



*Linking relief and development*

# **PBF in Action**

## **Theory and Instruments**

Course Guide

Performance Based Financing (PBF)

With 14 modules:

12 basic PBF modules, 1 regulatory module and 1 course evaluation module

# **PBF in Action**

## **Theory and Instruments**

PBF Course Guide

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Or can be found at following address: ??

## Dear readers and course participants

This book is developed during five courses on performance based financing (PBF), which took place between 2007 and 2009 in DRC, Burundi and Cameroun. The book is used during PBF courses of a 14 day duration with 13 modules, but shorter tailor-made courses may also be organized for decision-makers. The book contains 3 theoretical chapters concerning national policies, micro economics and best PBF practices & theories. The modules “conflict resolution” and “advocacy” are important to manage the change inherent to performance based financing. The other chapters are mainly practical of “how to apply PBF” concerning the role of the regulator, baseline studies, identification and understanding of indicators, how to manage fund holder organizations, health facility management tools such as the business plans and financial management, the interaction between community and health facilities to reinforce the consumer voice and social marketing.

It would be impossible to mention by name all the hundreds of PBF “family members”, who worked tirelessly during the last 10 years to innovate and to develop the ideas, which were the basis for this book. We often shared the same frustrations of working in traditional ineffective health systems and had the common desire to change the health system towards decentralization, good governance, efficient health facility management, better motivation of health workers and consumer empowerment and, more in general, to a “just” world.

We sincerely thank all the contributors to this book from Rwanda, Burundi, the Democratic Republic of Congo, the Central African Republic, Cameroun and the Netherlands for their commitment. Specific thanks go to Celestin Kimanuka, Jean Baptist Habaguhirwa and Freddy Batundi. Since 2002 14 Fund Holder Organisations have been established reaching millions of people. The funding often came from Cordaid’s own resources, but increasingly also from agencies such as the European Union, the World Bank, the Global Fund and different Bilateral Co operations.

The content of the book may be useful in countries, which already started PBF as well as for countries not yet applying PBF. For the latter the chapter on PBF advocacy may be of interest. My sincere thanks go to CORDAID the Hague for supporting the development of the course material through its representatives Piet Vroeg, Remco van der Veen, Frank van der Looij and Monique Lagroo. Thanks also to the MDF Central Africa Team in Goma, Jannes van der Wijk, Josefien Dekwaadsteniet et Clotilde Bawota for assisting us with the adult leaning techniques applied during the course.

ROBERT SOETERS  
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If you want to forward your comments, your critics, the results of your research or to get supplementary information, contact or visit the website <http://www.cordaidpartners.com/rooms/performance-based-financing>.

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## Abbreviations

ANC	Ante Natal Care
ARI	Acute Respiratory Infection
BP	Business Plan
CBHZ	Central Bureau of the Health Zone
CPA	Complementary Package of Activities
DALY	Disability Adjusted Life Years
DH	District Hospital
DHB	District Health Bureau
FP	Family Planning
GRH	General Reference Hospital
HC	Health Committee
HC	Health Centre
HF	Health Facility
HSPA	Health Service Purchasing Agency
IEC	Information Education Communication
MoPH	Ministry of Public Health
MPA	Minimum Package of Activities
NGO	Non-Governmental Organization
NHIS	National Health Information System
NIPH	National Institute of Public Health (Burundi)
PBF	Performance Based Financing
PLHIV	Persons living with HIV AIDS

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## 0. INTRODUCTION of PBF & METHODOLOGY

Dr. Robert SOETERS

### Aim and objectives of the PBF course

#### **Aim of the course**

- To contribute to the improvement of the health status of the population by providing accessible and equitable services of good quality while respecting the free choice for public & private providers and by making rational and efficient use of limited government and household resources.

#### **Specific Objectives**

- To reach a critical mass of people who adhere and can apply performance based financing and who will gradually replace health systems based on traditional input financing.
- To provide participants with an understanding of the relationships between national policies, health policy and economic policies and how they are influenced by performance based financing.
- To understand the objectives, theories, best practices and instruments of performance base financing.

#### **Expected Result**

- At the end of the training, participants will have adhered to performance based financing, will understand the role of main stakeholders (regulators, providers, fund holder organizations, community voice empowerment) and understand the role and problems of free market principles in the health system.

#### **Specific module objectives**

Each chapter of this book starts with the specific objectives.

### How did PBF develop and the reason for this course?

Performance contracting was first introduced in Asia during the 1990s, in Rwanda in 2001, in DRC in 2004, in Burundi in 2006 and progressively in other countries such as Tanzania, Indonesia, Cameroun and Central African Republic. Several studies, conducted in these countries show that PBF has encouraging results concerning not only health services output but also efficiency, quality and equity compared to more the traditional systems<sup>1,2,3</sup>.

Why did PBF become popular since its introduction 10-15 years ago?

- For the population, PBF is interesting because they observe better quality health services with more and respectful qualified personnel, that financial access improves and that a greater variety of health services become available.
- For health personnel PBF is interesting because it increases their remuneration compared to the situation before PBF. For many health workers PBF is also attractive because it allows them to earn more when they work more: There is a relationship between performance and rewards and new ideas are welcome to improve health services.
- Government authorities may find PBF attractive in order to quickly and efficiently improve social services and thereby the health status of the population.
- Politicians may consider PBF interesting to answer to demands from their electorate.

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<sup>1</sup> Loevinsohn B, Harding A. Buying Results? Contracting for health service delivery in developing countries The Lancet 2005 vol. 366:676-681

<sup>2</sup> Center for Global Development Performance Incentives for Global Health Potential and Pitfalls, Washington, 2009

<sup>3</sup> Soeters, R Griffiths, F Improving government health services through contract management: a case from Cambodia Health Policy and Planning; 2003 vol. 18(1): 74-83

- Aid agencies enhance PBF as an instrument to achieve the millennium goals and other social objectives.

The development of independent fund holder organisations is also an opportunity in political crises and in the case where the authorities are poorly motivated in the absence of adequate remunerations. This makes it easier in the short term to improve health services and at the same time provides an opportunity to start health reforms that may contribute to more stable and sustainable systems. PBF may not only be limited to the health sector, but can be applied in other sectors such as education, rural development and even politico-administrative and legal sectors.

### **Fears and misunderstandings**

Performance contracting often raises fears and misunderstandings. Some fear that PBF improves quantity of health service but not quality or that administrative costs are too high. Other observers introduce ideological arguments such as that PBF would promote “capitalism”, which protects the wealthy and abandons poor and vulnerable people. Decision makers may fear PBF as it requires them to rethink their ideas and paradigms with which they were familiar. Others may fear that PBF is difficult to learn and, consequently, what role will there be for them?

Most of these fears are not justified and they are often based on misunderstandings. Yet the reality is that they exist and therefore it is necessary to equip participants with the arguments to counter them. Due to both the encouraging results of PBF as at the same time these fears and misunderstandings there is an enormous need for this course. The course does not only explain theories and best practices but also how to carry out PBF (the management instruments) and how to conduct advocacy to promote PBF as well as how to prevent unnecessary conflicts. The feedback obtained during earlier courses showed that participants often become PBF advocates, adding to the critical mass of people required to change existing health systems.

### **PBF terminology, opportunities in other sectors and fragile states**

Contracting is also known as the contractual approach, strategic contracting and, more recently result based financing, pay-for-performance (P4P) and performance based financing (PBF). The generic term “contracting” is too general for the contractual relationships. Contractual arrangements should not only focus on the legal aspects of contracts and the profit orientation such as usual in the private sector but it should also enhance partnerships between partners to achieve social purposes and aim also at broader reforms of the health system<sup>4,5</sup>. Therefore, in this document, we use the more specific term “performance based financing”.

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<sup>4</sup> Perrot J. World Health Organisation The role of contracting in improving health systems performance., Discussion Paper, *EIP/FER/DP.E.04.4* 2004 <http://www.who.int/contracting/fr>

<sup>5</sup> Perrot, J, de Roodenbeke, E (éds.) La contractualisation dans les systèmes de santé, Editions Karthala, Paris, France, 2005

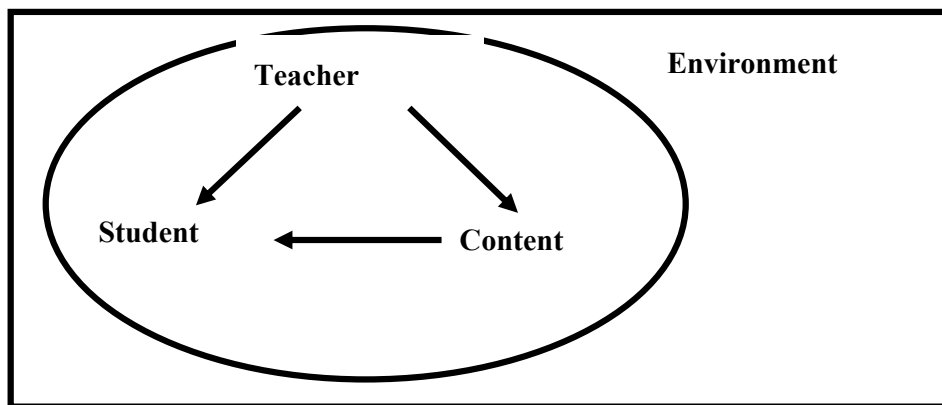
## PBF course methodology: adult learning

Freddy BATUNDI

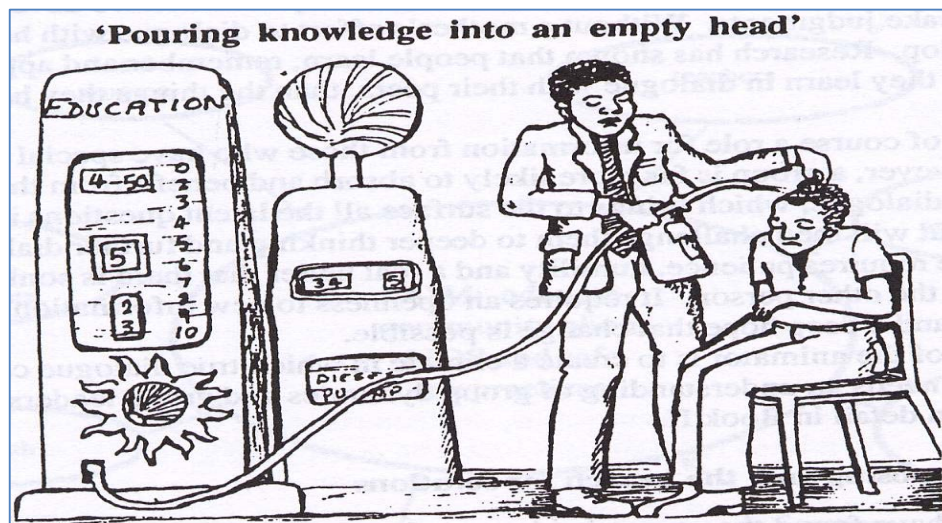
For this book and course we apply adult learning principles and techniques whereby participants actively participate in their own training, and adopt a participatory approach throughout the learning process. In the interactions between teacher, student and course content we identify the **traditional teaching system** and the **adult learning system**.

### Traditional teaching system

In the traditional system the teacher is at the centre. The assumption is that the trainer alone has all the knowledge and skills; the student knows nothing of what he must learn. He must accept and assimilate what the "master" taught him and must reproduce when asked to do so. Thus, the student has to memorise.



The learner is like an empty head which is to be filled with knowledge.



### Adult learning system

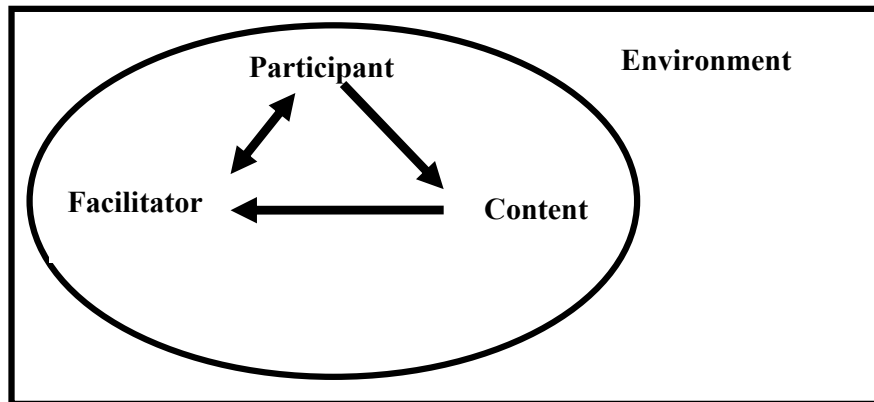
In adult learning the *student or participant* is at the centre. The teacher changes its role and becomes a "facilitator" instead of a "master".

This system is based on the following principles:

- The participant discovers by him- or herself what to learn;
- He can analyse situations and chose the appropriate progress;

- He has the right to make mistakes and to correct himself by trial and error. Learning becomes a process of reflexion and discovery;
- The participant is stimulated to have doubts, make decisions, analyse, communicate, conduct teamwork, and solve problems.

The participant and the facilitator explore and find together the path forwards. The facilitator is the guide, catalyst and motivator of the process. The participant learns by his own activity, personal commitment and intrinsic motivation. He is active in group work with fellow participants and collaborates to completing common tasks.



### Adult learning cycle

The **adult learning** approach is active and is characterised by participatory learning in which the exchange of practical experiences among participants is important. The *Adult Learning Cycle* reflects how adults normally learn new things in their daily life and allows facilitators to use more effective and natural daily life training strategies. At the end of the course each participant is then requested to develop a personal plan how to apply the knowledge and skills acquired when back in the working environment.

Training programmes often begin with theory and the practice comes afterwards. The adult learning cycle goes the other way round: it is a cycle of learning that starts from the *experience* of each participant.

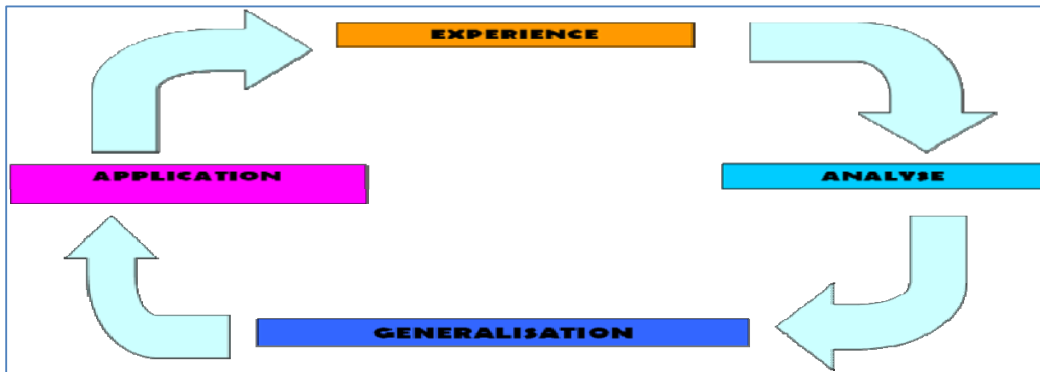
#### **MENTAL EXERCISE**

Remember something that you have learnt recently. Not necessarily a theory: it can be about something that you learnt to make, a technique or a competency; or a new way of seeing what you have known already or what you could already do. Then, if what you learnt is something important, something that you indeed use, something that you will always remember, there is a big chance that you learned it by applying the "*adult learning cycle*". You had an experience or done something which made you think about it and from there, you generalised a rule on the way things work and you can apply it now.

There are four main stages in the adult learning cycle, the first of which is always **experience**:

- **Experience:** observe, do an activity, provide the learner with situations to simulate the process of experimentation: example *role-play, case studies, films, demonstrations, questionnaires*.
- **Analyse:** reflect on the activity, discuss and provide feedback to probe into the experience: facilitate *dialogue* and conduct *group work*.
- **Generalise:** help the participant to generalise from the experience and deduce some best practices that may also be applied in the reality.
- **Apply in practice:** Allow the participant to develop practical plans to assimilate what was learned. Encourage to use the generalisation to change behaviour in order to become more efficient.

The diagram below, points out how the trainer facilitates activities undertaken with the group to draw the maximum of the natural cycle of learning.



**Learning domains**

Training objectives aim at meeting the following learning needs: (1) Knowledge (= know); (2) Skills (= know-how) and; (3) Attitudes (= behaviour).

The learning domains are the fields in which the learning needs are met. Taxonomy is the hierarchical classification of levels within a learning domain as shown in the following diagram.

TAXINOMIQUE LEVELS	DOMAINS ➔	KNOW (knowledge)	BEHAVIOUR (attitude)	KNOW-HOW (skill)
3 <sup>rd</sup> level of learning		problem resolution	internalization	dexterity
2 <sup>nd</sup> level of learning	➔	interpretation	response	coordination
1 <sup>st</sup> level of learning	➔	remembering	receptivity	imitation

**Attitude of the participant during the course**

The learning dilemmas for participants involved in adult learning compared to the traditional type of training of « *pouring knowledge in an empty head* » are the following:

COMFORT ZONE Traditional learning	CHANGE ENVIRONMENT Adult learning
<ul style="list-style-type: none"> <li>▪ Consumes the material</li> <li>▪ Let's wait and see</li> <li>▪ Refers to own references</li> <li>▪ Checks</li> <li>▪ Seeks truths</li> <li>▪ Seeks affirmations</li> <li>▪ Seeks routine procedures</li> <li>▪ Wants a toolbox</li> <li>▪ Is on holidays</li> </ul>	<ul style="list-style-type: none"> <li>▪ Participation</li> <li>▪ Responsible for his own learning</li> <li>▪ New approaches</li> <li>▪ Curiosity</li> <li>▪ Allows Surprises</li> <li>▪ Questions</li> <li>▪ Allows to change ideas</li> <li>▪ Is an actor</li> <li>▪ Travels</li> </ul>

To obtain the maximum from the learning process participants must:

- Be willing to move from the comfort zone towards the change environment;
- Always remember that (s)he is responsible for his own learning;
- Have a clear idea about his/her expectations;
- Actively participate in the training dynamics (participation in group works, conducts daily summaries & evaluations and does presentations during plenary sessions);
- Respects the group rules and the instructions given by the facilitators.

### Strategies to ensure participation during training

- A “**village chief**” will be elected by the participants to assure the link between organizers and participants concerning the logistical and disciplinary aspects of the course.
- **Evaluation and recapitulation:** Work groups will be created to evaluate and to summarize the work of the previous day. The daily evaluations and the recapitulation must be TAPIS. TAPIS is an acronym which describes the way it must be done.

<b>T</b>	• Timely
<b>A</b>	• Autonomous
<b>P</b>	• Participative
<b>I</b>	• Innovative
<b>S</b>	• Synthesis

- **Notation :** During plenary presentations, notes need to be presented in CCLR

<b>C</b>	• Clear
<b>C</b>	• Crisp
<b>L</b>	• Large
<b>R</b>	• Readable

- **Feedback:** To work effectively and to maintain good relationships with others feedback is important. Feedback aims at gathering ideas from other participants and to adjust behaviour, to continuously improve the training process and to reach the teaching objectives.

### **Some rules for giving feedback to participants**

- Good feedback does not make people feel attacked: feedback describes behaviour but does not give an interpretation or evaluation of that behaviour;
- Feedback must be specific;
- Feedback must help people to improve;
- The person obtaining the feedback must be capable of utilizing the information;
- Do not force feedback: if the recipient is not open for it, it will have no effect;
- Feedback is more useful when it is given directly after that the behaviour is observed;
- The sender and the recipient of feedback have to be sure that they understand each other.

### Your personal development plan for this course or when reading this book

1. Prepare your own need analysis (gap). What do you want to reach from this PBF course within 6 months and where you are now (look at your knowledge, skills, attitudes);
2. Depending on the gap, draw up your personal development plan.
3. Consult your expectations at the beginning of the course. To draw up your plan consider the following criteria: (a) be specific; (b) be realistic; (c) in how much time can it be achieved; (d) identify results and objectives that can be verified ; (e) apply adult learning techniques such as moments of reflexion, generalisation, try to apply what was learned ; (f) make use of and work in collaboration with your colleagues at the workplace.
4. Show your personal development plan on a flipchart, in a creative way. Present your Plan in the plenary session to seek other people’s feedback (10 minutes).
5. Let other participants ask questions of clarification and provide feedback.

# 1. SOCIO-ECONOMIC POLICIES, HEALTH POLICIES AND PBF

Professeur MUNYANGA, Dr Jean Paul NYARUSHATSI, Dr. Robert SOETERS

This chapter presents national socioeconomic policies and health policies and what are the links between them? Why was PBF introduced as a new financing strategy in the health sector and how can PBF play a role in strengthening the national economy?

## 1.1 Objectives

**At the end, the participants will have understood:**

- Some socioeconomic policies and health policies;
- The links between the economy and health;
- What problems exist in implementing health policies and economic development
- What role PBF can play in strengthening health policies and also which influence can it have at the national economy.

## 1.2 The socio-economic roles of the State

Each government must base its socioeconomic policies on normative aims and values which should result from a democratic and political process.

The following aims are usually identified in most countries:

- *Economic growth* to create wealth and to improve living standards.
- *Full employment* for each individual. Unemployment is a destruction of human capital, which blocks full economic growth. Failure to achieve economic growth and full employment creates poverty, social imbalances, political tensions and individual suffering and should therefore be prevented by all means.
- *Equitable distribution of resources*. This aims at achieving a more just society by taxing the wealthy and to support the poor or vulnerable and thereby to correct inequalities.
- To assure that the country in general but also the social sector (e.g. health facilities and schools) *balance their income and expenditures*. This to avoid balance of payment problems with other countries and donors as well to enhance sound financial management in health facilities, schools, etc.
- To monitor the *stability of prices*. This to prevent inflation, which discourages investors and willingness among citizens to save money (for investments or their pensions).

For achieving the above aims, most countries have adopted the *free market economy* as the preferred means to distribute limited resources in a competitive environment. Once accepted, it implies that government must oppose tendencies of organisations or individuals to create monopolies or economic cartels, which usually harm the public interest. In countries with free market economies, there are laws against monopolistic or cartel behaviour (see the box below on the Netherlands).

However, it is equally important that governments – once they have accepted the basic principles of the free market economy – to correct the problems (or market failures) that the same free market causes. Governments have several instruments to influence market failures such as for example subsidies, taxes and public information campaigns. For example, positive externalities (treatment TB and immunizations) and public goods (health information) are subsidized while negative externalities (smoking, alcohol, pollution) are taxed.

### **How are health markets regulated in the Netherlands? (Anouk Hermans)**

In October, 2006, the Dutch Parliament adopted a law on how to regulate the free health market. This law was voted with the objective to assure that Dutch consumers receive the best services for the scarce (financial) resources in terms of choice, quality and access. The government created the Netherlands Regulatory Health Authority (NZA) to supervise service providers, health insurance companies and the Regional Purchasing Agencies (AWBZ). The NZA must assure the functioning of the market and penalise actors who try to establish monopolies or cartels. This is to avoid the inefficient use of scarce resources.

#### **In Holland there are two systems of financing health services:**

(a) Law on illness coverage (ZVw), which covers health care during two years with general practitioners, specialists, hospital care, drugs and dental care. These funds are channelled through insurance companies and financed by employers and employees. The available funds are about Euro 2.500 per person per year;  
(b) The Act of the Exceptional Medical Expenses (AWBZ) covers the costs related to chronic diseases (more than two years) or diseases which have lead to a chronic disability such as psychiatric problems or which require long-term treatment such as congenital, physical or mental disabilities. Public funding for the AWBZ is channelled through 32 Regional Purchasing Agencies. The available funds are around Euro 1.000 per person per year.

### **1.3 National health policy**

Each country has its own national health policies, but they may be based on the following universal goals and values:

- To improve the *health status of* the population through the provision of *quality* services that are *accessible* (based on the human rights that assures access to health services) and has the additional objective to reinforce the economy, to create employment and to reduce poverty through economic multiplier effects;
- To assure *free choice among patients for public and private service providers* so that democratic values and the free expression of opinions are respected;
- To ensure *geographical, cultural and financial equity* while households contribute for health services proportional to their means and that services are orientated towards the health needs determined both by professionals and felt by the population;
- To assure the *rational and efficient use of resources* by orientating them towards effective and efficient health services and by making use of free market instruments;
- To ensure that the *proportion of the health expenses* in comparison with household income and government revenues is reasonable. The proportion is often around 8-10% if financing depends on direct fee paying and tax based systems. Once insurance systems are introduced the proportional expenditure on health tends to increase.

### **1.4 Health system problems**

Despite that the above health goals and values are mentioned in national documents, several problems and constraints may prevent their achievement such as:

- Lack of empowerment by consumers (purchasing power, rights and participation) to positively influence the performance of the health system in general and health facilities in particular.
- Government health expenditure may be insufficient and several low income countries are highly dependent on external aid financing.
- Lack of capacity to monitor performance in terms of output, quality and equity of the health services.
- Countries may also experience good governance and transparency problems, contributing to an inefficient distribution and management of public funds.

This may be caused by following factors:

- A centralized command and control approach concerning health facility management decisions and a “top-down” distribution of inputs such as drugs, equipment and salaries;
- Strategies may be orientated mostly towards hospital activities and not towards more cost-effective services at community and health centre level.
- The tendency to centrally employ health workers as civil servants. This is usually linked to government monopolistic provision of health services that does not stimulate entrepreneurship and competitive pressure. It does often also not take into account the freedom for patients to chose their own health provider.
- A centralised (government) salary systems often contains perverse discouraging incentives for health workers: “Those who work more – earn the same wage as those who do not work”.

In summary, the above described problems of traditional health systems management does not distribute scarce resources according to market pressure, which renders them inefficient.

These unfavourable factors block health objective achievement and contribute to poor quality health services. Only radical changes of the regulatory system and health facility management can change this. What are the challenges for change? How to conduct the required advocacy so that decision makers stop considering the health sector only as a waste of government resources but also as an instrument for socioeconomic development? Politicians and decision-makers may become more enthusiastic for change – and to commit financial resources - when they are convinced that resources are used in an efficient and effective manner. How to move away from the idea that the State must have monopolistic powers characterised by bureaucratic procedures and hierarchical relationships? How to promote a managerial culture whereby health care facilities are considered as social enterprises oriented towards performance? In many countries (in particular when governed by populist leaders) the above ideas are opposed and leaders tend to favour government oriented central command and control measures.

### **1.5 Why is PBF introduced in the health sector?**

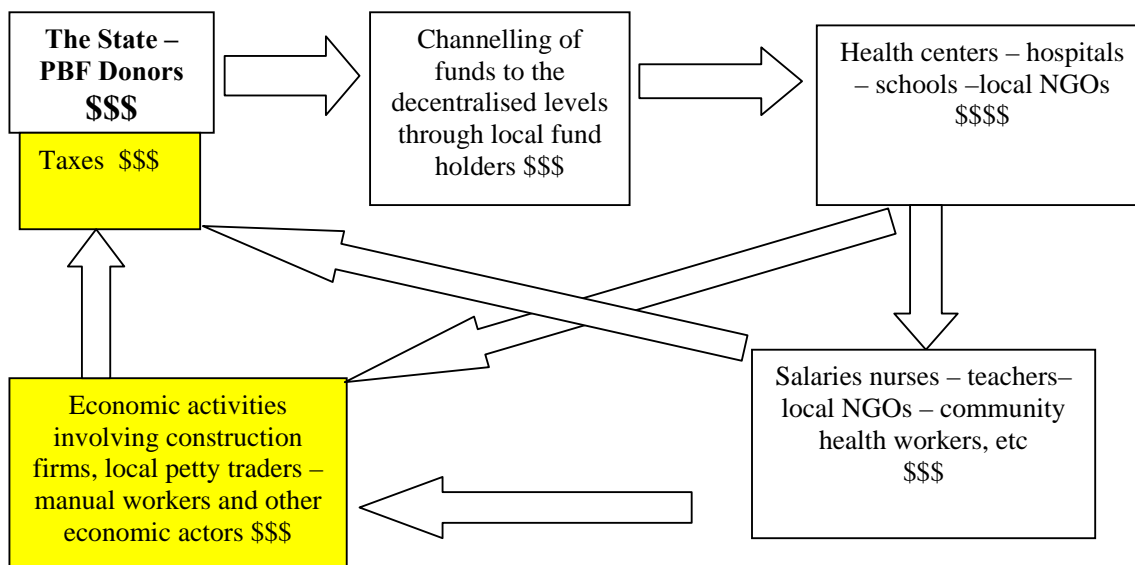
The above problem analysis is not new but what is new that there is growing discontent with the standard solutions provided by central command and control system approaches, input financing, ignorance of the private sector and unsustainable free health care and dependency on donor agency support. Furthermore, decision makers tend either to ignore or to be unfamiliar with the fact that investing directly in health facilities and community programs does not only improve the health status of the population but may also stimulate economic growth and the creation of employment. Performance contracting may be considered as a response to the frustrations related to the traditional health systems and it becomes more and more a new approach that gradually replaces the old dogmas of the Alma Ata type centralized approaches.

The evidence suggests that performance based financing may also contribute to the strengthening of good governance by:

- Creating checks and balances by establishing autonomous organisations at the peripheral level of a province or district, which independently assure regulation, fund disbursement, health provision and the strengthening of the consumer voice.
- Promotion of managerial capacities through autonomous management of health services;
- Creating competitive pressure between both government owned and private providers instead of – such as is commonly the case – ignoring the private sector and to consider the government health system as a monopolist actor. However, this does not imply a laissez-faire approach but government and fund holder organizations must assist good health facility management practices by introducing three-monthly business plan and to introduce management systems that translate health facility revenues into a good mix of operational expenses, investment and performance bonuses.

## 1.6 The link between PBF and economic development

PBF has as additional objective the stimulation of economic growth by creating additional wealth and employment. This is due to the fact that one of the PBF principles is the decentralized injection of private and public resources in cash into the local economy. This with the aim to create several economic multiplier effects such as shown in the diagram below.



Economic multiplier effects will be enhanced by the following favourable conditions:

- Autonomous health facilities have the freedom to use their resources without interference from central authorities;
- Prices must be set at the economic equilibrium price of supply and demand, instead of being centrally imposed by central decision makers and thereby to avoid the negative consequences of price ceiling and floors (see chapter 2 on microeconomics).
- Contract negotiations should be conducted at the peripheral district and provincial level of between fund holder agencies and health facilities so that the system is flexible and can adapt to area-specific opportunities and problems instead of through complex centralized procedures;
- Subsidies should be paid in cash (\$\$) and not in kind (essential drugs, equipment or fixed salaries);
- Health facility managers should provide a convincing business plan during three-monthly negotiations for contract renewal. This implies that health facilities have a transparent financial management system. During negotiations health facility strategies can be influenced. When the plan is not convincing contract may be delayed or not be renewed. However, once the contract is renewed the health facility managers have the full autonomy to spend their resources according to their specific business plan.

Finally by stimulating all these economic transactions of salary and performance bonus payments, rehabilitation of infrastructure, purchases of essential drugs and equipment, government can tax these economic activities and so use this money to reinvest in the local economy. This will create sustainable economic growth, create new employment opportunities and in general create wealth.

## 1.7 Does performance based financing improve the health services?

The evidence suggest that PBF improves health services by:

- Stimulating the free choice of consumers for service providers. The patient influences the quality of services and health worker motivation through his right to have free choice of provider. The government stimulates service providers because each patient going to health facilities is subsidized based on performance: « **money follows the patient** ».
- *Correcting market failures* by making use of subsidies for desired behaviour or services and by taxing undesired behaviour, government should inform consumers and assure mechanisms for assuring good quality health facilities and qualified health workers.
- Partnerships with the private sector and thereby to increase the number of facilities providing health services. This competitive pressure tends to improve quality, reduce prices and enhance the freedom of choice among patients for health providers.
- Promotion of managerial logic in the autonomous management of health services through the introduction of the black box tools particularly the business plan and revenue and expenditure management tools for financial decisions;
- PBF also re-distributes human resources by providing poor provinces, districts or health facility catchment areas with more subsidies than less poor areas.
- PBF routinely conducts baseline studies to identify the main health problems in a given province, district or health facility. This promotes allocative efficiency of scarce public resources. PBF also encourages action research and scientific studies so that lessons may be learned and new best practices identified. This approach should also identify the strategies for the problems identified in each specific area.

### **The case of Burundi**

The first pilot PBF initiative in Burundi was introduced by the Ministry of Health with technical assistance of the interventional NGO Cordaid in Bubanza and Cankuzo provinces in 2006. Other stakeholder such as HealthNet-TPO, and the Swiss and Belgium bilateral cooperation also started pilot programs. The Ministry of Health adopted the contracting strategy including pilots that separated the functions of : (a) Ministry of Health (MSP) / Provincial Health Bureau (BPS) / District Health Bureau (BDS) as regulator; (b) Provincial Fund Holder organizations for the fund disbursements; (c) Health centres and hospitals as service providers and; (d) local NGOs to reinforce the consumer voice empowerment of the population.

Pre- and post intervention assessments were done first in 2006 and then in 2008 in two PBF provinces and two control provinces. The results were encouraging in favour of the PBF provinces compared to the control provinces. The Burundi government then decided in 2008 to scale up PBF to the whole country during 2009-2010.

## **1.8 Conclusions concerning national health policy**

In the majority of developing countries, governments tend to have difficulties in identifying their core role of promoting social objectives and democratically agreed values and norms. By mixing finance, health provision and regulatory functions there are often conflicts of interest that block effective regulatory powers. This leads us to the following questions: (1) How to go from an emergency at hoc approach towards a development approach of sustainable development of the health system? (2) How to decentralise the responsibilities for health provision, fund disbursements, and regulatory activates while at the same time to focus on national goals and objectives? (3) How to improve the efficiency of distributing public funding?

How to break out of the vicious circle of poor government performance leading to poor health and economic catastrophe? Governments should reinforce their regulatory role while stimulating the economy and in particular the private sector to create wealth and employment. This can be enhanced by stimulating the social sector including the health sector to decentralize, to become more efficient and by providing high quality, equitable health services. Should we continue working with inefficient health systems based on centralisation and a command and control approach? The evidence in a growing number of countries suggest that it is time for change, and that dramatic improvements can be realized. Why then is there still opposition from certain stakeholders? The question is apparently not "must we change towards performance based financing systems". The answer is "yes". The question should therefore be: What advocacy strategies to develop to start change, who must we convince, where to start, and when?

## 2. MICRO-ECONOMICS and HEALTH ECONOMICS

Pacifique MUSHAGULUSA — Didier NTIRORANYA

### 2.1 Objectives

- To identify some main economic definitions, theories and principles
- To identify what markets do well, when markets fail and how to correct the failures
- To apply some economic principles in health systems management
- To describe the opportunities of PBF in comparison with other health financing approaches in low income countries

### 2.2 Introduction to economics<sup>6</sup>

Health has no price, but it has a cost. Hence the need to apply economic laws for the rational use of resources available for the health sector.

The word “economy” comes from two Greek words: OIKOS meaning “home” and NOMOS which means “order, principle, rule or law”. Economic science studies the use of scarce resources intended to meet unlimited human needs.

#### **Economic justification for the intervention of the state:**

Economists justify state intervention by criteria which go beyond efficiency. It has also to consider access to goods and services such as health care and education as well as the redistribution of income and wealth for equity purposes.

**Microeconomics** = the study of economic exchanges of individual decision-making units. This may be individual consumers (demand) and companies producing goods or services (supply).

**Macroeconomics** = the study of economic exchanges at national and international macro level of entire aggregate economies. It studies such issues as overall price levels, unemployment, inflation and economic growth.

#### **Fundamental concepts of economy:**

- **Desire:** any human aspiration, wish.
- **Good:** anything having the ability to meet human needs and which is available for that purpose.
- **Economic Agent:** every individual or any institution such as a health centre or hospital which constitutes a centre of economic decision (*to buy or sell or not to buy or sell*).
- **Economic Act:** actions undertaken by economic agents
- **Economic system:** It deals with resources allocation issues and decision procedures.

### 2.3 Economist toolbox

An economist has a range of useful tools:

- **Historical analysis** through statistics to find causalities. *‘It is necessary to study the present, in the light of the past, to forecast the future.’*
- **Economic modelling.** These are simplified small-scale versions of some aspect of the economy. Economic models are often expressed in equations, by graphs or in words. It is based on abstraction, which means that it ignores many details so as to focus on the most important elements of the problem.
- **Economic theory.** For a theory there is scientific evidence. It is a deliberate simplification of relationships used to explain how those relationship work. This is important to deal with

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<sup>6</sup> For this chapter on economics we have used the textbook “Economics. Principles & Theory”. 11<sup>th</sup> Edition 2009 from William Baumol & Alan Blinder. We recommend readers to buy this book to serve as reference.

possibilities *that have not actually occurred*. For example to learn how to reduce unemployment an economic theory investigates what will be the result of a new policy proposal. This is often the work of scientific organizations such as the National Statistics Bureau (in the Netherlands) or The School of Health Economics (DRC).

- **Hypothesis.** This is an untested theory for which there is not (yet) scientific evidence that the hypothesis is correct, contrary to tested economic theories. An example of an hypothesis some years ago was “PBF is more cost-effective than central command and control decisions on management procedures and distribution of inputs such as drugs”. Such an hypothesis must then be tested by intervention – control pre- post studies (see chapter 4). This was done in several countries such as in Burundi and DRC and you find the reference to such a study in the footnote below<sup>7</sup>.

## 2.4 Definitions in economics

Although economic science can contribute to theoretical tested and factual knowledge on a particular issue (= **positive economics** = *what is or what was*), the final decision on policy questions often rests on social values and ethical opinions about which people may have different opinions (= normative economics = *what should be*). Ideally such political normative decisions are made through a democratic process. It is then the role of economists – based on tested economic theories and models - to foresee what the likely consequences are in the future in terms of cost and efficiency of those normative decisions.

**Virtually all resources are scarce**, meaning that people have less of them than they would like. Therefore, choices must be made among a limited set of possibilities, in full recognition of the inescapable fact that a decision to have more of one thing means that people will have less of something else.

There exist two distribution systems of goods and services:

1. **The free market system.** This is a form of economic organization in which resource allocation decisions are left to individual producers and consumers acting in their own best interest without central direction.
2. **The central planning economy.** Here central decisions makers tell people how to produce, what to produce, and what to consume. This was the way how it was done under the communist regime in the former Soviet Union 1922-1991. However, this system collapsed spectacularly and the formerly socialist countries have been working hard to “marketize” their economies. Even the still socialist China shifted towards the market system.

**The almost impossibility of central planning.** The production processes of different industries and the preferences of the consumers are all interdependent, the whole economy can be disturbed if the problem of production planning is not resolved. Given that the interdependence of these processes of production implicates the treatment of a phenomenal quantity of data, *a centralised planning is almost impossible*.

The market economy (with freedom for the economic actors to change prices according to their wishes) provides a solution to this problem through the law of supply and demand, which automatically seeks the equilibrium price without outside interference. However, free markets may not solve unemployment problems or protect the environment and not all goals in society can be solved with free markets. It may produce too much or too little of socially desired goals and actors with superior knowledge may misuse the market for unrealistic profit making. This book does not either defend or attack the capitalist system, but also socialists such as Carl Marx agreed that the market is remarkably efficient in producing and distributing goods. The free economic market

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<sup>7</sup> See report “Household Survey Burundi 2006-2008 and Evaluation Study DRC 2005-2008 at <http://www.cordaidpartners.com/rooms/performance-based-financing>.

system is the superior form of distributing scarce resources while at the same time markets can also fail. Yet, these failures can best be corrected by market techniques such as subsidies (enhancing desirable services), taxes (reducing bad habits such as smoking), information campaigns (to promote desired behaviour such as immunization or accessing family planning) and government regulation (such as for quality assurance in the health market).

**Coordination in an economy:** In deciding how to allocate scarce resources, every society must somehow make three sort of decisions: (1) It must figure out how to utilize resources efficiently to reach the maximum economic possibilities; (2) It must decide which of the possible combinations of goods to produce – how many food, cars, health care, etc; (3) It must decide how much of the total output of each good to distribute to each person.

**Choices in production:** It is the market system which determines what the community produces by virtue of the law of supply and demand. By virtue of non-interventionism, the distribution of resources of a society depends on 2 decisive factors: (a) preferences of the consumers and; (b) relative difficulty to produce the goods (production cost). Price varies so that produced quantity is equal to what is needed.

**Production planning:** By virtue of non-interventionism, it is the price system which distributes energy and other raw materials among different industries according to the need of each. In a free market, factors of production are allocated to firms which are capable of productively use them. Firms which are unable to make productive usage of a factor will be moved aside from the market by the price of this factor (they may go bankrupt).

**Distribution of the products to the consumers:** The price system fulfils this task by allocating high prices to products in high demand and by leaving consumers free to act according to their own interests, their tastes, their preferences as well as their relative incomes.

**Opportunity cost** of any decision is the value of the next best alternative that the decision forces the decision maker to forgo (e.g. work as 16 year old or studying to enhance knowledge). It is not the market price of a house or of a new computer or the expenses related to schooling which represents the *real cost of a decision*. It is rather the value of what it is necessary to give up such as meals in a restaurant, a new office or a holiday. This opportunity cost corresponds to all possibilities which the individual, firm or organization must give up to obtain desired property. If they want to make logical choices, the opportunity cost must be taken into consideration in the decision-making process and when the market functions well goods that have an high opportunity cost will also have a high money cost. However, when the market functions poorly such as when central decision makers impose market decisions the opportunity cost may be very high. This is for example very common in developing countries when central administrators decide on management procedures and the distribution of inputs such as drugs on behalf of health facility managers. The opportunity cost is then usually high as in a specific health facility there may be a much higher need for rehabilitation or staff bonuses.

**Comparative advantage:** One country has a comparative advantage over another country in the production of a particular good relative to other goods if it produces that good less inefficiently than it produces other goods, as compared with the other country.

#### **Example of comparative advantage**

Let us assume that Gerard, a farmer's son, is a good farmer and earns 1000 \$ a month. Let us assume that he is also a successful singer and that he earns 2000 \$ for a show in a hotel or in a nightclub.

Q/ Should he refuse singing contracts to have more time to plough?

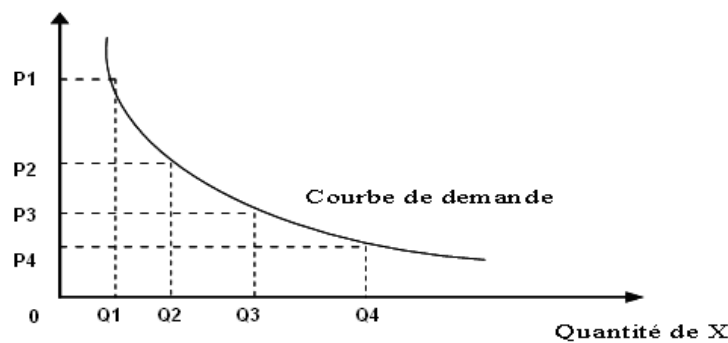
R/ Certainly not! He should rather give this farming job to Leon, a less efficient farmer, to plough for him. Certainly, Gerard is a better farmer than Leon, but it is more profitable for him to entrust his agricultural activities to Leon. That way, Leon liberates time for Gerard to make more money with shows. That's how Gerard earns his living by carrying out a job for which he shows a comparative advantage and so both individuals find their advantages there.

## 2.5 Demand for goods in microeconomics

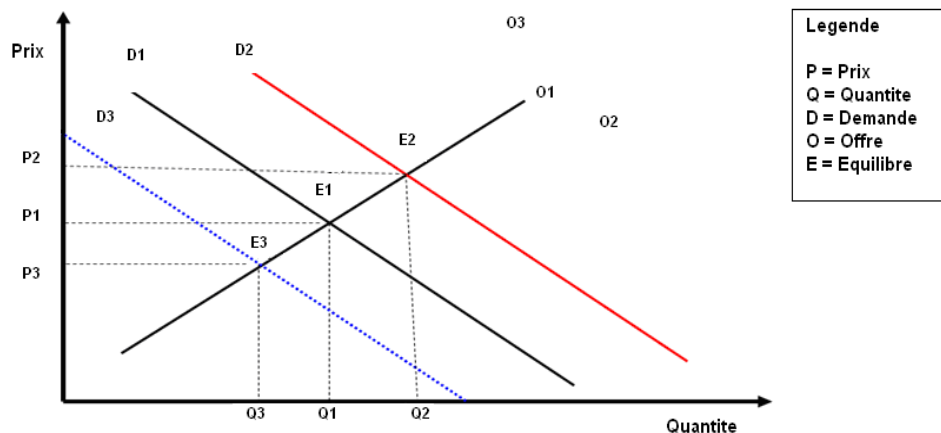
The quantity of goods demanded in an economy depends on various factors:

- The *price* of the concerned good ( $P_x$ ) ;
- The price of *substitute products* (beef instead of pork or fish; spaghetti instead of macaroni)
- The *available income* ( $R$ ) of the consumer;
- The *consumer's choice and preferences* (for example influenced by advertisements);
- The *demographic growth*.

The **Law of Demand** emanates from the hypothesis according to which the prices of substitutable products, the available income of the consumer, tastes and population growth remain constant. Thus, the law demand is said as follows: «*Other things being equal, quantities demanded of a good vary in inverse function of its price*». The curve of demand is descending from the left to the right; its slope is therefore negative since when price reduces the quantity demanded increases.



**Displacement of the demand curve.** A *variation of the price* of a given good causes a displacement of demand along the demand curve. On the contrary, a variation of other factors (such as income, population growth, the taste of the consumers, etc.), which influences the demand of this good will cause a shift of the entire demand curve.



As a result, any factor (population growth, a product which is popular) which causes the displacement of the demand curve towards the right without changing the supply curve, causes an increase in the equilibrium price and quantity. Any factor (reduction of household incomes, increased unemployment, political instability, a substitutable product which is introduced into shops) which causes the displacement of the demand curve towards the left without changing the supply curve, causes a fall of the equilibrium price and quantity.

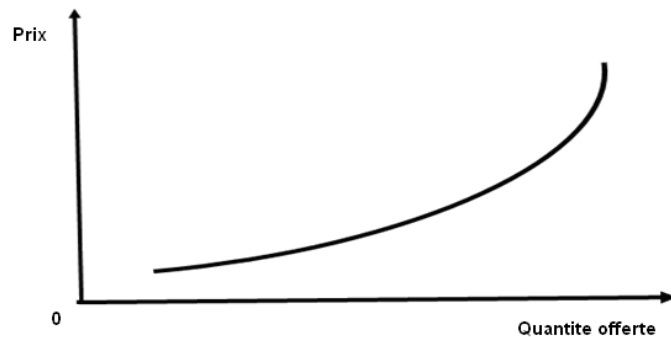
## 2.6 Supply of goods in microeconomics

The supply of a good is the quantity of this good offered on the market by a seller at a given price.  
**The quantity of the supply of a good in an economics depends on several factors:**

- The *price* of the concerned good
- Size of the industry
- Technologic progress
- Price of production factors
- Price of related products

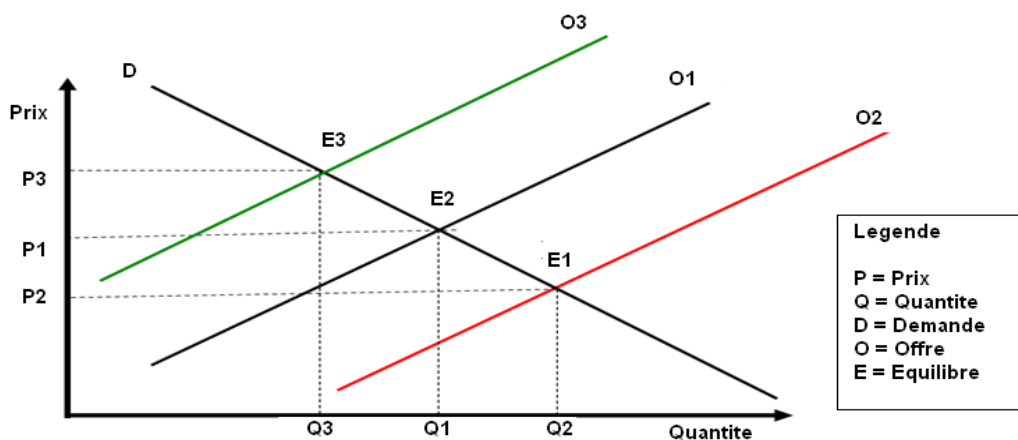
### The Law of Supply

The more the price of a good increases, the more is the quantity offered of this good on the market. Therefore, the law of supply is expressed as follows: «*Other things being equal, quantities supplied of a good vary in direct function of its price*». The supply curve is ascendant from left to right; its slope is therefore positive because when price increases, the quantity offered also increases.



**Displacement of the supply curve:** A variation of the price of a given good causes a displacement of fixed supply along the supply curve. On the contrary, a variation of one of other factors (price of production factors, size of industry, progress of technology, etc.), which influences the supply of this good will cause the shift of the supply curve.

**As a result,** any factor (such as technological progress, more competition among suppliers) which causes the displacement of the supply curve towards the right without changing the demand causes a fall of price and an increase in the equilibrium quantity. Any factor (reduction in price of production factors) which causes the displacement of the supply curve towards the left without changing the demand curve causes an increase in price and fall of the left equilibrium quantity.



**Shortage** of a good: Requested quantity is superior to what is supplied.

**Surplus** of a good: Supplied quantity is superior to what is requested

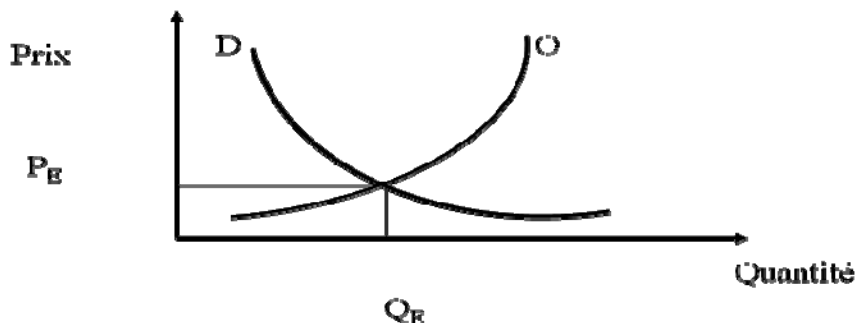
**Elasticity of demand in comparison with the price** is the proportion of the increase of attendance (= the number of consultations, therefore demand) divided by the proportion of price reduction. If elasticity is  $> 1$  it means that the proportion of attendance increases more than the proportion of price reduction.

#### **Elasticity in a health facility**

The elasticity of demand is very important in the health services and facilities. If elasticity is high a *reduction* in the user fee tariff of the health facility increases more the income of the health facility. In contrasts, when price is inelastic a high tariff will not reduce demand and the health facility can make big profits. In that case and if the effects for the population are negative the government may consider either to influence the price by providing subsidies and to force prices down or to stimulate competition by offering other providers to enter in the market.

### **2.7 Equilibrium in microeconomics**

**Equilibrium Price:** To analyze how the free market determines price, we must compare the desires of consumers (demand) with the desires of producers (supply) and see how they interact. In a free market, price and quantity are determined by the intersection of the supply and demand curves. An equilibrium is reached in which there are no more inherent forces that produces change. Changes away from an equilibrium position will occur only as a result of “outside events” that disturb the status quo.



D: Demand curve; O: Supply curve; EP: Equilibrium Price; EQ: Equilibrium Quantity

**The law of supply and demand** states that in a free market the forces of supply and demand generally push the *price* toward the level *at which quantity supplied and quantity demanded are equal*.

### **2.8 Perfect competition**

**Perfect competition** occurs in an industry when that industry is made up of many small firms producing homogenous products, when there is no impediment to the entry or exit of firms, and when full information is available.

**In summary the conditions of perfect competition are:**

- Numerous small sellers and customers. This rules out collusive arrangements whereby firms work together to fix prices;
- Homogeneity of the product. The product identical to that supplied by any firm and consumers do not care from which firm to buy;
- Freedom of firms to enter the market to compete with existing firm. Equally when a firm is not profitable no barriers should prevent firms to leave the market and;
- Perfect information among suppliers and consumers.

These requirements are rarely found in practice. Probably the most close are African open air markets selling locally produced vegetables, fruits or staple foods such as sorghum. Why then, do we study perfect competition. The answer is that under perfect the market mechanism performs best whereby society's scarce resources are used by firms and consumers with maximum efficiency.

## 2.9 Ceiling and bottom prices and the invisible hand of Adam Smith

When there is *shortage of a product*, price has the tendency to rise. Sometimes, angry consumers put pressures to incite politicians "to regulate" the problem by establishing a **ceiling price**. This is also the case with nominal pricing or zero level prices (or free health care) for health services.

When there is *abundance of a product* for example due to favourable meteorological conditions, the harvest improves and prices tend to decrease. In such a case, of course, the producers are discontented and try, sometimes successfully, to promote laws which prevent prices to decrease below a minimum by fixing a **bottom price**.

Such attempts to hinder the functioning of the law of supply and demand generally provoke failures and produce the opposite results instead of the desired effects:

- a) When a State controls rents to protect the tenants, the accommodation becomes rare because it become less profitable to construct or to maintain houses;
- b) When Government fixes a minimum wage to protect the marginal workers, marginal jobs disappear because employers find them too expensive;
- c) When bottom prices are set for agricultural products such as wheat or milk, surpluses pile up in warehouses.

Political leaders who try to ignore the functioning of the law of supply and demand are likely to cause unforeseen problems. By fixing prices government open a can of worms leading often to corruption and favouritism, it is unenforceable, auxiliary restriction will be put to enforce the price, it reduces the volume of the transactions and it leads to inefficient allocation of scarce resources.

This produces a chain of consequences which are:

- the persistent shortage of concerned goods;
- the illegal / illicit market or black market;
- the prices of black market are almost always higher than those of the free market;
- The enrichment of black market agents to the detriment of the producers or distributors of the concerned goods.

### **What are the influencing factors of the price for the supply and demand of curative care (OPD consultancies, hospitalisations and deliveries)?**

If the quality of care of care improves (reasonable waiting time, respectful treatment, medicines available) the supply curve moves to the left (and the price increases) and if the quality is poor the supply curve moves to the right (and the price reduces). If the per capita income of the population of a given area increases because there is a good harvest the demand curve move to the right (and the price increases) while if there is shortage of rain or a political crisis the demand curve moves towards the left (and the price reduces).

"The market" automatically finds the new optimum price for patients and health facilities taking into account all the complex factors which influences supply and demand. These factors also include how each health facility is organised, its managers' capacity, motivation of personnel, the state of the infrastructure, social marketing strategies, the presence of equipment and drugs, etc, etc. According to economic theory it is quasi-impossible for central planners to know and master all these supply and demand factors, which vary per province, district and health facility. Unfortunately, this is what decision makers in the health sector often do: They tend to fix ceilings for user fee tariffs for ethical or populist political reasons and they will then be confronted by the famous "invisible hand" of Adam Smith, mostly at enormous cost for the society at large.

A typical example was found in **Burundi** in 2006 when government under pressure from some donor agencies introduced a poorly implemented free health care policy. It resulted in immediate loss of revenues for government health facilities, which were not compensated. It led to chronic labour unrest, qualified staff abandoning rural health facilities and for the population of poor quality care with long waiting times and lack of respect by staff. In 2008 a study found that in fact women in provinces where there was only the free health care policy paid more for deliveries as health facilities had found indirect tariffs for transport and food purchases. Patients also started to go to religious health facilities that did not provide free health care and other services such as family planning suffered as health staff reduced.

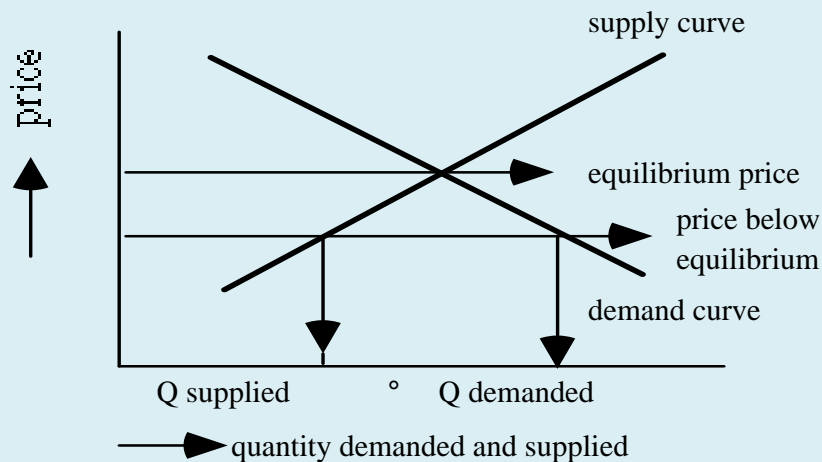
## 2.10 How to use market instruments to enhance social aims

In the logic of the free market, instead of imposing unrealistic prices on the market, governments should use market methods to achieve social aims.

**Examples of market oriented solutions:** Services that have high positive externalities (certain health services such as immunization or family planning) or public goods characteristics (information concerning safe sex and use of hygienic practices) should be subsidized. Imperfect information should be countered by information campaigns and sometimes regulation to prevent unqualified firms or providers to enter the market. Firms or government departments seeking their power to monopolise market share should be punished and competitors should be encouraged to enter the market. Insurance markets have also many problems. Moral hazard implies that insurance fund members, knowing they need not pay for health services, abuse the system and make excessive use. This can be corrected by co-payments. In low income countries there are also better alternatives for insurance systems to achieve the same social goals such as performance based financing. Adverse selection by insurance companies only to select healthy young costumers should be regulated to avoid that insurance companies deny entry for patients.

### Example: How to influence the user fee tariff of a health facility?

- Fixing user fee prices in health facilities nation- or even at provincial level is a wrong answer to the socially desired goals of improving financial access for patients in general and the poor in particular. It will create prices below the equilibrium price which the law of supply and demand shows has more negative side effects than the benefits of the desired social goals. This is reflected in the following diagram.

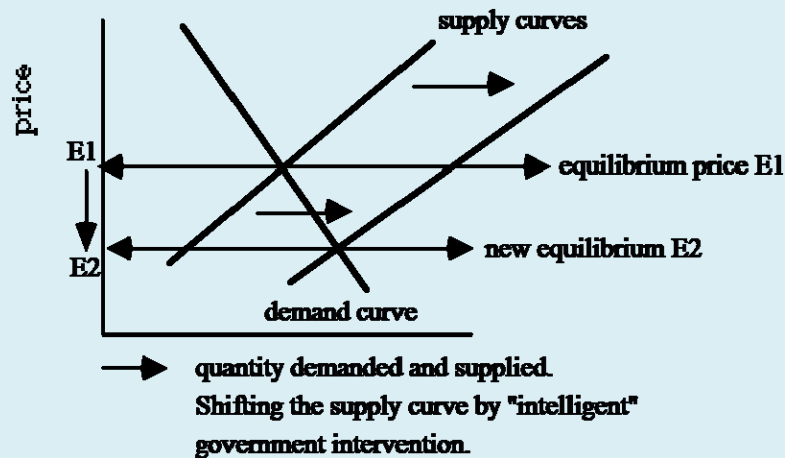


### What alternative exists to influence the market?

An economist can influence market price by the use of subsidies. *Examples:*

(a) Subsidies for curative care in health facility => to move the supply curve to the right.

(b) Taxes on the alcohol or cigarettes => to move the demand curve to the right.



**A pure monopoly** is an industry in which there is only one supplier of a product for which there are no close substitutes and in which it is very difficult or impossible for another firm to coexist.

There are only few situations where monopolies are justified such as patents whereby a company is allowed to protect the investments made to discover and test new drugs. However, mostly monopolies are undesirable and harmful to society. It leads to inefficient use of scarce public resources, poor quality services and too high prices for commodities. Sources of such monopolies are barriers to entry such as legal restrictions (drugs distribution system in DRC), control of scarce resources (such as the South African diamond syndicate) and large sunk costs (such as Boeing airplane industry in large aircrafts such as the 747 jumbo jet until when the Airbus 380 entered the market), technical superiority (Microsoft on Windows computers) and superior skills (during a certain period, for example knowledge on PBF and, between 2002-2009, few NGOs had technical skills to deliver PBF).

**Governmental interventions** are necessary to correct the abuses of the monopolist with the aim to improve the market efficiency and improvement in price – quality ratio's. It is through competition that prices will decrease and that quality increases because suppliers aim to attract customers with the objective to make a profit and to survive.

**Natural monopoly** designates an industry or a supplier the advantage of mass production, thus one single firm can better respond to the totality of market demands at a lower cost than when several firms or suppliers give smaller quantities.

#### **Example of natural monopolies: Railways and a district hospitals**

It is not efficient to construct two railways next to each other. It is also possible to consider a district hospital to be a natural monopoly because it would be wasteful to build two district hospitals for a population of 100.000 inhabitants next to each other. It is therefore not logical to build new railways or hospitals for natural monopoly reasons. However, to stimulate competition, it is possible to change the management of the hospital or to have several companies operating different train companies on the same railway tracks. Furthermore, government may also stimulate the private sector to open new hospitals that compete with government managed hospitals.

## 2.11 Introduction to Health Economics

**Definition health economics:** the study of scarcity and choice within the health sector.

Health has no price, but it has a cost and resources are limited. Therefore it is necessary to apply free market techniques for the rational and efficient management of limited public resources. We identify three types of efficiency: (1) *Allocative efficiency*. Which health interventions obtain most health gains: immunization instead of cardiac surgery? The efficiency ratio is often expressed in DALYs =- disability adjusted life years); (2) *Technical efficiency*. How can an intervention be carried out most cost-effectively such as for example using fixed or mobile strategies for an immunization program; (3) *administrative efficiency*. For example the question whether health programs should be monopolistic or competitive; decisions should be central or decentralized, etc.

It is a very young discipline as in the 1960s & 1970s and still during the 1978 Alma Ate conference on Primary Health Care there was little attention for scarcity. The “sky was the limit” because health should not have a price. However, with the rapid technological advances in the industrialized countries and the failure to provide even basic health care in developing countries the question of scarcity and distribution of limited resources became undeniable.

**Health economics objectives:** health economics aims at providing tested theories leading to best practices on how to provide quality and equitable health services while making the most efficient use of scarce resources.

**In the macroeconomic perspective** health economics studies the importance of health for the economy as a whole and for example what is the optimal cost for health care as a proportion of the total economy. Health economics principles may also be used to enhance economic growth through economic multiplier effects and to study how to stabilize the demographic situation on a given country.

**In micro-economic perspective:** Make the most effective use of limited resources and to distribute between primary, secondary and tertiary care in terms of curative and public health interventions.

### **Different types of costs**

**Direct Cost** = monetary value of articles and of services linked to direct care = medicines, salaries, consumables;

**Indirect Cost** = monetary value of articles and services not linked to direct care = depreciation of facilities & equipment, transport and food costs for patients.;

**Marginal Cost** = monetary value of an additional unit;

**Average Cost** = Average of monetary values of units.

## 2.12 Demand for health care

In economics, demand comes from a need and the consumer interest is to maximise his or her satisfaction of that need by obtaining the most satisfying quantity of goods or services. What is it in the health sector?

### **There are three types of health needs:**

- Patient or *consumer felt needs*, which are usually also expressed. The treatment of pneumonia is usually a felt need for the individual but often also confirmed by the health provider.
- *Professionally determined needs* defined by experts or by government and not necessarily felt by individual patients or consumers. Bad personal hygiene and sanitation, polluted water or unsafe sex can be a professionally determined problem that needs to be addressed but which not felt by individual.
- A *non satisfied* need felt and expressed by consumers (and professionals). This is also called unmet demand for a given health service. Non satisfied demand may be caused by financial

problems (curative care) or by the non-existence of the services (HIV/AIDS, family planning services, delivery care).

Illness is usually unexpected and can therefore not be planned such as how an individual can plan for the purchase of a computer or a car. Patients do not know in advance whether they will become sick and, if yes, what will be the cost.

### **2.13 Health services supply**

Health services are produced by the following input factors: capital, human resources or labour, land and equipment and organisation. However, the factor “organisation” is often misunderstood as if this will be automatically available. In fact, it is this is the key to success as only entrepreneurship can ensure to put new services into effective use. Therefore entrepreneurship is the major source of growth and development potential. Countries always have several untapped sources of development, which are often ignored. Besides the official (government) health services there may be several other private health providers both formal and informal, pharmacies as well as traditional healers. These health services may either be homogeneous (a private or a government health centre) or substitutes (a health centre and a pharmacy or traditional healer).

**Increase of supply in the health market through scientific research:** By developing new health diagnostic and therapeutic methods it allows uncertainty in the outcome of illness to a state of certainty. Raising the health status of the population by research creates new services (supply) as well as demand for health services. For this reason health services and costs in the health system tend to be ever rising. For example in the USA health costs constitute more than 14% of the gross domestic product. In Europe this is approximately 12% but in Africa it is often below 10%.

### **2.14 Health Market Failures**

#### **1. Asymmetry of information.**

In economics, symmetry exists when suppliers and consumers have the same information about the market transaction. When two people negotiate a deal for which one of them has more information this constitutes a market failure. There is asymmetry of information.

This problem is more common for transactions in health than for example in the buying and selling of food or bicycles. Yet it should not be overlooked that also in health care markets there may be situation of perfect knowledge and therefore the potential for perfect competition. For example, an individual with an headache or a simple respiratory infection, searching for paracetamol or an antibiotic cure. In this case there is **symmetry of information** because the patient understands his problem, knows what he is looking for, the doctor agrees and prescribes the requested drugs. However, when a patient has thorax pain, the problem is complex for the patient. Is it a simple muscle pain or a potentially fatal heart problem? Here doctors have superior knowledge on how to diagnose whether the problem is serious or not and what treatment to propose. In this case, there is **asymmetry of information**. The service provider knows better what is the problem as well as how to solve it. In this scenario the doctor identifies the demand for care on behalf of the consumer e.g. “supplier induced demand”.

#### **2. Externalities and public goods**

In economics, an externality or spill over of an economic transaction is an impact on a party that is not directly involved in the transaction. In such a case, prices do not reflect the full costs or benefits in production or consumption of a product or service. A positive externality is called an external benefit, while a negative externality is called an external cost. Producers and consumers in a market may either not bear all of the costs or not reap all of the benefits of the economic activity. For example, manufacturing that causes air pollution imposes costs on the whole society, while fire-proofing a home improves the fire safety of neighbours.

**Positive Externalities:** e.g. Tuberculosis treatment or vaccination. The individual patient or person may demand less care in comparison with what is desirable for the society. A tuberculosis patient may not be willing to make great efforts to be treated out of fear or depression. While this can be understood for the individual it is dangerous for society as this will further spread infectious diseases. Equally a mother may not be willing or too busy to vaccinate her child while this will reduce the herd immunity against polio or measles.

**Negative Externalities:** Pollution, alcohol, cigarettes, fish farming (which stimulates the mosquito growth and thereby malaria). Pollution producers such as a cement industries are not primarily interested in the protection of the environment because corrective measures may increase their production costs and therefore reduce profits. Yet, for the society pollution is important so that government must take actions to protect the environment.

A **public good** is a commodity or service, which benefits everybody but it is impossible to exclude people to benefit. This is also a market failure because, if left to the free market, there will be an under supply of those public goods because nobody in the market is willing to pay for it. Examples: information on dangerous health practices, roads, security forces. Government may then step in to seek a collective solution by financing it – this is also called a merit good.

### 3. Insurance market failures.

Health insurance markets are particularly prone to market failures.

**Moral risk** is the tendency of overconsumption and overproduction of health services when the person using those services is not the one who directly pays. This is the case when there is a third party, who pays the bill such as an insurance company. There may be the moral risk of the **patient** but also the moral risk of the **service provider**, who knows that the patient is insured and may therefore increase the services provided for financial gain. Moral risk may be corrected by co-payments (fixed amount or proportion of total bill paid by the insured), and deductibles (own risk). This increases the out-of-pocket spending of consumers, which decreases their incentive to consume. Thus, the insured have a financial incentive to avoid making a claim

**Adverse selection** describes the tendency for only those who will benefit from insurance to buy it. Unhealthy people are more likely to purchase health insurance because they anticipate large medical bills. On the other side, people who consider themselves to be reasonably healthy may decide that medical insurance is an unnecessary expense; if they see the doctor once a year that's much better than making monthly insurance payments. However, then the expenditures incurred by the risk prone patients will make the average premiums higher so that even more less risk patients will leave the insurance system. This makes an insurance system more and more expensive and may, finally, lead to the bankruptcy of the system. This is unfortunately very common with voluntary health insurance systems in developing countries.

**Cream skimming** happens when low-cost people select an insurance plan. Cream skimming occurs when an insurer knows more about consumers' expected costs than the consumers themselves and enroll a healthier-than-usual population. Insurance companies are more interested to insure individuals who have a smaller chance of falling sick than those who have a high risk of becoming sick and therefore to incur expenditures. They will therefore prefer health, young people and block entry for those patients who have high risks (diabetes, HIV patients, and elderly patients).

### 2.15 Health Financing Systems

There exist several systems for financing health services:

1. **Central provision and financing of health services or national health system.** This type of Alma Ata or Primary Health Care (PHC) health financing aimed at “**Health for All**”. It applied mostly free health services provided by government health facilities. These PHC systems were proposed to operate through district health systems, which were until recently still

supported by the WHO. It was based on a public monopoly system whereby health provision, regulation and fund disbursement was all assured by the same hierarchy of Ministry of Health, Provincial and District Health Authorities. This system was often associated with centralized decision making about health facility management procedures and the distribution of inputs such as drugs, infrastructure and equipment. Private sector partnerships tended to be ignored. There exist little evidence that such government financed and provided systems are cost-effective. In particular in developing countries the results seem dubious at best.

2. **Compulsory health insurance** – employers and employees have to pay premiums for the health services and an independent insurance company (or the central government) negotiates fixed reimbursement for a well defined set of health service benefits for the insured patient. The advantage of compulsory insurance is that it prevents the problems related to adverse selection and cream skimming. Governments often heavily subsidize as realistic premium payments would make the system too expensive, in particular for the poor. In more affluent countries employees pay a proportion of their salary for health insurance of around 7%. Insurance systems have high administrative costs for premium collection, auditing results. The proportion of administrative costs in low-income countries may become extremely high (up to 50% of total cost) because after the fixed administrative costs are paid there remains little to pay for the variable reimbursements of the health expenditures incurred by the insured.
3. **Voluntary pre-payment system or “mutuelles”**. Community based health insurance systems are based on the voluntary contributions of the insured. These systems tend to have a positive effect on risk sharing for those who are members. Only the relatively wealthy tend to adhere as the very poor may consider the premiums too high and citizens with a per capita income lower than \$ 200 per year rarely adhere to voluntary health insurance. For them other expenditures such as food or schooling may be more important. Voluntary insurance system in low income countries tend therefore rarely to be equitable. When the State invests a lot of money in “mutuelle” systems it may even be “anti-poor” as wealthy socio-economic groups benefit relatively more than the poor. From the perspective of equity the opportunity cost may be very high as there exist more effective performance based financing systems that better protect equity. In summary, the feasibility of health insurance systems in low income countries is limited because a large part of the economy is informal and the administrative costs are relatively high. In mid income countries, the feasibility of health insurance is more favourable because demand comes automatically (even without intervention of the State) from the income growth of households.
4. **User fee payments** either per activity or with a flat fixed fee system. It implies self-financing of care by individuals through direct cost recovery. User fees may negatively influence the utilisation of health services when the tariffs are too high for the consumers. The problem with tariffs per act is that the expenditures are not foreseeable for patients and therefore constitute a risk which can become catastrophic for a household. Flat user fees have the advantage of sharing the risk with other patients and thereby constitutes a form of solidarity among patients. The disadvantage of flat fees is cost-escalation as patients tend to claim the full benefit of their payment.
5. **Performance Based Financing** is the ‘transfer of money or material goods conditional upon taking a measurable action or achieving a predetermined performance target’. PBF is broader than the mere establishment of contracts but also aims to reform the relationships between consumers, providers, regulators and fund holder agencies in order to make performance contracts effective. In this payment system public money is used to pay for results (= output + quality) instead of paying in advance for inputs. The advantage is that health facility managers can then use the money in the most cost-effective manner to increase their production and therefore their revenues. It stimulates well performing health facilities and penalizes poor performance with lower revenues. The system is still new and despite the growing evidence base action research and scientific intervention control studies are still required. It is likely to

gradually replace the old Primary Health Care paradigms of the last decennia such as described above under the central provision and financing of health systems.



## 2.16 Which health financing system is the best?

Revenues for health services may be obtained from national and international taxes (through aid agencies). **Free health care provided by health facilities is based on taxes** such as the UK based "National Health Service", which is also common in several English-speaking African countries. The outcomes of such "free health care" financing systems are usually poor. Willingness of external aid agencies to invest in health systems in Africa constitutes an opportunity. However, it can also mean a restraint to development of endogenous of sustainable financing systems because external support is often neither efficient nor reliable.

Insurance systems equally have problems and a system only based on direct user fees is likely to create serious financial access problems for the population. Probably the best health financing system is a mix of systems whereby part of the funding is obtained by the State through taxes and whereby fund holders organisations at decentralized level negotiate the best possible outcome with health facilities through performance contracts. Revenues can also be obtained by obligatory and voluntary health insurance systems while direct user fee payments by patients to health facilities should remain an important source of revenues.

There is no good or bad financing system. The "ideal" system depends on several factors: the available government resources, the purchasing power of the population to pay insurance premiums as well as the historical development of the financing system. However, one should never forget that **efficient use of limited resources** can best be done by free market techniques also if the aim is to correct market failures.

## 2.17 Exercise

### **Exercise on Microeconomics**

For each concept of the left, associate one or (several) word (s) / a key idea at the right.  
(Your neighbour appreciates the association and makes short comments).

When all other factors equal	-	Only price influences demand and supply
Often leads to black market	-	Demand curve
Neither benefit nor deficit	-	Free market economics
Market instrument to influence price	-	Applied to protect interests of suppliers
Price floor	-	Ceiling Price
Descending curve	-	A condition for perfect competition
Meeting demand and supply	-	Subsidy

- Approach to distribute scarce resources - Imposed prices
- Free entry and exit in market - Equilibrium price
- Interventionism of the State - Balanced revenues and expenditures

**Exercises on Health Economics**

For each concept of the left, associate one or (several) word (s) / a key idea at the right.  
 The neighbour appreciates the association and makes small comments.

- Health Insurance - Tends to create black market effects
- What tends voluntary insurance not to do - To create equity
- Positive externalities - Corrected by paying small fee
- Health market failures - Protects against risk of unexpected illness
- Free health care - May be taxed to decrease demand
- Public goods - Centralised distribution of inputs
- Negative externalities - Economic multiplier effects
- Traditional financing approach - May be corrected by market techniques
- Moral Risk - May be corrected by subsidies
- Decentralised subsidies in cash - Nobody can be excluded from benefiting

### 3. PBF Theories & Best Practices, Good Governance and Equity

Robert SOETERS, Peter Bob PEERENBOOM

#### 3.1 Objectives

- Identify and apply the theories and best practices linked to PBF.
- Identify and apply the elements of good governance in organizations, countries and PBF.
- Know and use the mechanisms of financial and geographical equity.

#### 3.2 Theories linked to PBF

The main theories on which performance based financing are based are the following:

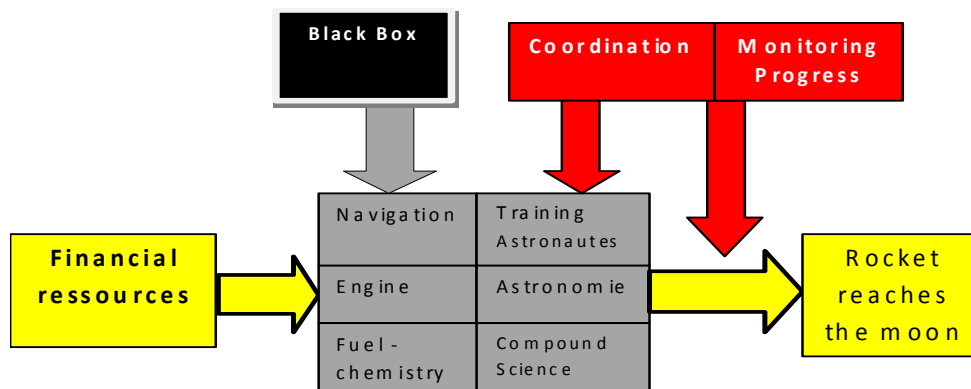
1. Economics and free market principles
2. Systems Analysis
3. Public Choice
4. Health economics & public health
5. Contracting theories and PBF best practices

##### 3.2.1 Economics and free market techniques

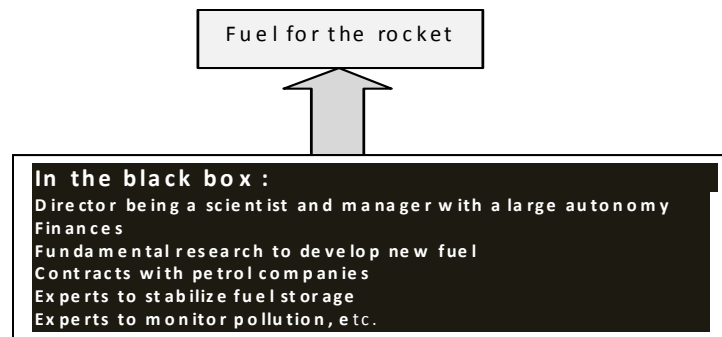
The free market economy is adopted by most countries worldwide as the best approach to distribute scarce resources and it is linked to a society which accepts democracy, seeks partnerships with the private sector, promotes the free choice among patients for health facilities and encourages competition among health providers for patients. Yet, in some countries decision makers argue that free market principles should not be applied in the health market because of the market failures to achieve social objectives and that for that reason the health system should be based on central command and control. Is this indeed the better alternative? In this book we present the arguments why free market principles should still be used but that health market failures should indeed be taken seriously. Market failures can be corrected by also applying market economics techniques (see chapter 2).

##### 3.2.2 Systems Analysis

Systems Analysis theory has been developed to understand complex and interactive systems such as how to launch a rocket to the moon or how to construct a modern aeroplane such as the Airbus 380. Systems Analysis studies the relations between the different components of a system. The basic idea is that while each of the components is treated as independent and autonomous (the black box), that it requires coordination assuring that in the end objectives are indeed achieved.

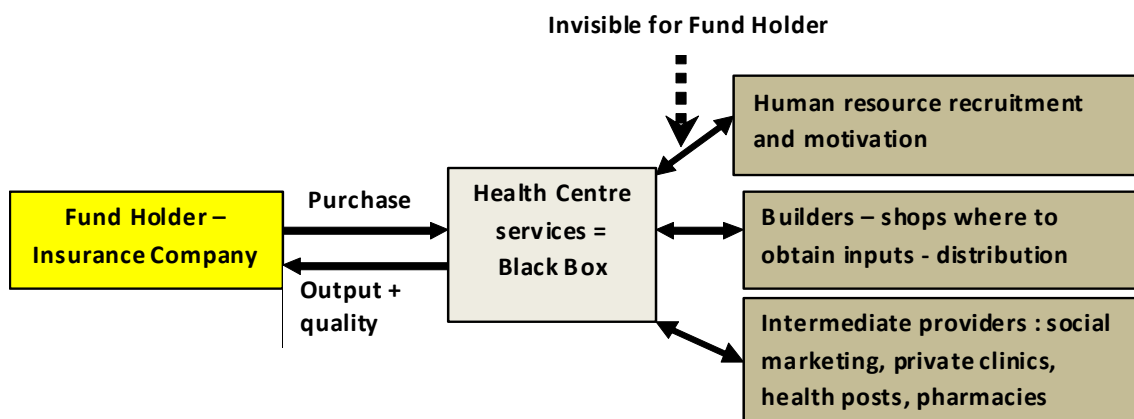


For example, is it possible for any person to understand all the details of how to launch an Apollo rocket to the moon? Details such as how to construct the engine, what fuel to use, how to navigation, which software to use, how to select and train the astronauts? Of course the answer is NO. Therefore, the managers coordinating the project consider each component as independent (the black box), which must be managed by an autonomous specialised team. For example for the fuel, it requires autonomous research directed by an expert manager, the recruitment of experts in chemistry & financing, how to collaborate on the project by an oil producer, etc. The details of producing fuel can only be understood by the director of the fuel component. As a result, the rocket does not explode, it can resist very low temperatures, and it is sufficient to reach the moon and to return, etc. The coordinator of the moon rocket project will judge the fuel department in how far they achieve the specific objectives and for that purpose signs a performance contract with the director of the fuel component.

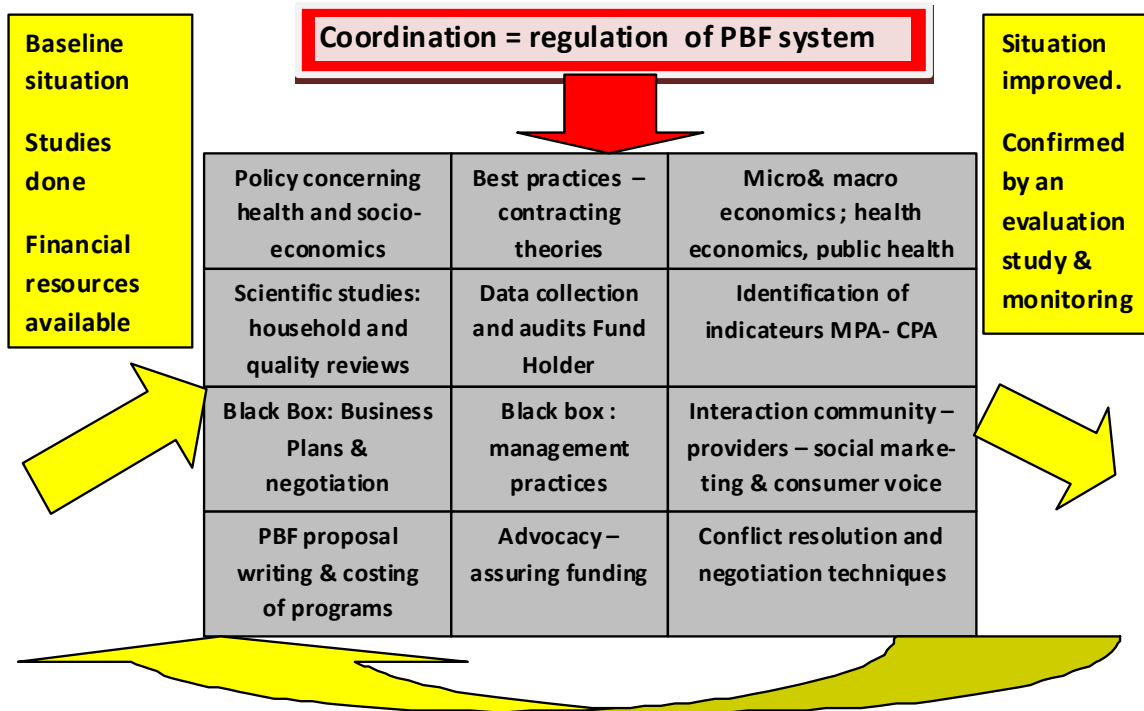


Performance based financing system is equally based on systems analysis theory. Neither decision makers at national level nor managers at fund holder level know all the management, logistics and financial details of each health centre catchment area because they are too complex and specific taking into account all the problems but also opportunities that exist. Attempts to control the system from above will therefore always fail and may create more damage to society than would be the case if health centre managers (similar to a department director producing fuel for the moon rocket project) were put on performance contracts to render available to the population the health package identified by government. In systems analysis the health centre is considered a black box because only the manager, the health committee and the personnel control all the strategies, know all the inputs and where to obtain them, how to conduct the social marketing and which are the opportunities to collaborate with private providers in the catchment area, etc. However, this does not mean that the internal procedures of the health centre are not transparent. On the contrary the procedures are clear but the managers have the full autonomy to make decisions without all the time to consult higher managers.

**The health centre is an autonomous black box or economic actor**



The diagram below shows the 12 basic components or modules of the PBF system. The 13<sup>th</sup> component is the coordination, regulation or “steering wheel” of the system, which assures that the 12 basic components are oriented towards the improvement of the health status of the population.



### 3.2.3 Public Choice Theory

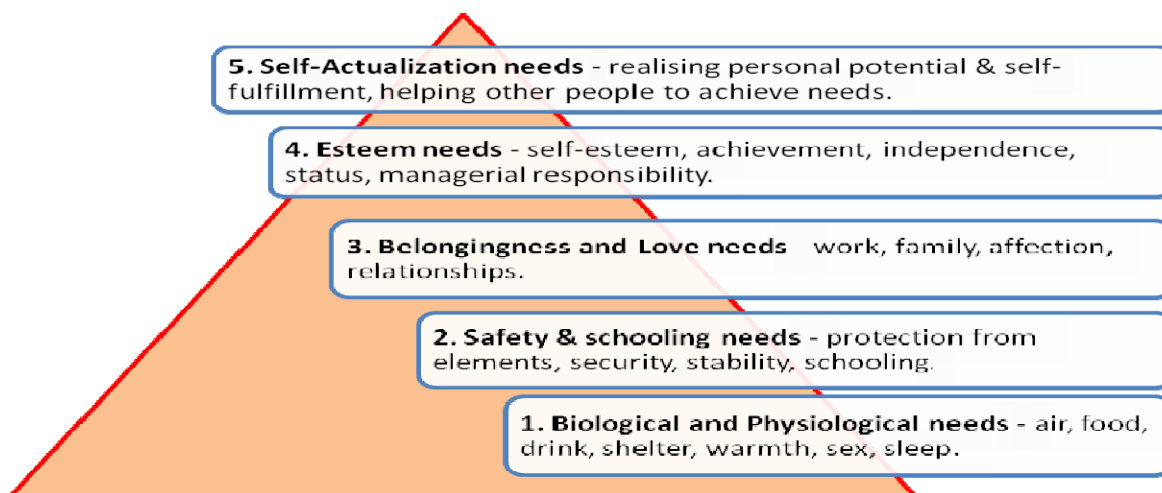
Public Choice theory describes stakeholder behaviour in general and the behaviour of civil servants in particular. The objective of public choice theory is to develop a model that best describes the likely behaviour of different actors. The importance to predict the behaviour of civil servants is that they are supposed to defend the public interest. What are the conditions under which they indeed do so? In a free market system each economic agent aims at maximising his private interest. If both suppliers and consumers aim at maximising their own benefit under perfect competition conditions this will also maximize also the public interest by making the most efficient use of limited resources. A similar arguments can also be developed for the behaviour of civil servants.

#### **Which theory better explains the behaviour of civil servants?**

- (a) Public interest behaviour
- (b) Medical ethics behaviour (*Oath of Hippocrates*)
- (c) Private interest behaviour

There are civil servants, who may act following the public interest or medical ethics- behaviour. In industrialized countries the salaries of civil servants are high enough to meet basic needs and it may be assumed that they focus on their social tasks without being tempted to corruption or self-enrichment. However, when reading newspapers it becomes clear that this is unfortunately often a wrong assumption. So what to expect in a in developing countries when the salaries of civil servants may not exceed \$ 100 per month not satisfying basic needs such as food, housing and schooling fees for their children. Public choice theory does not assume that civil servants protect the public interest but it seeks positive and negative incentives so that it becomes attractive for an individual civil servant to defend the public interest. In other words: “The private interest (of the civil servant) and the public interest become the same”.

The Maslow's hierarchy of needs may further help us to understand the behaviour of individuals such as shown in the following diagram.



Only when the lower order needs of physical and emotional well-being are satisfied are we concerned with the higher order needs and personal development. It is clear from the diagram that few civil servants in developing countries have achieved the fifth level of self-actualization whereby they start helping other people to achieve their needs.

PBF public choice theory therefore proposes the following positive and negative incentives to motivate different stakeholders such as health workers, regulatory and fund holder staff, local community group members, etc?

**Positive incentives:**

- **In the first place it is** necessary to reach a level of remuneration (consisting of salaries and performance bonuses), which can support a family in terms of food, clothing, habitat and schooling for children. This issue is part of the baseline study for each new PBF intervention and often the conclusion is that the remuneration of key actors should double or triple.
- The **Second** important principle to motivate stakeholders is that the entire remuneration should not be fixed. Part of it should be variable through performance bonuses. This is in line with the principle according to which *«more work produces more rewards»*. In PBF, the proportion of salaries compared to performance bonuses is suggested to be around 50% - 50%.
- The **Third** public choice principle is that there must be an administrative and political atmosphere of transparency with check and balances.

**Negative incentives:**

- Contracts may not be renewed in case of non-achievement of targets and objectives. Performance contracts with health facility managers usually have a three month duration. When performance is reasonable contracts will be renewed without problems if the new business plan is convincing. When there are minor problems the fund holder may delay approval of the business plan (and the contract) until a new more convincing business plan is made. When the performance of the health facility is so poor that it is unlikely that targets will be achieved the contract may be ended and a new health facility or management team may be invited to propose a business plan. Problems with religious health facilities sometimes occur when they refuse to render family planning services to the population. This may be solved by giving the religious health facility a sub-contract with another health facility in the same catchment area. This implies that the complete health package is then assured by the health facility with the principal contract so that the gaps left by the religious health facility are filled.

- Another important instrument of public choice is to create check and balances between the main stakeholders for better control and transparency through the separation of functions and notably between health providers, the regulator and the fund disbursement agency.

#### 3.2.4 Health economics, public health & decentralisation

**Health economics** is important to study health care markets (supply, demand and equilibrium), to identify its market failures and the mechanisms to correct those failures by also applying market oriented techniques.

**Public health** is another important discipline for PBF as this will determine cost effective interventions such as specified in Minimum Package of Activities and Complementary (hospital) Package of Activities.

In PBF, **decentralisation** is a key principle as it better allows local decision makers and stakeholders to efficiently influence the health services and to enhance empowerment.

##### **The levels of decentralisation are:**

- Deconcentration.** This is the first step moving away from a centralized command and control decision making system. It provides some powers to delegated local authorities to exactly implement national policies. However, they do not have the power to change any of the national procedures or instructions. It is sometimes described as a form of decentralisation whereby local authorities function as the “marionettes” of national decision makers.
- Administrative geographic decentralisation** allows the transfer of health responsibilities and decision making powers to peripheral (provincial or district) authorities. This may include decisions on changes in the health package or with whom to contract health services. This is particularly important in large countries such as DRC or Indonesia where provinces and districts greatly differ from each other.
- The **autonomy of health facilities** aims at giving legal autonomy to health facilities. This may also be done for government health facilities. Government continues to own the health facility but the management is autonomous concerning recruitment of staff (hiring and firing), use of resources and establishment of user fee tariffs. This form of decentralisation is usually applied in performance based financing. It implies the purchaser – provider split whereby the regulator, the fund holder and the health providers have each their distinct responsibilities and powers. This system has as additional advantage that it facilitates to treat government, religious and private health facilities exactly the same without any discrimination.
- The most advanced form of decentralisation is **full privatisation** with the transfer of public assets to the private sector. In such systems (such as for example in the Netherlands) government plays mainly the role of regulator of the health market and assures the financing for the health services through general taxes and regulating the health insurance system. From a PBF perspective this is probably the most desired form but in many countries this may not be feasible for political reasons.

#### 3.2.5 Contracting theories related to PBF

In the **contracting process** usually the following phases take place: (a) the preparation; (b) the formalisation of the contracting relation; (c) the implementation of the contract and; (d) the end of contract which can lead to renewal, non-renewal or renegotiation.

**A valid contract** must fulfil the following conditions: (a) free and informed consent by both parties; (b) the partners must have a legal status; (c) the contract cannot incite to illegal behaviour according to the law; (d) the contract objective and targets must be certain and verifiable.

**The elements of a contractual arrangement are:** (a) A voluntary alliance between independent partners which comes with reciprocal rights and responsibilities; and the partners expect benefits from their relation; (b) The benefits of the contract are not altruistic; both parties aim at making profit and to benefit from the contractual arrangement and.

How to respect the terms of the contract varies depending on whether it concerns a classical or a relational contract.

### **A classical and a relational contract**

A **classical contract** is characterised by: (a) a clear contract objective; (b) The contract is limited in time; (c) Partners know exactly the what, when and how of the contract; “the future is foreseeable”; (d) The contract is opposable in the legal sense; (e) The contract is usually developed by a call for tenders. Examples of classical contracts are the building of a home or the contracting of laundry and security services of a hospital.

**Limited rationality:** The reality of health services is often more complex and it is therefore difficult or impossible to predict the future. Unexpected events can occur such as epidemics, change of available resources due to aid agencies not honouring their commitments, wars, coups d'état, bad harvests influencing the purchasing power of patients, etc. Thus, **limited rationality** is the fact that the partners of the contract may not know the future about their relationship although at the same time they have a mutual interest to enter into a contractual relationship.

It is therefore called a **relational contract**. Often such contracts must necessarily be vague and incomplete. The contract duration cannot objectively be set by the partners and it must be done in partnership and interdependency. It requires mutual trust because there is need for flexibility in case of unexpected events. It is difficult to go to court especially because the contract is established in a partnership framework. Such contract are very common in performance based financing. Examples are the relationship between government and aid agencies; NGOs playing the role of fund holder organizations and health facilities; private clinics with a sub-contract with a principal contract health centres, etc.

### **3.3 Good Governance**

**Dr. Peter Bob Peerenboom and Freddy Batundi**

**Good governance** is to run, control, influence, and manage public affairs of the country by cooperation between legislative, judicial and executive powers for the public interest of society. Any governance involves authority (right to command obedience) and power (the exercise of authority). Good governance implies that power and authority are not exercised by one individual or group.

#### **Purpose of good governance**

Good governance aims at directing the population towards self-determination (possibility of making a free choice) and self-help (taking over its own development). Good governance leads to more democracy whereby people govern themselves. Good governance is characterised by the cooperation between three entities.

Examples:

- In the political domain, there is a political triangle: the *legislator* / regulator (the National Assembly), the *executive* (the Government) and the *judicial* system.
- In financial management, there is: the *manager*, the *accountant* and the *cashier*.
- In PBF: the *regulator*, the *purchasing agency* and the *health care provider*.

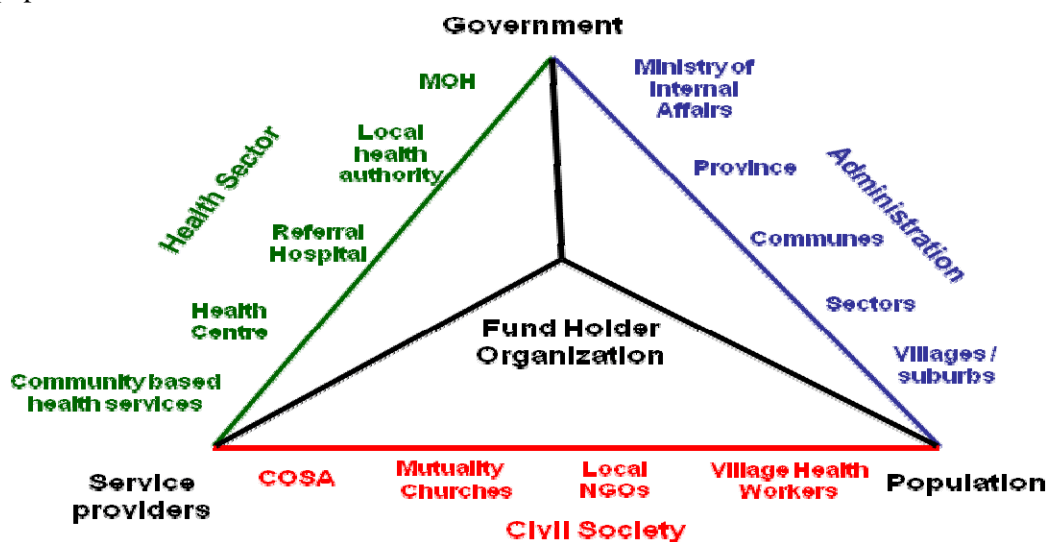
To assure stability, the triangle must be equilateral. To make this triangle, it is necessary to ensure: (a) the multiplicity of actors; (b) the separation of functions and to create check and balances

among actors; (c) to clearly describe the responsibilities among actors; to clearly describe the procedures and mechanisms of negotiations.

**Eight key characteristics of good governance:**

1. **Participation:** the government must listen to different viewpoints of the population on how public affairs should be conducted.
2. **Transparency:** the government must report on his management and must take responsibility for decisions taken. Documentation of government management must be comprehensible, clear and within reach for all.
3. **Search of consensus** (by negotiation): Good governance requires dialogue and consensus between government and the people on decisions which affect them.
4. **Responsibility:** Good governance requires that authorities get involved in finding solutions to people’s problems. Authorities have to promote collective well-being by creating a favourable environment for development (see also chapter 1 on national policies).
5. **Permanent monitoring and evaluation:** Good governance practice allows partners to monitor and evaluate each other.
6. **Access to information:** Good governance assures access to information for all. This informs the decision-making in the free choice of the population.
7. **Equity and Inclusivity:** In Good governance the resources of the country are exploited for the common interest. Good governance promotes solidarity, patriotism, respect for others, mutual acceptance and unity among the people.
8. **Sensitivity to complaints:** In good governance, governments are sensitive to people’s situation; they make sure that people’s problems find appropriate solutions.

Good governance pyramid of the Fund Holder Agency consisting of four triangles: (a) Service provider– regulator – population; (b) Service provider – regulator – purchasing agency; (c) Population – regulator – purchasing agency; (d) Service providers – purchasing agency – population.



3.3.1 Group work exercise

- Discuss how good governance is promoted by the relations in the PBF triangles.
- Identify how good governance can be promoted in the management of a health centre, a fund holder agency or a district team?

### 3.4 Best practices in performance based financing

#### The eight best practices in Performance Based Financing

1. The need for health managers to balance revenues and expenditures;
2. Autonomous management of health facilities;
3. Collaboration between public, religious and private health facilities;
4. Importance of health facility competition for contracts;
5. Importance of the health facility's free choice for its suppliers of inputs;
6. Importance of payments of subsidies only in cash and not in kind;
7. Separation of functions of main health system stakeholders;
8. Extension of performance purchasing towards other sectors than health.

A best practice is an approach or principle that can be used to predict the future and which is based on a tested theory for which there is evidence that it works such as for example proven in an intervention control study. PBF programs aim to base their approach on scientific evidence, which should continuously be improved and adapted to specific local circumstances. A scientific PBF design compares the situation between an intervention area before and after the intervention with a comparable control area. Ideally, the only difference variable between the intervention area and the control area is that PBF best practices are applied or not.

PBF programs have been under heavy criticism and scrutiny during the last years. Decision makers and scientists correctly ask “does it work” and “are public funds used wisely”. This even more so because performance based financing such as defined in this book basically aims at fundamentally reforming the health system. Change may be good, but when it fails the damage may be even larger or the opportunity costs would be too high.

The evidence base for the success of PBF is steadily growing. This does also justify another scientific question: “Does there exist evidence that traditional health systems work such as more central command and control systems oriented towards central decisions on health facility procedures and inputs such as essential drugs?” If the answer is unclear, this further justifies intervention – control studies to be conducted.

#### 3.4.1 The finance law of balancing revenues and expenditures

This law helps health facility managers as well as decision-makers at national or provincial levels to balance their revenues and expenditures at a given level of quality care. If revenues are too low, expenses must be reduced or new sources of revenues should be found. If aiming at higher levels of quality care, it is essential to find new sources of income. In this process, market forces are crucial so that managers innovate and seek efficiency gains to make use of limited available resources. Therefore, when revenues are too low health facility managers should be allowed to seek additional resources for example from cost sharing to assure that minimum quality standards are maintained.

The law of finances is illustrated by following expression:  $P \times Q = G + A + C$ . Whereby

**P** = care unit Price;

**Q** = Produced Quantity of care;

**G** = Contribution of the Government (basic subsidies, salaries);

**D** = Contributions from Donor agencies (inputs, equity funds, grants, etc.);

**C** = Costs recovery: reimbursement from insurance systems, direct user fees (flat fee or per act).

**P x Q** = Expenses engaged by the health facilities;

**G + A + C** = total income of the health facility

### Concerning the financial result of a health facility three situations are possible:

- Income > Total cost: => There is a profit
- Income = Total cost: => There is neither benefit nor deficit
- Income < Total cost: => There is a deficit which requires the balance to be restored.

It is essential to analyse the financial implications of what services are being offered:

- Which health facility services are provided for curative care such as OPD consultancies, in patient care & deliveries and of which quality? The targets for the "outputs" are important but equally the quality standards that should be achieved such as the presence of quality personnel, acceptable waiting time, availability of quality essential drugs and medical equipment, good hygiene and adequate sterilisation procedures, use of flowcharts or partogramme's, etc. Based on the package to be provided and the quality standards to be achieved the costs will differ
- The revenues produced by the health facility activities should be adequate to motivate health workers. This requires a good mix of a basic salary with an individual performance bonus, which should be sufficient to satisfy the basic needs of employees (see above public choice theory).
- When preventive, promotional and more in general public health activities such as immunisation and family planning are included in the package this usually requires high enough subsidies so that the health facility management can establish the user fees at zero.

The instruments for health facility managers to effectively assure that revenues and expenditures are balanced are presented in module 9 (business plan) and 10 (calculation of income, expenses, indices and performance bonuses).

#### 3.4.2 Autonomous management of health facilities

The decision on user fee tariffs should be the responsibility of the health facility managers together with the health committee of a health centre or the board in case of a hospital. Managers should also have the freedom to hire and fire personnel based on the activities to be carried out by the health facility as well as on the available revenues. This implies that the health facility operates as an economic actor in a "market". Being an economic actor management should aim at reducing cost and at increasing revenues in order to become more efficient and to be competitive compared to other health facilities. Managers must achieve their performance targets in the most efficient way which allow them to obtain the PBF subsidies and to assure that contracts will be renewed. If the health facility does not produce good results (perhaps due to the misuse of funds) this usually implies that targets are not reached and thereby risks that the contract will not be renewed. In that case it is the responsibility of the health committee or the owner of the (religious or private) health facility to review why the performance of the management is poor, which should lead to measures that correct the management problems or strategies.

In the « market logic», government should refrain from directly paying health worker salaries through central payment mechanisms as such systems tend to be inefficient and rigid. Governments should be encouraged to leave the responsibility for salary and individual bonus payments to the autonomous management of each health facility. For example, in Rwanda government only pays a fixed lump sum subsidy to each health facility, which roughly covers the basic salaries of health staff but leaves the individual bonus payments to health facility managers to produce from the variable subsidy payments and cost-recovery revenues. This assures that health facilities remain competitive and seek innovation. When they produce more they will generate more subsidies and cost-recovery revenues and this will lead automatically also to higher performance bonuses.

Health facilities must look for local solutions for specific problems. This requires "ownership" by the health facility, **entrepreneurship** in management and continuous **action research**. The fund holder agency and the local health authorities monitor and verify the results. Output is reviewed by

the fund hold and quality by the local health authorities and local NGOs collect information concerning patient satisfaction. All this information can be incorporated in the negotiations about contract renewals.

### 3.4.3 Public-private partnerships: principal and sub contracts

Health facility managers with a main PBF contract are not only responsible for the building where they are working and its staff but also for the entire catchment area including its population and other health entities such as private clinics, pharmacies, etc. Performance financing targets are population-based and the activities of other health providers should mostly be considered an opportunity to improve the health services at large and should not be considered necessarily a “competitor” or a “risk”.

Therefore, the business plan of the health centre with the principal contract may propose sub-contracts with private clinics or establish new health posts under their direct supervision. In underserved areas this may imply actively stimulating new private entrepreneurs to start working in the catchment area. There may also be too many private (informal) health facilities which do not fulfil basic quality standards. By agreeing contracts to a limited number of good quality private clinics the remainder of health facilities with low quality standards may be put under such high competitive pressure that they automatically disappear. However, the decision of health facilities to enter or to exit in the health market should ideally be made in close collaboration with local health authorities, who review in how far a health facility fulfils minimum quality standards. This task becomes easier when those involved health authorities are not themselves working in a (government) health facility. This usually constitutes a conflict of interest whereby the health authority will ignore poor quality practices in the government facility and consider the private provider as a “competitor”.

The Rwandan Ministry of Health became aware that their traditional central administration of government health facilities and health workers was a source of inefficiency, while at the same time they did not want to fully privatise all government health facilities. Health management of government health facilities was then as per 2008 made fully autonomous whereby staff recruitment and salary payments became the responsibility of the health facility management. Effectively, as per 1<sup>st</sup> of January, civil servants previously working directly for the government were transferred to become employees of autonomous health facilities.

### 3.4.4 Health facility competition for contracts

The importance to stimulate competition for contracts is a basic principle in the contracting approach. Without competition, there will be tendency to inefficiency, poor quality of services and disrespect for patients.

### 3.4.5 Importance of the free choice of health facility for their inputs

Monopolising the market of medicines and others items like mosquito nets, must be avoided.

The South Kivu province experience in DRC shows that free choice of essential drugs suppliers among several good quality wholesalers, chosen by the regulator, solved the problems related to the availability of drugs. Before, the province had systematic stock shortages due to the approach of obtaining only drugs from one monopolistic distributor selected by the government.

### 3.4.6 Payment of subsidies only in cash

Payments of subsidies in PBF should only be done **in cash** and not in kind such as through the central distribution of inputs (drugs, equipment, infrastructure rehabilitation and salaries\_. Several studies showed that one US dollar given in cash to a health facility has the same result as \$ 4 invested in inputs such as medicines, equipments, facilities etc.

Some people believe that performance based financing is expensive due to high administrative costs? Indeed the management and administrative costs of PBF programmes should not exceed 30% of total costs and, at least, 70% must be used for the subsidies IN CASH for direct service delivery or community programs. The 30% management charges concern the costs for the health authorities, the fund holder organizations, technical assistance and baseline and evaluation studies.

The \$ 2-3 per person per year required to operate the PBF system is not expensive in comparison with \$ 6-10 a year per person spent in the traditional input financing systems. The World Bank in its 1993 World Development Report suggested that about \$ 12.00 per capita a year was necessary to meet the minimum and complementary health packages. In 2000, the WHO even suggested that \$ 19-34.00 per capita a year would be required including HIV / AIDS and nutrition programmes.

#### 3.4.7 Separation of functions among the main health system stakeholders

In traditional district health systems government representatives usually play at the same time the roles of health provision, regulation and fund disbursement. Performance based financing proposes to separate those functions. It means that the person *producing* the services (the staff of health facilities) is not the same as the person *buying* the services (the fund holder) is not the same as who coordinates or inspects that quality is assured (the regulator).

Furthermore the PBF system also proposes to stimulate independent organizations to assure the consumer voice empowerment of the population. The principles and logic of separating functions are clear and difficult to dispute. However, how to apply this depends usually requires major reforms and requires choices to be made in each specific country on the institutional arrangements.

The main functions and responsibilities in PBF are the following:

*a. Health service provision.* After signing a contract, autonomous health facilities provide services. Contracts are signed by an independent fund holder organization with the manager of each health facility and *not* with individual health workers. Managers have the overall responsibility for the daily running of the health facility and the health committees (for health centres) and boards (for hospitals) . These community representatives should only play a monitoring role but intervene when the management is unable to solve problems.

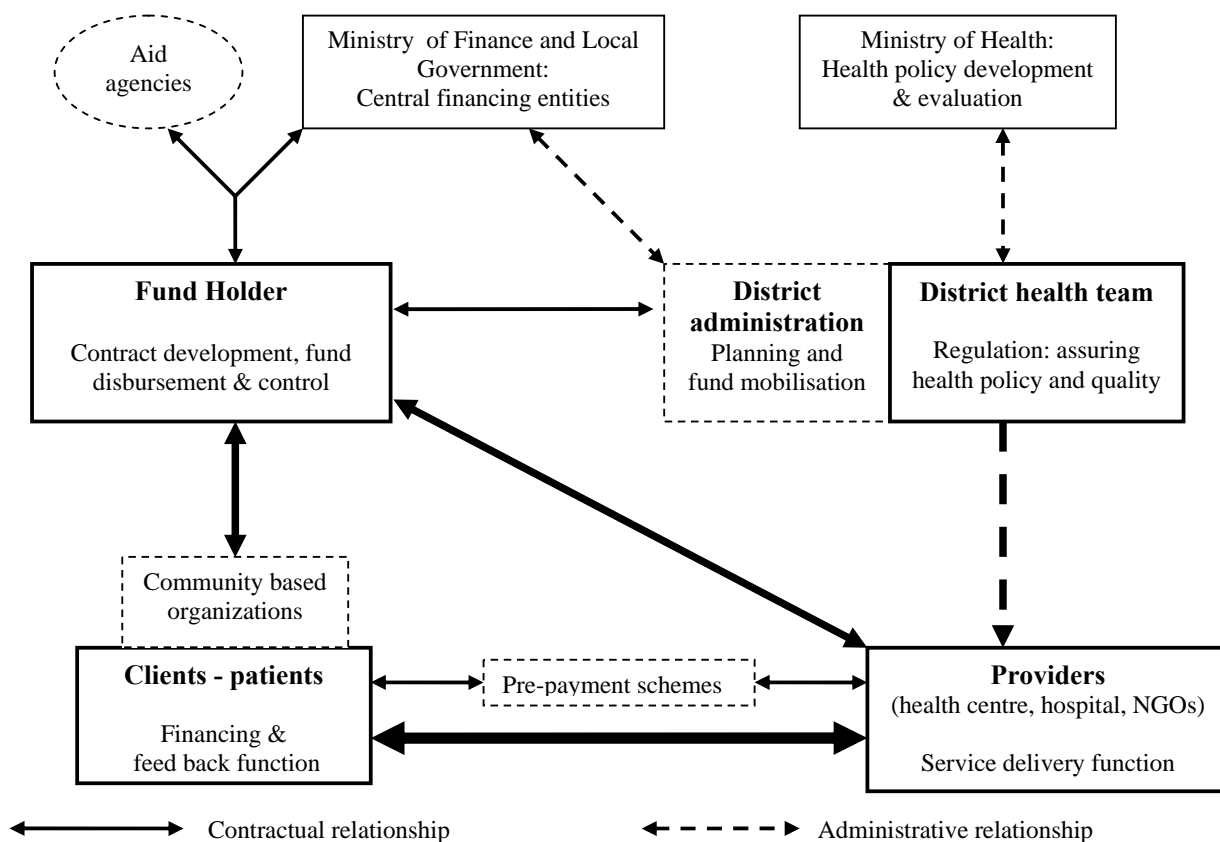
*b. Strengthening consumer voice empowerment.* By directly paying for health services patients (the demand) influences the operations in the health facility (supplier). This is the most efficient and preferred market transaction as long as financial access is not at risk. Secondly, in PBF systems local community groups conduct surveys and verify whether subsidized activities have indeed taken place and at the same time these survey verify the patient satisfaction with the services.

*c. Fund disbursement.* A well equipped and independent fund holder is responsible for the purchasing of the services from health facilities (or schools, etc). Based on a health facility business plans contracts are signed and subsidies are paid monthly against the production (and quality) of the health facilities.

*d. Regulation, planning & quality insurance.* In developing countries decision-makers at the national level should define health priorities based on a mix of cost-effective health activities as well as certain social or political priorities. They also set quality standards as well as certain administrative rules such as what is the minimum salary for different categories of health workers. At peripheral level, local health authorities assure the implementation of the national health policies, perform health facility quality reviews and are often responsible for regulating the private sector.

## Institutional design/Set-up of Contracting

The institutional design which is mostly found in PBF systems is shown in the diagram below:



### 3.4.8 Potential of performance contracting in other sectors than health

PBF is not limited only to the health sector. It can also be applied in other sectors such as education and rural development or even in administration.

A first multi-sector PBF project was launched DRC South Kivu in 2008 including health, education and rural development. In Rwanda, the government has, through the office of the prime minister, contracted the district administrators. Education sector indicators are schooling of girls and boys and sex education sessions as well as quality indicators such as the availability of educational material and furniture and the number of children per class. In rural development indicators were bridges rehabilitated, 1 km of road cleaned from grass, etc

## 3.5 Equity mechanisms

Health facilities do not have the same starting conditions when entering into performance contracting. The health facility may be geographically isolated or be distant from the distribution centres for inputs such as drugs. Other facilities may be difficult to reach due to the absence of public transport. Roads may be in very poor condition or sometimes even absent all together such as in DRC. Such factors should be taken into account in the subsidy calculation. Another equity concern may be the financial status of the population of a given geographical area due to the state of the soils and its fertility influencing the agricultural production. These factor may contribute that the proportion of very poor or vulnerable people is higher than in another area. The infrastructure of the health facility (or school) may also be very poor, and basic equipment may be lacking, which requires investments to attain the same level as other facilities.

**The following equity mechanism are proposed in PBF systems:**

- Overall reduction of user fee tariffs by applying the subsidy instrument;;
- Providing an isolation or poverty bonus to health facilities that are disadvantaged;
- Making available equity funds for health facilities for the individual poor and vulnerable;
- To stimulate any local initiative assisting the poor.

The first equity measure is to reduce user fee tariffs for the whole population by providing *subsidies* to health facilities. This will shift the health facility supply curve to the right and reduce the price as managers wish to benefit from the subsidies when they increase utilization (see chapter two on micro economics). The second measure is the *isolation or poverty bonus* which can be given to disadvantaged health facilities. This is carried out by adding a percentage to the monthly subsidies. The additional subsidy will allow the health facility to be at same level as the others. Qualified staff are reluctant to work in isolated areas but when the isolation bonus is high enough it will allow the health facility managers to attract and stabilize the staff by paying higher incentive bonuses to their staff compared to health facilities in urban centres or more wealthy areas.

The following table shows an example of how to constitute isolation / poverty bonuses:

Indicators	Basic Subsidy	Urban Health Centre	HC at 5-10 km	Isolated HC	HC isolated with poor community	HC isolated, poor population and bad infrastructure
<b>Isolation and / or poverty bonus</b>		<b>0%</b>	<b>5%</b>	<b>10%</b>	<b>20%</b>	<b>40%</b>
Delivery	\$ 5,00	\$ 5,00	\$ 5,25	\$ 5,50	\$ 6,00	\$ 7,00
External Consultancy	\$ 0,30	\$ 0,30	\$ 0,32	\$ 0,33	\$ 0,36	\$ 0,42
Family planning contact	\$ 1,50	\$ 1,50	\$ 1,58	\$ 1,65	\$ 1,80	\$ 2,10
Construction of a latrine	\$ 1,00	\$ 1,00	\$ 1,05	\$ 1,10	\$ 1,20	\$ 1,40

The third mechanism to assist the poor is the **equity fund**. This may be given as an additional proportion of the overall monthly subsidies. Health facility management may use these funds to assist individual very poor or vulnerable people in their catchment area. This can best be done autonomously whereby the health facility produces in their Business Plan a strategy of how this system should be operated, how to select the beneficiaries, etc.

Health facilities should also be encouraged to stimulate **local initiatives** to protect the poor such as through religious and private organisations.

**3.6 Terms of reference for a field visit where there is NO PBF project**

The participants are divided into 5 groups. They visit the following health facilities: 1 hospital district, 1 government health centre, 1 religious health centre, 1 private clinic, 1 district health office. They meet the representatives and discuss with the various actors. After the visit, participants discuss together and prepare a presentation of 10 minutes.

The themes to exploit are oriented by following interview question:

- Does the health facility receive inputs (drugs, equipment, etc)? Which? From whom? Does the health facility have autonomous management?
- What source of funding does the health facility have? Is the payment in cash? Which procedures need to be followed to obtain funding?
- Is there an independent fund holder organization buying results from the health facility in your area?
- Does the health system contain monopolistic organizations in terms of power or for the distribution of inputs? If yes, explains?

- Is there a separation of the functions in the area such as regulation, fund disbursement, service provision and strengthening the consumer voice?
- Is there a need for multi-sector PBF activities in the catchment area of the health facility? If yes, which and why?
- What are the mechanisms used in your area to know the opinion of the patients and the strength of the consumer voice ?

### 3.7 Terms of reference for field visits where there is a PBF project

Group	Health Facility	Objective :	Methodology / Activity
Group 1	Health centre (religious)	<p>At the end of the visit, the participants :</p> <p>Are capable:</p> <ul style="list-style-type: none"> <li>- To explain the promotion of PBF public – private partnerships</li> <li>- To analyse the potential of business plans</li> </ul> <p>- <i>Group discussion</i></p> <p>- <i>Plenary presentation of findings</i></p> <p>- <i>Feedback from facilitators and participants</i></p>	<p><b>Meeting with health centre manager on:</b></p> <ul style="list-style-type: none"> <li>- Relation of collaboration with the private health centre, negotiation process of sub-contract, impact of this collaboration on the use of services in the health area</li> <li>- Use of subsidies</li> <li>- Quality improvements observed</li> </ul>
Group 2	Health centre (government)	<p>Are capable:</p> <ul style="list-style-type: none"> <li>- To explain the promotion of PBF public – private partnerships</li> <li>- To analyse the potential of business plans</li> </ul> <p>- <i>Group discussion</i></p> <p>- <i>Plenary presentation of findings</i></p> <p>- <i>Feedback from facilitators and participants</i></p>	<p><b>Meeting with health centre manager on:</b></p> <ul style="list-style-type: none"> <li>- relation of collaboration with the private health centre, negotiation process of sub-contract, impact of this collaboration on the use of services in the health area</li> <li>- Use of subsidies</li> <li>- Quality improvements observed</li> </ul> <p><b>Visit to private clinic</b></p> <ul style="list-style-type: none"> <li>-relation of collaboration with private health centre,</li> <li>-process of negotiation of under contract,</li> <li>-impact of the collaboration on the quality of care and the development of the health centre,</li> <li>-use of grants</li> </ul>
Group 3	Health centre Provincial or district health authority	<ul style="list-style-type: none"> <li>- Are capable to explain how PBF reinforces the referral system</li> <li>- Are capable to describe the role of PBF to strengthen regulation</li> </ul>	<p><b>Meeting with the managing doctor of the hospital</b></p> <ul style="list-style-type: none"> <li>- Discuss referral system.</li> <li>- Strategies to improve the quality of care,</li> <li>- The role of the Business Plan</li> <li>- Health Authority: Did regulatory role improve – supervision, quality of care, other activities?</li> </ul>
Group 4	Visit to Fund Holder and local NGOs	<ul style="list-style-type: none"> <li>- Are capable to explaining the process of strengthening of the consumer voice of the population as a modern method of community participation.</li> <li>- Know the role of local NGO in PBF</li> </ul>	<p><b>Discussion with the Fund Holder verification officer:</b> selection of local partner organisations, verification system of the subsidized activities, choice of the patients to be verified. <b>Discussion with the person in charge of the local organisation:</b> choice interviewers, how feedback to health facility are given,</p> <p><b>Discussion with the person in charge of the health centre:</b> influence of the results of the local NGO surveys on the performance of the health centre</p>
Group 5	Health centre (private)	<p>Are able to analyze how subsidies can improve the infrastructures &amp; equipment and to recruit of the additional personnel</p>	<p><b>Discussion with the person in charge of the health centre</b></p> <ul style="list-style-type: none"> <li>- Who should do the recruitment of staff? The HC or an external actor?</li> <li>- How does the sub-contracting process take place between the main contract holder and the private clinic.</li> <li>- Is the public – private partnership beneficial for the population?</li> <li>- Influence of private partnership on quality of care?</li> </ul>

## 4. BASELINE & EVALUATION STUDIES FOR PBF PROGRAMS

Celestin KIMANUKA

### 4.1 Objectives

- To identify the importance of household and quality baseline and evaluation studies and how they influence decisions concerning the problem analysis, selected indicators and strategies of PBF interventions;
- Identify the main sources of bias when conducting surveys;
- To identify the differences concerning the following type of indicators: (a) Output (curative, reproductive health, family planning, hygiene, etc); (b) Quality (professional determined and patient felt); (c) Impact (diseases episodes, birth-rate, mortality rate); (d) Financing (health expenses, proportion of health expenses in comparison with income, catastrophic costs);
- Be committed to data collection following scientific and evidence based standards.

### 4.2 Why to conduct baseline studies prior to PBF interventions?

Why is it necessary to conduct baseline studies and evaluation in the context of PBF programmes? These studies are important: (a) To agree with the main actors on the specific initial problems of the targeted population and region; (b) To agree about objectives, intervention indicators and targets; (c) To set up a monitoring and evaluation instrument to analyse the achievement of objectives and to allow to regularly adapt indicators and strategies.

The baseline study prior to a PBF programme often has three elements: (a) household survey; (b) quality survey and; (c) semi qualitative interviews with key actors as for example the managers of health facilities, health regulators, NGOs and administrative authorities. The interviews often also serve to establish the minimum remuneration system required to motivate health workers and to successfully apply PBF.

After the collection of data it is crucial to launch an adoption process of the findings which involves the main stakeholders and in particular the national decision-makers. How many disease episodes has a person per year in a given geographical zone? This is important to calculate the targets for the number of external consultations and hospitalisation. What is the income per person per year and which proportion is used for health expenditures? For what proportion of the population the health expenditures are catastrophic and what proportion does not seek health care due to shortage of money? This will determine whether the intervention should focus on financial access problems or, to the contrary to other priorities.

In traditional health financing approaches such studies are rarely carried out, which implies that projects and programs spend public resources in an unknown environment on the basis of not tested hypotheses. This may obviously lead to a huge waste of public resources.

### South Kivu Case – 2005-2008 PBF intervention<sup>8</sup>

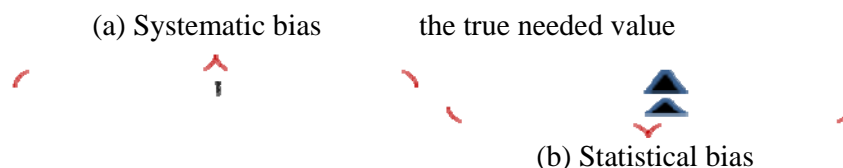
In 2005, several interventions of different NGOs in the South Kivu Province in DRC were based on the hypothesis that financial access and utilization of curative care were the main problems. However, a PBF baseline study conducted in 2005 showed these were not the main problems, but rather the quality of health services and the non availability of certain specific services such as family planning, promotion of construction and use of household latrines and the distribution of bed nets. Therefore PBF subsidies were orientated towards quality improvement and those specific services. In the control areas, which applied the traditional approaches, the wrong hypothesis concerning the problem analysis of the health system had perverse effects. It prevented health facilities to generate sufficient revenues to solve the main quality problems in their health facilities and focused too much on financial access problems and curative care utilization, which in fact did not really exist. The evaluation of PBF intervention in the South Kivu in 2008 compared the two intervention districts with the two control districts and the results showed that the PBF intervention district had significant better results.

### 4.3 Stages in conducting scientific studies

- Establish the study objectives & research protocol and obtain permission from the authorities;
- Identify and train the research team such as the interviewers and data entry persons;
- Develop and test survey questionnaires for the household and professional quality studies and for the main stakeholder interviews;
- Choose clusters randomly in the intervention and control areas;
- Carry out the study and conduct the data entry and cleaning;
- Produce cross tables with main findings and apply statistical tests to establish their significance;
- Organise 2-5 day workshops to analyse the findings with the main actors leading to recommendations based on the findings
- Distribute the report – conduct advocacy – make the report available at a web site.

### 4.4 Systematic and statistical biases

Bias is a term used to describe a tendency or preference towards a particular perspective, ideology or result, especially when the tendency interferes with the ability to be impartial, unprejudiced, or objective. In scientific studies we identify: (a) systematic bias and; (b) statistical bias.



#### 4.4.1 Systematic biases

A systematic bias is a bias of a measurement system or estimate method, which leads to systematic errors, namely produces readings or results which are consistently too high or too low, relative to a given actual value of the measured or estimated variable.

Categories of biases that are likely to appear are:

1. **Questionnaire bias.** Caused by questions that are poorly formulated or poorly translated. The interpretation of questions can differ in the local language in comparison with the text in French or English. To avoid this bias, double translations should be carried out whereby the first translator translates the text into the local language and another one translates the text back into French or English.

<sup>8</sup> Soeters, Peerenboom, Mushagulusa, Kimanuka 2010 *Performance based financing in a failed state. Can it work and how?* Forthcoming Health Affairs.

2. **Respondent's bias.** The respondent may give information about which they are not sure (for example fearing to be considered ignorant). The respondent may also give false answers for example because s/he thinks this to be socially expected or because they expect rewards when giving certain information. The respondent may also hide information concerning his assets or income fearing that the survey will lead to taxes later. The respondent bias may also be due to forgetting facts, misunderstanding about the question or hiding information if someone else is present during the interview.
3. **Non-response bias.** This may be the case when surveys take place during daytime when the household members are working. Equally, when interviewing a health facility it is a problem when the manager is absent. Respondents may also refuse to participate in a survey.
4. **Interviewer bias** (voluntarily or involuntarily). Personal opinions of interviewers and supervisors can bias results. For example, interviewers may use verbal or non verbal language to indicate what is the "correct" answer. This problem may be identified and solved by conducting role plays during the training of the interviewers. There may also be unintentional errors when the interviewer does not read the question correctly. An interviewer may also bias the response of the interviewee due to his appearance, the tone of his voice, friendliness or due to remarks made not related to the interview.
5. **Confidentiality bias:** For sensitive questions (reproductive health, HIV / AIDS etc.) the respondent may not answer certain questions when in the presence of family members. In that case the interviewer may find a strategy to ask such question in confidence. It is also good practice to explain at the start of the interview that all information will be treated with the greatest confidentiality.
6. **Selection bias** is a distortion of evidence or data that arises from the way that the data are collected and may be due to the method of collecting samples. Examples of selection biases are: (a) the selection of the sample was not at random (for example only volunteers were selected); (b) isolated villages were excluded because of distance
7. **Interpretation bias.** Errors due to the wrong interpretation of the results. This may be the case when the researcher tries to prove the hypothesis by all means. Peer group review of the results and the analysis may solve this type of bias.

#### 4.4.2 Strategies to reduce systematic bias

- Choose experienced interviewers;
- Test the questionnaire several times to make it comprehensible, easy to use, and preferably the questions should be closed with a set of pretested answers. This facilitates the analysis;
- Take enough time for all phases of the survey;
- Conduct role plays with the interviewers, observe each interviewer in the field before beginning the survey;
- Rigorously supervise and verify each questionnaire the same day of the interview. Immediately conduct data entry so that possible omissions or obvious mistakes can be corrected;
- Conduct rigorous data cleaning before starting the analysis and check for extreme values, which may be data entry errors;

#### 4.4.3 Statistical or sample biases

**Statistical bias** or sampling error is the error caused by observing a sample instead of the whole population. The sampling error depends on the size of the sample (n): it is linked to the degree of homogeneity of the population in comparison with a given character. If there is a high variety in outcomes, it may be necessary to select a bigger sample. The sample size depends on the required level of accuracy for a given study. The higher the accuracy needed, the larger the sample. When a cluster sample design is chosen for reasons of efficient data collection this will reduce the statistical strength of the findings and may require a larger sample to be selected.

## 4.5 Household surveys

### 4.5.1 Definitions, objectives and indicators

A household is generally defined as a person or a group of people who live together, who occupy the same accommodation and who share the same resources and particularly the same kitchen. A household can be one family or more families living together but sharing the same accommodation and kitchen. A household may also contain domestic staff such as a cook or cleaner.

The objective of a household survey in PBF interventions is usually to obtain a better understanding of the health seeking behaviour of the population. The household survey may wish to identify the unmet demand for certain basic health service activities such as malaria prevention by distributing bed nets, institutional deliveries, family planning, etc. The survey may also collect information about patient satisfaction with the services rendered by health facilities such as waiting time, respect of staff, etc

Household surveys may be conducted to collect information about impact indicators such as : (a) Health expenditure per person per year ; (b) Diseases episodes per person per year ; (c) Birth-rate and infant mortality rate; (d) Proportion of households having access to drinking water, fertile agricultural fields; (e) Types of houses in which households live and access to and utilization of latrines.

Household studies usually collect information about the *output* indicators subsidised by the PBF program. The output indicators concern the Minimum Package of Activities (MPA) at the health centre level and from the Complementary Package of Activities (CPA) at hospital level. The MPA includes curative care such as external consultations, hospital days, assisted deliveries as well as public health interventions such as bed net distribution, birth spacing, and sanitation. The data collected will also serve as a reference point for the reliability of the data of the routine Health Management Information System.

### 4.5.2 Methodology of a household survey

The sample size is calculated on the basis of the target population. For example for a target population of about 1.000.000 persons a sample of 500 household is sufficient to get the statistical significance for events with a certain regularity such as deliveries or disease episodes. While a larger sample provides more statistical strengths for differences found in the study, it also may make the study more complex, expensive and prone to systematic biases.

PBF household surveys often are stratified random clusters surveys whereby the clusters of 25-30 households are chosen randomly. The clusters may be selected either from statistical demographic units or from health centre catchment areas. The population is usually stratified per province or district as well as by rural and urban population. The following table shows the stratification made in Burundi for the 2006 study.

Health Provinces	Population	%	Clusters	Households
Bubanza	313.000	27%	5	125
Cankuzo	190.000	16%	4	100
Makamba	311.000	26%	5	125
Karuzi	365.000	31%	6	150
<b>TOTAL</b>	<b>1.179.000</b>	<b>100%</b>	<b>20</b>	<b>500</b>

Table : Stratification of clusters in Burundi 2006 study.

Concerning the selection of the interviewers, preferably, there should be an equal distribution of male and female. It is better to select already skilled and experienced interviewers, especially those who have been previously trained in household survey techniques. Depending on their experience a training course should be conducted of 2 to 5 days.

The survey team should have a car, 5-6 interviewers, a supervisor, a data entry person and a driver. Realistically only 5 households can be covered by each interviewer per day so that one cluster can be covered by a team. In each cluster, 2 or 3 villages or suburbs may be selected randomly. Once in the village, the interviewer chooses a direction at random by using the «BIC method » (throwing a ball pen in the air and randomly choose a direction from the middle of the village / district). The households are chosen progressively by respecting a step of two or three houses until 5 households are interviewed. Data are analysed using statistical applications such as Microsoft EXCEL. EPI INFO or SPSS can be used for the statistical tests.

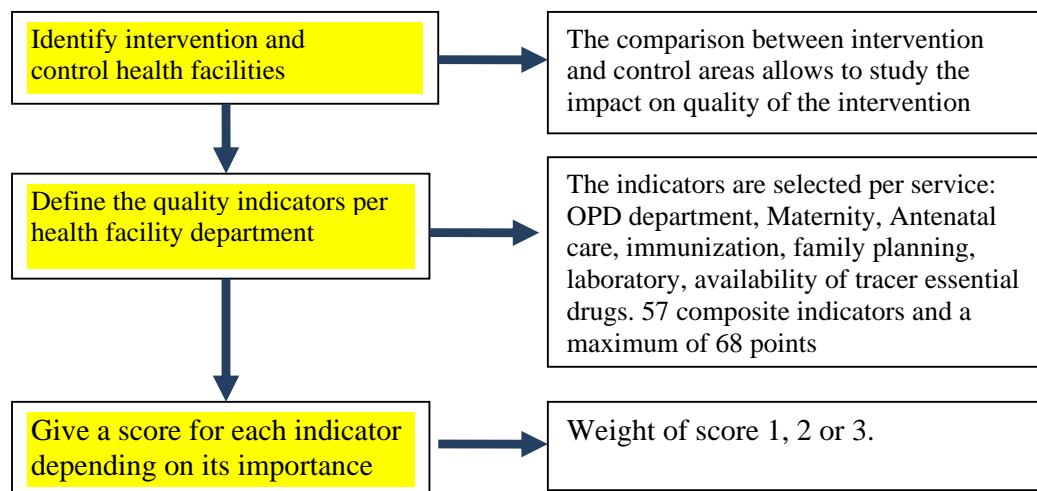
#### 4.5.3 Statistical tests

Statistical tests may be applied to compare the differences of two proportions or averages and thereby to analyze the significance of the differences observed. Comparison may take place concerning the variable under study between an intervention and a control area, between an urban and a rural area or between the results before and after the intervention. Specifically, *averages* may be tested by the analysis of variance (ANOVA) when the variances are homogeneous and to the non-parametric tests of Mann Whitney, Wilcoxon or Kruskal Wallis when the variances differ significantly (which can be tested by the Bartlett test). Comparison of *averages* can also be done by the Student t test. Concerning the comparison of *proportions* the  $\chi^2$  Pearson test can be done which analyzes contingency tables.

#### 4.6 Health facility quality surveys

The objective of baseline quality surveys in health facilities is to establish the starting point concerning quality of care in health facilities in the intervention area as well as in a control area. The indicators are not exhaustive but they should give a good impression concerning the quality in health facilities. In Burundi and DRC, a questionnaire with 57 composite indicators was used. The same indicators should then also be used for the evaluation after 2-3 years so that a comparison can be made. To reduce the risk of bias, two interviewers should work together and discuss the results. Preferably no interviewer should conduct the review in health facilities from the same province or district to prevent bias. This survey also served as the basis for a new questionnaire with 154 composite indicators, which were used three-monthly for health centre quality reviews by the health authorities as well as by the peer group reviews of the hospitals (see also chapter 7 on regulation and quality reviews).

The following steps should be followed during the quality survey.



#### **4.7 Interview with managers of health facilities**

These "semi-quantitative" surveys are often conducted with health centres managers. The objective is to collect additional information concerning supervision aspects, costs recovery, external support and the financial aspects of the health centres. The study also provides important information about the presence of qualified personnel compared to the standard and what would be reasonable to pay health workers as the sum of the basic salary and variable incentive bonuses.

#### **4.8 Peer group evaluation of hospitals**

Peer group evaluation was initiated in Cyangugu province in Rwanda in 2004 by Cordaid. Four district hospitals were put together and visits were organised quarterly. The objective was to share management experiences among hospital directors, chief nurses and administrators. The idea was not to conduct hierarchical supervision, but rather to create an environment of discussion and to learn from each other's strengths and weaknesses. Recommendations had the form of suggestions. The Rwanda experience was successfully evaluated and therefore the system was also introduced in DRC and Burundi.

#### **4.9 Discussions with the main stakeholders and restitutions to analyse the study**

The final step in the process of household and quality surveys as well as the various discussions with the main actors is to analyse the collected information and to draw conclusions how to introduce PBF in the intervention area. The restitution workshops are also of great importance to establish ownership for the recommendations and therefore decision makers should be invited.

#### **4.10 Exercise on the presentation of study results PBF intervention Sud Kivu 2005-2008**

Participants are distributed into 5 groups. Work to be done:

1. Read, analyze, and discuss the summary of the household survey and quality survey carried out in February 2008 PBF program in two health district in South Kivu in the
2. Identify the 5 most important messages that can be drawn from this summary.
3. Prepare during 30 minutes a role-play that shall last 10 minutes to inform the Minister of Health in the presence of a number of partners (WHO, UNICEF, DFID) and provide arguments for scaling up PBF to other districts.

The actors are:

1. **The Director of the fund holder:** it is a person with 5 years experience convinced of the positive results of the PBF. He must use during the role play the arguments in favor of PBF
2. **Provincial Health Authority :** He has monitored the PBF program during 5 years, he knows the encouraging results of the survey but he is under authority of the Minister of Health.
3. **Minister of Health:** He must take a decision concerning PBF but he must also take account the opinions and interest the main partners (WGO, UNICEF, DFID) who are present during the meeting.
4. **Delegate WHO:** He is not convinced of the results of the PBF project and emphasizes the needs to start pre-payment schemes in DRC (he must find arguments to defend its position)
5. **Delegate UNICEF:** He is not convinced of the PBF results and must advance arguments why to continue distributing essential drugs bought by UNICEF (he must defend this position because UNICEF has already assured funding).
6. **Country Representative DFID:** His organization strongly defends free health care for DRC as this is the policy of the British government for Africa. (he must attack PBF because it favors cost sharing policies).

Each team member has a role to play.

#### 4.11 Summary of evaluation report 2005-2008

**Full report available on the Cordaid web site: <http://www.cordaidpartners.com/rooms/performance-based-financing> Name: "Household Study PBF in DRC".**

This study shows that the health intervention district, which apply performance based financing have for the majority of quantitative and qualitative indicators superior results compared to the control health districts and which apply a traditional "input" approach. The study shows that the PBF intervention has produced more results at lower cost and a cost-efficiency gain of 3 - 5 times. Performance based financing is more effective as well as more efficient compared to traditional input financing and strategies that promote free health care. This justifies the recommendation to the Government of the DRC, the provincial government in South Kivu, Cordaid, the Congolese partners as well as international organizations to expand PBF in the Democratic Republic of Congo and other countries.

However, to extend these experiences, there is a need to increase the training capacity as well as to identify local and international experts capable of running such PBF programs. The Katana-Idjwi health district PBF program was conducted without international permanent experts, but benefited since 2003 from regular technical assistance as well as exchange visits to neighboring countries. The provincial authorities and the Catholic Health Bureau (BDOM) have been instrumental to advocate PBF.

In the study area there was an 85 % economic growth between 2005 and 2008, which probably reflects the improved safety since 2005. The province of South Kivu is potentially rich with abundant water, fertile fields and mineral wealth. Without war and political disturbances, the South Kivu economy is apparently capable of improving the living standards of its population. These findings are important because it shows the feasibility to quickly improve the social sector through a combination of indigenous financial contributions of the population together with external assistance through PBF subsidies.

Economic growth with 120% was more important in PBF intervention districts compared to 49% in the control districts. We postulate that the PBF initiatives may have contributed to this higher economic growth. The health facilities in the PBF districts have increased their revenues from direct cost sharing in particular from the wealthy economic group, which confirms that PBF interventions produces more equitable outcomes. On the contrary, in the control districts, which applied the DFID promoted "free health care" strategy, the contribution of the population to health facility revenues *diminished* and the reduction mainly benefited the "middle" income group while the "very poor" income group saw its health expenditure increase. These findings suggests that the traditional input oriented and free health care districts did not achieve similar equity results.

The professionally determined as well as population perceived quality was better in the PBF intervention districts compared to the control districts. We believe that this difference is linked to the following: (a) the population made significantly more cost-recovery contributions in the intervention health facilities; (b) the PBF subsidies in the intervention districts were in cash instead of "inputs" allowing the health facility managers to autonomously improve their services using the money to solve their specific problems.

In the French-speaking countries, a rate of about 40-60 % of cost recovery is considered optimal. Internationally, a proportion of 8-10 % of the household revenues that is spent for health expenditure also seems optimal. This means that robust cost-recovery mechanisms need to be in place, which stimulates the sustainability of the system and avoids the dependence on external aid and government assistance. In the PBF intervention districts total health centre revenue was \$ 1.04 per person per year compared to only \$ 0.45 in the control health facilities. To make available a high quality minimum health package we believe \$ 2-3 per person per year to be necessary and therefore the external assistance to health facilities should further increase in South Kivu. For the control districts the situation is more complex and we believe that the various stakeholders should: (a); provide more autonomy for health facilities to establish cost-recovery tariffs with their communities; (b) support health facilities in cash and not in inputs ; (c) reorient the budget of \$ 7-10 from inputs towards cash payments to the health centers, hospitals and community while at the same time the administrative costs of the NGOs should diminish.

The evidence suggests that the PBF system of health facilities autonomously buying drugs (and other inputs) from competitive distributors is more effective than the centralized monopolistic approach of NGOs and regional distribution centers to buy their drugs from abroad. This study further shows that the experience with identifying several competitive drugs distribution centers in Bukavu town from which health facilities

were allowed to buy had superior results for the availability of drugs. Another advantage of the PBF approach in South Kivu was that it stopped the taxing of health facilities up till 60% of their cost recovery revenues to finance monopolists drug distribution system was counterproductive for the local economy and dangerous for the sustainability of the health system.

The health authorities should stimulate health managers to adopt a autonomous cost recovery strategies through fee paying in the short term and probably through pre-payments systems in the longer term. We also believe that it will be better if communities themselves identify the very poor and vulnerable individuals for which equity mechanisms could be developed by the health facilities themselves. This is particularly important for assisting the poor to access hospital care.

Strong economic growth during the last three years has also increased the feasibility of prepayment schemes compared to the situation in 2005, but to convince the population to join insurance system the health facilities needs to price their services at real cost. This encourages the population to avoid high health care costs. However, in this case, if the mutual membership is voluntary (contrary to Rwanda where it is mandatory), the feasibility of achieving good results on equity is very poor in the DRC. We propose gradually to integrate elements of health insurance in the purchase of performance system and no longer initiate isolated programs of prepayments schemes.

The following table shows that the very poor socio-economic group in the study did not benefit from pre-payment schemes in South Kivu.

Socio-Economic group	Nu. of households member of pre-payment scheme 2005	% 2005	Nu. of households member of pre-payment scheme 2008	% 2008	Absolute difference 2008 / 2005
Very poor	0	0%	0	0%	0%
Poor	5	29%	6	27%	-2%
Middle income	4	24%	6	27%	4%
Wealthy	8	47%	10	45%	-2%
<b>Total</b>	<b>17 of 440 = 3,9%</b>	<b>100%</b>	<b>22 of 440 = 5%</b>	<b>100%</b>	<b>0%</b>

## 5. OUTPUT INDICATORS IN PBF INTERVENTIONS

Jean Baptist HABAGUHIRWA – Dr Robert SOETERS

### 5.1 Objectives

- Identify the criteria of objectively verifiable indicators;
- Identify the main output indicators of basic health and hospital packages and know how to calculate the population based targets.
- Identify the criteria for the establishment of the subsidy per activity

### 5.2 Introduction

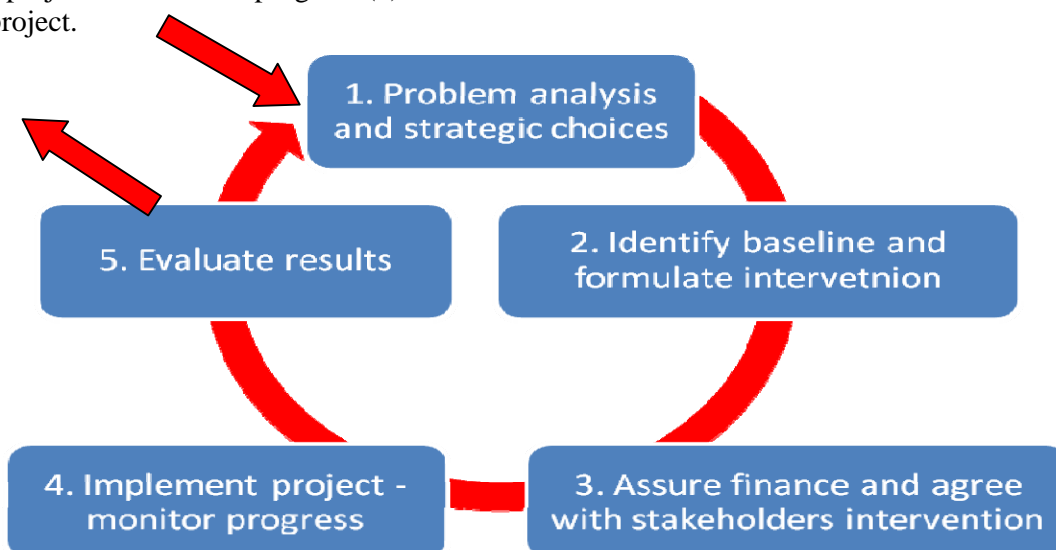
An *indicator* is a measurement which indicates the degree of achievement (level of fulfilment) of an objective or target. It points out the progress towards the set target.

An indicator must be **SMART** = **S**pecific; **M**easurable; **A**chievable **R**ealistic and; **T**imely.

PBF subsidies may be paid for: (a) output (or quantitative) indicators and; (b) quality indicators. Health facility outputs such as consultancies, deliveries, FP contacts, etc usually determine the monthly subsidy payments and allow the health facilities to pay salaries and other recurrent expenses. Health facility output indicators in PBF system in developing countries are usually not less than 15 and not more than 25. Fewer indicators usually imply that the PBF system becomes a vertical program of a limited number of health activities and more than 25 indicators makes the system complex and difficult to monitor monthly. In contrast, quality indicators may be many (around 120-200) as they are being reviewed at most once per three months. Furthermore quality can be paid every three months according to the score of all measured indicators and do not need to be paid per indicator. The quality bonus may be calculated by taking the sum of the quantity subsidies multiplied by for example 15% x the score of the quality review.

### 5.3 PBF project preparation

The management cycle has five stages: (1) Problem analysis and strategic choices; (2) Identify baseline and formulate intervention; (3) Assure finance and agree with stakeholder intervention; (4) Implement project and monitor progress (5) Evaluate results and either end intervention or re-enter with new project.



The cycle can last 2-5 years in the case of a project. A second shorter cycle is the regular adaptation of subsidies as well as some indicators; this may take place every 6-12 months. The shortest PBF management cycle concerns the three-monthly preparation of the health facility business plans. The regular renewal of the health facility contract allows flexibility and adaptation when need requires.

When an organisation wants to initiate a PBF intervention, it has to begin with the formulation of a proposal to be submitted to authorities and / or aid agencies. It may contain the following elements:

- Place of intervention and the target population (Where and who?)
- Project motivation (Why?)
- Indicators to be financed (What?)
- Project duration (When?)
- Monitoring and evaluation mechanisms
- Project costing (subsidies, administrative expenses, studies, regulation support, etc).

#### 5.4 Output indicators

The table below contains activities that are usually included in PBF interventions at health centre level. In the case where the population in a PBF intervention zone is 1.150.000 and if it is assumed that each inhabitant visits a health centre once a year, the monthly targets is:  $1.150.000 / 12$  months = 95.833 consultations per month. By adding an isolation and equity bonus of 15% each external consultation will be subsidised  $\$ 0.30 \times 115 \% = \$ 0.35$ . The targets for external consultancies per person per year are often based on WHO recommendations. However, the baseline household surveys conducted in preparation for a new PBF intervention may show another reality such as 1.5 or 2 episodes per person per year. During the project formulation this should be taken into account and, if necessary, the target may be adjusted.

MPA Activities	Population:	1.150.000			
	Isolation and Equity Bonus :	15%			
	Target Calculation per month	Target month	Basic Subsidy	+ Isolation and Equity Bonus	
External consultancy (new cases)	population / 12	95.833	\$ 0,30	\$ 0,35	
Hospital bed days	pop / 1000 x 0,5 x 30 days	17.250	\$ 0,70	\$ 0,81	
Serious case referred and arrived at hospital	pop / 12 x 4%	3.833	\$ 1,00	\$ 1,15	
Minor surgery	pop x 1% / 12	958	\$ 0,50	\$ 0,58	
PEV: Children completely vaccinated	pop x 3,94% / 12 x 100%	3.776	\$ 1,50	\$ 1,73	
VAT 2 - 5: protected pregnancies	pop x 4,3%/ 12	4.121	\$ 0,50	\$ 0,58	
Assisted birth in health facility	pop x 4,3%/ 12 x 80%	3.297	\$ 2,50	\$ 2,88	
PNC: New + Standard Visits	pop x 4,3%/ 12 x 80% x 4	13183	\$ 0,50	\$ 0,58	
PF: New + Standard Users	pop x 21% / 12 x 20%	16.100	\$ 1,75	\$ 2,01	
PF: Insertion of implant or DIU 2% per year	pop x 21% / 12 x 2%	403	\$ 5,00	\$ 5,75	
PF: referral for tubal ligation or vasectomy	pop x 21% / 12 x 1%	201	\$ 1,00	\$ 1,15	
STD consultancy	pop / 12 x 5%	4.792	\$ 0,50	\$ 0,58	
Testing for TBC (3 x sputum)	pop / 100.000 x 150 / 12	144	\$ 10,00	\$ 11,50	
TBC Patients treated with BK – after 6 months	pop / 100.000 x 150 / 12	144	\$ 20,00	\$ 23,00	

Table 3: Health centre outputs indicators, targets, subsidies and isolation / equity bonus.

#### 5.5 Criteria for establishing the subsidy per activity

- a) **Availability of funding:** When there is adequate funding the subsidies may be increased to the desired level but when funding is limited this will also decrease the subsidies per activity. This scenario should be clearly stated in the contract.
- b) **Positive externalities:** for example TBC testing and treatment, immunization requires a higher subsidy because if left to the market it would receive less money as the market does not consider the public interest.

- c) **Public goods** (everyone benefit, but nobody can be excluded). For example social marketing for healthy behaviour or which has a national interest such as the use of family planning. This, government should take care of and requires funding at cost price or higher.
- d) **Political priorities:** Activities that government consider a priority will receive higher subsidies in comparison with others. For example in Burundi government decided in 2006 that assisted deliveries and consultations for children under 5 years were national priorities.
- e) **Level of target achievement** during project implementation: If the target is attained or surpassed, the subsidy may remain the same or be reduced. To the contrary, for an indicator that performs poorly the subsidy may be increased.

## 5.6 Exercise 1

1. What are consequences of an indicator in PBF that is not SMART?
2. What is the difference between output indicators for which monthly subsidies are paid and quality indicators only subsidized every three months after a quality review?
3. Why do PBF interventions not subsidize process indicators (number of meetings, report submitted, IEC sessions, and motorbike trips)?
4. Study the following list of indicators:
  - Maternal mortality
  - Malnutrition rate
  - Institutional delivery
  - Operational incinerator and rubbish pits, well fenced and under lock and key
  - Management documents of health facility in files and cupboard and accessible for staff on duty
  - Presence of a qualified obstetrician in health facility
  - Number of meetings conducted by Health Committee
  - Number of workshops attended by the district medical officer
  - Technical meetings health staff conducted monthly with reports accessible in a file
  - A person tested for HIV after counselling and informed about the result
  - HIV positive mother effectively prevented from transmitting HIV to her child
  - Permanent presence of a qualified nurse in the health facility
  - Quality evaluation done by the health authorities supervisors in private facilities
  - Diseases episodes per person per year
  - Patient felt satisfaction on waiting time
  - Monthly income of health facility
  - Number of qualified personnel in health facility

Which of these indicators are output indicators suitable for monthly subsidies?

Which of these indicators may be reviewed (every three month) by health authorities?

From the indicators that are not output or quality indicators are they important to be measured?

Yes / no. If yes, explain why and how?

5. **The indicator ‘serious illness referred’ was considered as important, but also poses verification problems. Discuss the following examples and suggest what subsidy could be paid and why?**  
Acute Malaria? Cataract? Hernia? Hypertension crisis of the village chief? Complication during delivery?
6. **Should impact indicators be paid? Intra-hospital mortality – maternal mortality?**  
**Yes / No. If not, why?**
7. **Analyse the following activities (indicators) and suggest which proportion of the production cost should be paid through external subsidies? 0 %, 10 %, 25 %, 50 %, 75 %, 100 % or more?**  
Explain your answer by taking into account the public good, externalities and of equity
  - TB Patient who correctly receive the DOTS treatment for 6 months
  - A severe pneumonia requiring an antibiotic cure
  - An endoscopy in an university hospital.

- Subsidy for a mosquito net sold and used by a household.
- President of the Republic declares free deliveries?
- Adequate latrine constructed in household
- A completely vaccinated child.

## 5.7 Exercise 2: The case of Ibo Health Centre

IBO health centre has a population of 20,000 inhabitants. It has 3 qualified nurses (all male) and 10 unqualified staff members. In June 2009, the monthly revenues were \$ 950 per month (thus the health centre revenues are an average of \$ 0,57 per capita per year. Here's how revenues are divided by source:

Revenues	Francs	US \$
Direct cost recovery – user fees	F 100.000	\$ 200
Subsidies from different aid agencies & government grants	F 300.000	\$ 600
Income from pre-payment schemes	F 50.000	\$ 100
Income from police and army contributions	F 25.000	\$ 50
<b>TOTAL RECETTES</b>	<b>F 475.000</b>	<b>\$ 950</b>

Here is the list of minimum health package identified by the government as well as the targets per indicator.

INDICATEURS PAQUET MINIMUM d'ACTIVITES	
OPD consultancies (1 consultancy / pers / year)	population x 1 / 12 =
Child completely vaccinated (before 12 months)	pop x 4,5% / 12
Pregnant women completely immunized	pop x 4,8% / 12
Distribution bed nets	pop/5an/12mois/1,5 pers
Latrines constructed	pop / 6 pers / 12 / 3 ans
Assisted delivery in health facility CS	pop x 4,8% / 12
ANC : new and standard	pop x 4,8% / 12 x 3
Family Planning: TOTAL New and standard acceptors	pop x 21% / 12 x 20%

A fund holder agency has installed itself in the area willing to purchase the production of the health center as follows: \$ 0.35 per patient; \$ 1.5 per fully vaccinated child; child \$ 1.50 per assisted delivery; \$ 0.50 per completely protected woman \$ 2.00 per bed net sold; \$ 1.00 per latrine built; \$ 0.50 per new or standard antenatal care consultancy and \$ 2.00 for each family planning accepting three cycles of pill or injectable contraceptive.

The health centre is not easily accessible and has a shortage of medical equipment. The fund holder has therefore proposed to pay a 15% isolation bonus of 15% to compensate for these difficult conditions.

### Questions concerning the case of IBO health centre

1. Use the EXCEL software provided "Health Center Ibo" and enter the formulas to answer the following question: What are the monthly targets for each indicator? What will be the subsidy per indicator after adding the isolation bonus? If the health center reaches its target what would be the total subsidies per month?
2. How many qualified staff for this health centre catchment area need if applying the standard of one qualified staff per 2,000 inhabitants?
3. For the month of June, distribute the revenues between the different expenditures items, taking into account your priorities.
4. Explain how we calculated the revenue of \$ 0,57 per capita per year for the health center?
5. Is this sufficient to properly manage the health center? Yes / No. If not, which expenditure items are underfinanced?
6. If this amount is not sufficient, what annual amount per capita would you think necessary for the adequate management of the health center catchment area?

## 6. FUND HOLDER AGENCY, DATA COLLECTION & AUDIT

Dr Jean Pierre TSAFACK, Jean Baptiste HABAGUHIRWA

### 6.1 Objectives

- Identify the problems concerning the collection of routine health management information;
- Identify the role of fund holder organizations;
- Be able to use the PBF data collection instruments such as standard health facility registers, monthly activities reports, medical verification and audit tools and to collect reliable data for the regular subsidy payment.

### 6.2 Problems concerning routine HMIS data collection

Problems related to data collection in Health Management Information Systems are the following:

- a) Data may be incomplete and/or biased because sources are not reliable or manipulated;
- b) Data may be under-reported to avoid taxes (such as for curative care in DRC);
- c) Authorities may overestimate the population with the aim to obtain more resources (such as for immunization programs in DRC);
- d) Monthly reports may not be accessible or available in the health facility because the manager is absent or was transferred.
- e) Health workers are little motivated to collect good quality data when they do not see the benefit. This is often the case when administrators of vertical programs demand data without assuring that these data are also useful for the management of the concerned health facilities.
- f) Data collection for different health departments or aid agencies may not be coordinated so that they overlap or become excessive.

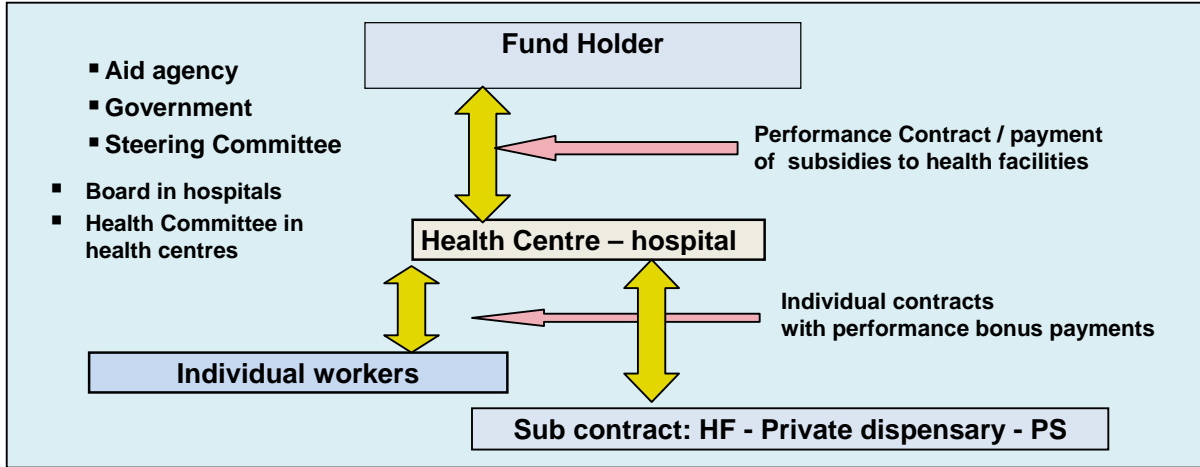
All these factors contribute to the poor reliability of routine HMIS data and they can therefore usually not serve as the basis for subsidy payments in PBF systems.

### 6.3 Fund holder organization management

A potential risk of PBF output payments is that health facilities may be tempted to inflate the results concerning their outputs to obtain more subsidies. Without a strict verification and auditing system cheating is almost unavoidable and it may put the PBF system at risk. If audits show that there is regular cheating with data this may lead to the cancellation by the Ministry of Finance or the involved aid agencies for the PBF program. Therefore, a PBF verification and auditing system has been developed to prevent such problems. As a side effect of the strict verification of PBF data routine HMIS data collection then also tend to improve. This in turn may also improve the planning by health authorities and health facilities.

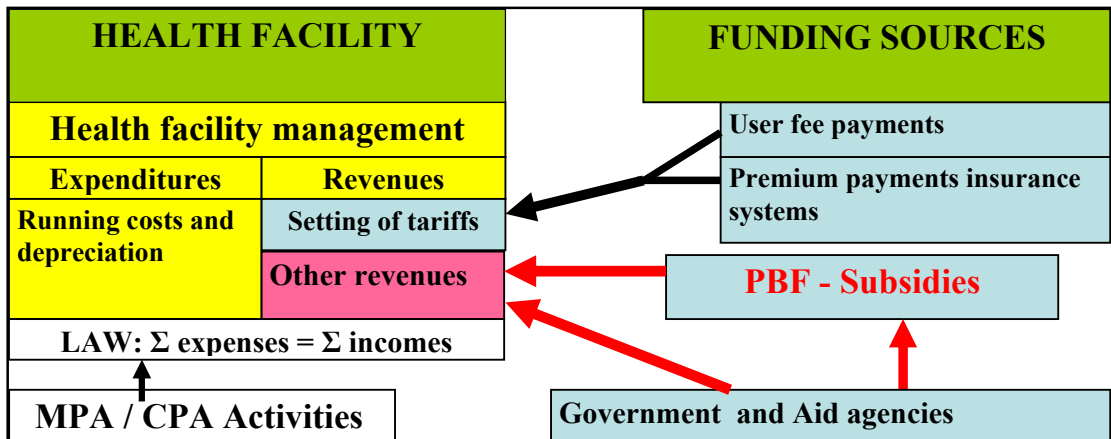
Thus, one of the objectives of the creation of the fund holder organizations is to verify and audit the output data of health facilities. In case of falsifications sanctions must be applied routinely as a strong deterrent against fraud. Monthly, *medical* verification officers visit the health facilities to check the registers. Quarterly, *community* verification officers visit health facilities and take samples of 1-3 % of all activities from the registers (external consultation, deliveries, vaccinations, etc). These data are given to local community groups, which then verify the existence of these persons in the villages. For effective verification, registers must contain the correct patient addresses. The objective of these home visits is, first, to check if the data found in the health facility registers are correct and; secondly, to gather patient feedback on their satisfaction with the quality of the services provided by the health facility.

Fund holder organizations are composed of a public health specialist (or health economist), an administrator / accountant and 3-5 verification officers (medical, community and/or for school – in case the PBF intervention also subsidises school indicators). The fund holder organization further negotiates performance contract with the health facilities. The contracts between health centre management and the health workers as well as the subcontracts with private clinics in the catchment area are not directly influenced by the fund holder or district authorities.



The terms of the performance contracts signed between fund holder and health facilities contain the following elements:

- To assure the cost-effective provision of health service so that set targets concerning health packages are attained;
- To assure that the quality standards are of high standard. These will be checked by the local health authorities as well as through patient interviews;
- Assure that revenues and expenditures of the health facility are in balance and which are checked monthly.



## 6.4 Standard health facility registers

Each subsidized activity carried out in a health facility must have a standard register where the realized activities are daily entered.

**Examples** of standard register of a health facility for external consultations:

Ser. Nu. Year	Date	Ser. Nu. month	Name & first name	District	Village	Head of household	<5		>=5		New Case	Old Case	Referred from:	Lab exams	Diag- nosis	Treat- ment	Refer- red	
							Male	Fem	Male	Fem								

Standard register of a health facility for the distribution of bed nets:

Ser. Nu. Year	Date	Ser. Nu. month	Name	First name	District	Village	Sold at which price ?

Standard register of a health facility for family planning acceptors:

Ser. Nu. Year	Date	Ser. Nu. Month	Name	District	Village	Age	Oral CC 3 cycles	Injec- table	IUD	Im- plant	Perm. Meth: tubal ligation/ vasectomy	New accepter	Re- Atten- dant

At the end of the month, a blank space is left at the bottom of the page of the register so that fund holder medical verification officer and the health facility manager sign to confirm the total number of patients during the month.

<b>Total Number of new cases for external consultancies for the month of .....</b>	<b>Signature of manager date</b>	<b>Signature of the Fund Holder verification officer date</b>
.....	..... ... / ... / 200..	..... ... / ... / 200..

## 6.5 Monthly Activity Report

The standards registers serve for the HMIS report as well as for the Monthly Activity Report. This latter report concerning the output of the health facility serves as an auditable document that has the function of an invoice. One Monthly Activity Report is kept at the health facility and another one is stored in the fund holder's office. They must be kept at least 5 years for auditing purposes.

## 6.6 Payment Procedures

### **Data encoding in EXCEL application**

Health facility data are entered in an EXCEL database for analysis and to calculate the monthly subsidy payment. Considering the importance of these data for the payments it is important to check entries and to avoid errors which may have serious financial consequences.

### **Invoicing and grants payment**

On the basis of the Monthly Activity Report the fund holder calculates the monthly payments for each health facility. The fund holder preferably transfers the money into the bank account of the

health facility before the 25<sup>th</sup> of the following month. The health facility must acknowledge the payment received from the fund holder before the next payment. A lack of quality in the registers or HMIS report may lead to penalties if it appears that the data are not matched with the verification in the registers. A gap of more than 5% may result in the non payment the concerned indicator.

## 6.7 Exercise

### Group Work

- What problems can be identified with routine HMIS data collection systems? Besides the problems identified in paragraph 6.2 can you imagine others?
- In PBF data collection, there are positive and negative factors that influence the quality of the data. Which are those?
- What are advantages and potential risks of the PBF data collection system?
- Why should the main registers of health facilities be standardised?
- Analyse data in the EXCEL spreadsheet “MOD6CS-IBO” Are these data correct? If there are errors, which are they?

Minimu health package indicators	Jan 2009	Feb 2009	Mar 2009	Apr 2009	May 2009	June 2009
External consultancies new cases (1 cons/pers/yr)	1005	1255	1389	8011	800	399
Hospital bed days (0,5 bed occupied / 1000 pop)	300	250	430	0	0	450
Referred of serious patients and arrived at the hospital	2	450	2	3	4	6
Children 6m–6yrs receiving vit A (target 90%)	500	450	300	700	300	600

## 7. THE ROLE OF THE REGULATOR

Dr Jean Paul NYARUSHATSI et Mr. Bwanga ENANJOUR

### 7.1 Objectives

- Understand the problems, conceptual framework and instruments of health systems regulation in the context of free market economies- and PBF principles.
- Understand the instruments and indicators concerning health facility quality reviews.

### 7.2 Problems with regulators in traditional health systems

In many developing countries health authorities operate in a **monopolist hierarchical system**, in which the Ministry of Health, provincial and district authorities at the same time play the role of regulator, service provider, fund disburser and the custodian of community participation. Health authorities (and politicians) often have limited knowledge of the advantages of the free market and assume that their role is to enter into a central command and control type of relationships with other stakeholders.

As a result, national level civil servants and decisions makers may develop rigid instructions. These instructions often lack a sound problem analysis and may lack a scientific evidence base. The instructions may be the result of international discussions or advocacy by pressure groups. **Rigid, hierarchical** attitudes with little respect for other national stakeholders combined with authoritarian directives may frustrate the entrepreneurship of health facility managers. They routinely ignore the comparative advantages of the private sector and to impair them. All these factors block the development of the health system and the economy, because (as we have seen in the microeconomics chapter ) central command and control systems fail to distribute efficiently scarce public resources.

Another often found problem with the performance of health authorities in developing countries are very low salaries and the absence of incentive systems to reward performance. Salaries are paid without connection to performance, employment as a civil servant is often for life and health authorities may lack the intrinsic motivation to defend the public interest. When governments (historically) decided that health workers should be civil servants this confused their role as regulator and it wrongly assumed that health services should also be implemented by civil servants. Furthermore, local health authorities often **lack good instruments** to implement their regulatory tasks such as quality insurance or how to stimulate public-private partnerships.

This toxic mix of a lack of clarity about the core role of government authorities, their low salaries and a poorly functioning incentive system lead to inefficiencies, frustrations & cynic behaviour, corruption and the misuse of power.

### 7.3 The core role of regulation: conceptual framework, values

A **health system** comprises of all organizations, institutions and resources devoted to producing actions whose primary intent is to improve health.

**Regulation** is defined as rules designed to control the conduct of those to whom it applies. Regulations are official rules, and have to be followed.

Ideally, health policy objectives in a democratic country must be developed on the basis of a democratic process of consultation with stakeholders, sensitivity for people's interests and an electoral process whereby those politicians are selected because they best represent the values and objectives of the health system such as felt by the electorate (see chapter 1). There should furthermore also be scientific evidence that specific approaches or interventions work and are the

best possible mix to achieve quality and equitable health services. In this logic, the government, through the Ministry of Health, assures the general administration and regulation of health policy implementation. It is the steward of the health system.

The national health policy for the majority of countries may contain the following aims and values (see also paragraph 1.3):

- To improve the *health status of* the population through the provision of *quality* services that are *accessible* (based on the human rights that assures access to health services). An important related objective is to reinforce the economy, to create employment and to reduce poverty by aiming at economic multiplier effects;
- To assure *free choice among patients for public and private service providers* so that democratic values and the free expression of opinions are assured;
- To ensure *geographical, cultural and financial equity* while at the same time households contribute for health services proportional to their means and that services are orientated towards the health needs determined both by professionals and felt by the population;
- To assure the *rational and efficient use of resources* by orientating them towards effective and efficient health services and by making use of free market instruments;
- To ensure that the *proportion of the health expenses* in comparison with household income and government revenues is reasonable. It is often assumed that health expenditures (user fees and health insurance premium payments) may vary between 8-10% as a proportion to household income.

A number of choices must be made to achieve the above aims and values. For example, how to assure that health policies are supported by the electorate? How to assure that health services are of good quality instead of providing free health services of poor quality in overcrowded health facilities? While it is easy to make populist statements in favour of free health care, where do the resources come from, is it sustainable and the most cost-effective manner to distribute scarce resources? How to motivate health workers so that they guarantee quality without labour unrest and strikes such as often the case? While the principles of free choice among patients for health providers is shared by most stakeholders, how to implement this? How to assure that national health policies have a sound evidence base? Are there national research institutes that conduct scientific research and, if yes, which organisations?

According to PBF principles all this requires first of all that decisions are made supported by evidence that they will work. Secondly, the decision should not only support the health system but equally create economic growth and employment. Thirdly, only well motivated health authorities can be effective custodians or stewards of national policies, who defend the public interest without conflicts of interest.

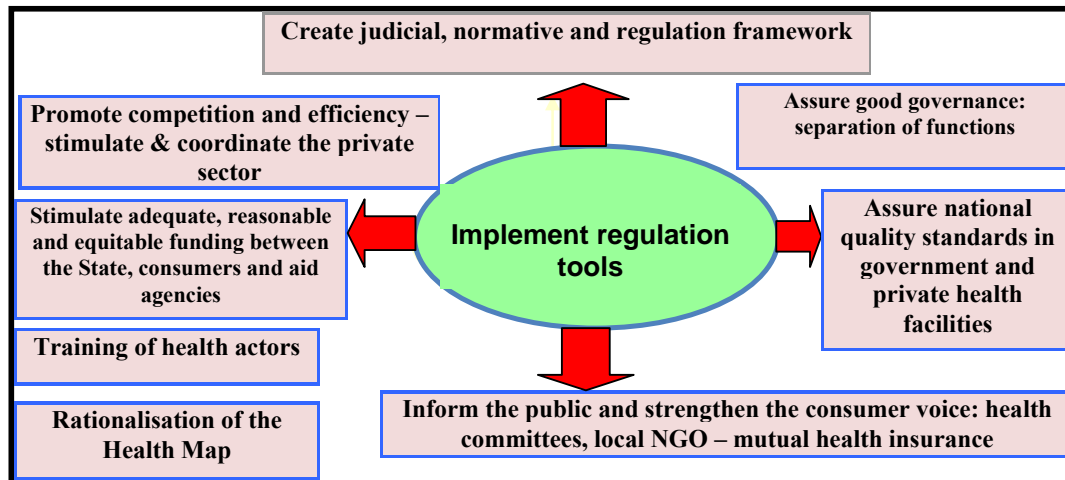
#### **7.4 Regulatory roles of the government**

Based on the problem analysis and experience with PBF the following regulatory roles for the government have emerged:

- Their first role is to promote the aims and values of national (health) policies. This requires a small group of well paid civil servant to develop strategies, to conduct participative supervision and to conduct quality reviews at health facility level without being tempted to rent seeking or misuse of their powers;

PBF interventions aim at reinforcing the health system as a whole; therefore, 5-10 % of funds are set aside to reinforce regulation and in particular quality assurance and respect for national standards. For this reason in Burundi the PBF program, through the Ministry of Health, channelled funds in the form of performance contracts for national supervision tasks and for in particular quality assurance activities conducted by regulatory authorities at provincial and district level.

- The importance to separate the functions of regulation, health provision and fund disbursement for good governance and transparency;
- To promote competition between providers and to include the private sector as this creates several economic multiplier effects and assures efficient use of limited public resources;
- To create performance based financing mechanisms that assure adequate and equitable financing both from government and out-of-pocket resources making use of the free market to distribute scarce resources as well as market oriented measures to correct their failures.
- To assist with the rationalisation of the health map into practical units at district level for a target population of 100-200.000 and at health centre level for 10.000 people;
- To inform the public, to strengthen the consumer voice empowerment and to assure mechanisms for the effective social marketing of desired behaviour.



#### 7.4.1 Separation of functions and the limits of the role of the regulator

To assure good governance and transparency, national and peripheral health authorities should limit themselves to strict regulatory activities. The roles of purchasing health services and its provision should be carried out by other organisations. As the result of this principle public funding should be channelled through autonomous fund holder organizations such as NGOs or independent insurance companies. These funds fund holder organizations may then directly sign contracts with health facilities based on clear national targets, which are controlled by local health authorities in how far they are achieved.

#### 7.4.2 Regulatory control of quality standards in both government and private health facilities

The regulator, at various levels, has the responsibility to set standards without discriminating against government, religious or private health facilities. The regulator assures **harmonious public – private collaboration** and makes use of their respective comparative advantages. Tools to implement this have been developed in the form of the sub-contract system whereby principal contract holders enter in sub-contractual relationships with other health facilities in the same catchment area. But also, this implies that any health facility being government or private can be excluded from a performance contract if minimum standards are not met and health authorities may then also close a government health facility.

### 7.4.3 Assure competition for inputs of health facilities

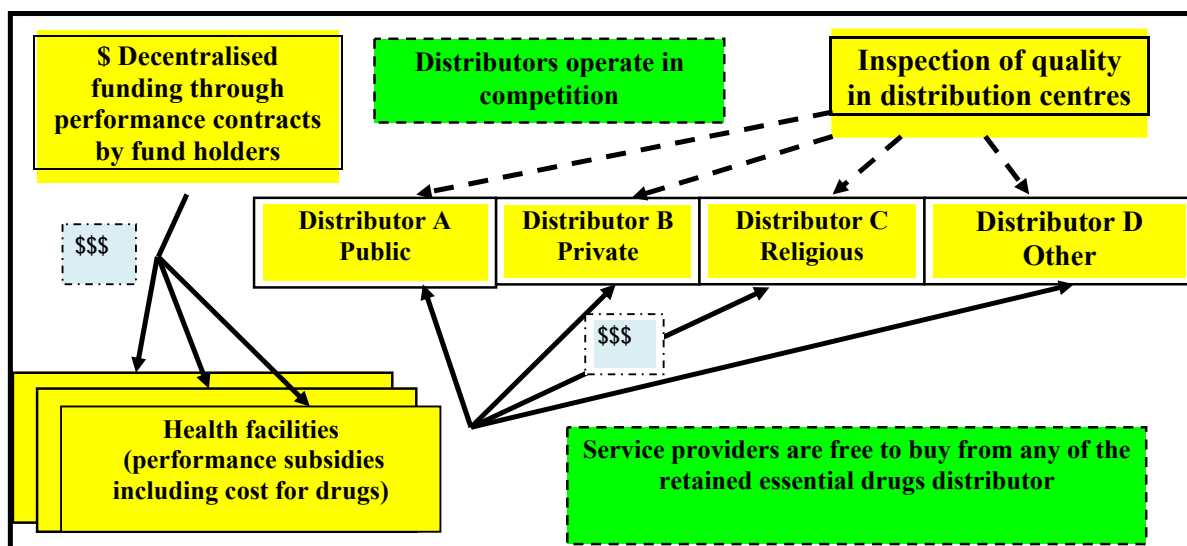
**Monopolistic distribution of drugs and other inputs have the following disadvantages:**

- **Stock shortages** because it is quasi impossible for a single distributor to plan for all the pharmaceutical needs in a country, province or health facilities;
- Risk of having **excesses of products that may expire** due to central command and control errors during the planning for these inputs. This constitutes a waste of national resources;
- Monopolistic government systems create conflicts with private pharmaceutical industries. Government becomes a player in the market instead of regulating the market for the public benefit. Thus, private sector operators may start hiding their activities in order to fight what they may consider unfair government competition and this, in turn, creates a **black market**. This may lead to a situation whereby a large proportion of essential drugs transactions are not controlled so that even more dangerous practices and products appear. I government would leave the distribution of essential drugs to the market and assures quality these problems would not appear.

In a free market system the quality of drugs and equipment should be assured by a central authority setting the standards among distribution centres, which operate in competition with each other. At the peripheral level health authorities control in how far these standards are respected. Autonomous health facilities are free to purchase their inputs and thereby create the demand and thereby competition between any of the government accredited distribution centres.

In this philosophy, the State uses the comparative advantages of the private sector to create a cost-effective and good quality mechanism to distribute essential drugs and medical equipment. The State should, in fact, encourage private investors to start new pharmaceutical industries to produce drugs, mosquito nets, equipment, furniture, etc. Moreover, by stimulating the private sector this will create economic growth and employment, which, in turn, constitutes a source for government tax revenues.

The drugs distribution system proposed in PBF is summarized in the following diagram:



The role of the regulator for the **distribution of essential drugs and its quality assurance** is to create a situation of equitable competition among different distributors without discrimination. This requires that inspectors only concentrate on how to assure quality standards and to assist pharmaceutical industries to do so. The industry should not be considered a threat by the authorities but first of all an opportunity for development with several economic multiplier effects. Provincial and national pharmaceutical regulators should also be empowered with adequate knowledge and instruments (laboratories, etc) to conduct their regulatory roles.

### **The case of the Democratic Republic of Congo: Monopoly in the centralised distribution of medicines**

Monopolization of essential drugs distribution was imposed in DRC through provincial distribution centres with the argument that it would assure good quality drugs. This argument was not confirmed by the studies conducted by Cordaid between 2006 and 2008 in the South Kivu province. The studies showed that the monopolization of medicines in the two control district created serious drugs stock outs in health facilities and therefore dissatisfaction among the population and health workers. To the contrary, in two health districts that applied PBF and where health facilities were allowed to purchase essential drugs from any distributor accredited by the provincial health authority, there were no drugs shortages (Intervention Control Study published in Health Affairs 2010).

#### **7.4.4 Provincial steering committees**

As part of PBF, the coordination of the health system at district and provincial levels is usually allocated to Steering Committees which must guide and co-ordinate the activities between the stakeholders. The main activities of these steering committees are to:

- Assure that the stakeholders implement the national health policy, including PBF, and more in general to improve the health status of the population;
- Explain and encourage economic multiplier effects of injecting cash directly in health facilities and communities and of stimulating entrepreneurship among health managers and thereby moving away from traditional central command and control input financing systems;
- Assure adequate funding for the PBF system and stimulate aid agencies to invest their resources through PBF;
- Analyse problems of political nature and develop communication strategies to solve them.

#### **7.4.5 Reinforcing consumer voice empowerment**

Consumers obviously play the most important role in health systems and regulators must strengthen their influence such as described in chapter 11 of this book “Consumer – Provider Interaction”.

#### **7.4.6 Human resource management**

In PBF systems health facilities are autonomous in hiring and firing staff and health workers should preferably not be civil servants. What role does the regulator play? In the first place regulators may develop and enforce national labour laws such as concerning minimum salary scales per academic level, years of employment, etc. Ministry of Health should also set the standard for the number of qualified nurses, doctor as a ratio of the population such as 1 qualified staff per 2000 people at primary health centre level or 1 qualified staff per 1500 people when the health package includes HIV/AIDS activities. Furthermore health authorities may also play an important role in assuring training for health workers.

### **7.5 Supervision and quality assurance**

Technical participative supervision is done at different levels of the regulatory system. For example, the national level may supervise the provincial and district authorities while district authorities conduct quality assurance reviews at health facility level and regulate the private sector. Preferably each health centre catchment area is visited once per three month by supervisors during which quality reviews take place. In PBF systems the fund holder may pay a quality bonus based on the outcome of these quality reviews.

When supervisors notice during their visits that quality is below standard, the health facility management must explain how they will improve and integrate those ideas in their next Business Plan. Failure to improve quality standard after 3-6 months may delay the renewal of the performance contract. Each Business Plan should contain strategies how to improve quality.

The **quality bonus** is allocated quarterly to health facilities and may be the equivalent of 15% of the total output subsidies during the quarter when the score is 100% and proportionally lower when the score is lower = **Quarterly Quantitative subsidies x 15 % x quality score**. Experience has also been developed with the allocation of a part of quality bonuses on the basis of patient satisfaction surveys and the criteria such as timeliness of submitting information as well as the reliability. However, the exact formula on how to distribute bonuses may be discussed and decided in the Steering Committees and adapted to local circumstances.

### **Quality standards that may in the Business Plans (module 8)**

- Number of skilled personnel => at least 1 per 2000 inhabitants;
- Hygiene, waste disposal and sterilisation procedures;
- Small rehabilitations (painting, solar light, incinerator, septic pit, latrines)
- Major rehabilitations (for which the fund holder may advance funds based on an infrastructure fund or as an advance for future subsidies).
- Purchase of new medical equipment for sterilisation, laboratory, computers, mattresses, etc
- Analysis of the geographic access in the catchment area and potential for collaboration with private sector.

#### 7.5.1 Monitoring of quality indicators

Health centre quality reviews are usually done by a team of at least two health authority supervisors. Quality scores in Burundi and DRC are not supposed to be below 50% for health centres and below 60% for hospitals. The following table shows the 15 components of the quality questionnaire used in DRC and Burundi with in total 154 composite indicators.

A composite indicator for quality reviews contains several elements which all must be satisfied to earn a point (or sometimes more than a point). The weighing of indicators may be 1, 2, 3, 4 or 5 points and depends on its importance.

#### 7.5.2 Quality reviews of health centres by local health authorities

The quality reviews of health centres is done by a team of at least two supervisors of the local health authority. This evaluation may take a full day in particular when the review includes other sub-contracted health facilities such as private clinics or health posts. Fund holder verification officers should check at an at random basis the quality of the quality reviews. This to prevent that supervisors give a too positive or too negative score based on private preferences or to assure the payment of the full quality bonus. At the same time health authority supervisors should also check the work of fund holder verification officers. This to assure transparency.

Every element below 60% must be analysed and corrective actions must be suggested. The PBH-DBH team suggests to the health centre manager strategies on how to use the quality bonus for quick improvements.

#### 7.5.3 Quality evaluation of private clinics by the local health authorities

The **quality reviews of subcontracted health posts and private clinics** is ideally also done once per quarter and should take around 2-3 hours. The quality review score should not be below 50%. In case of a bad score the supervisors have to analyse the reasons and suggest urgent actions for improvement. At the end of a quality review the supervision team should organise a feedback meeting and share on strengths, weaknesses and the recommendations.

#### 7.5.4 Peer group quality reviews at hospital level

In the past, hospital quality evaluations were often done by specialist doctors working in national reference hospitals. This was not a very realistic approach due to shortage of specialists with time

to conduct regular visits in a multitude of hospitals. Furthermore, the hierarchical inspections were often not perceived as constructive by hospital managers and therefore the peer group review system was developed. Peer group quality evaluations are not hierarchical but rather an exercise among equals or “peers” whereby a team from one hospital visits another hospital. The aim of the inter-collegial visits is to advice and not to impose unilateral instructions.

Peer group evaluations are done at least by two other hospitals each represented by 3 persons (managing doctor – administrator - nursing manager). A representative from the local health authority and the fund holder organization may also be invited. The evaluation may be done within one day. It is important to organize the visit in a disciplined manner so that participants arrive in time and do not waste each other’s time. The exercise may begin by reviewing the recommendations of the previous evaluation. The doctors may review the medical technical aspects, the administrators the financial – administrative performance and nursing directors may focus on nursing aspects. The atmosphere of the visit should be frank, sincere and transparent without an attitude of “seeking for errors” but rather to find strategies how to improve services. The results must be treated with confidentiality to avoid that hospitals hide information, but also to protect the individual confidentiality of patients such as PLHIV. Every element below 60 % must be analysed and corrective actions must be suggested. By the end of the visit a joint meeting should be organised to discuss findings and recommendations.

#### **The case of Burundi concerning quality reviews**

In Burundi, quality bonus is calculated as follows: 50% of bonus is based on the quality review by the health authority supervisors. For the other 50% of the quality bonus other elements have been included in the score of each health facility:

Criteria of evaluation for the attribution of quality bonus	Value in %
<b>Technical quality evaluated by local health authorities</b>	<b>50%</b>
Quantitative verification of basic documents	10%
Verification of the existence of registered users	10%
Verification of the provided service	10%
Average cost of subsidised services	5%
Cost perception by users	5%
Satisfaction of the users for services provided by the Health facility	10%
TOTAL	100%

Table: Criteria of evaluation for the attribution of quality bonus.

#### **7.6 Exercise**

- What is the role of local health authority in the promotion of the private sector?
- How does the subcontract system reinforces the health system?
- What are arguments to separate regulatory and fund disbursement functions at provincial level?
- What are the roles of the provincial health authorities in regulating the distribution of inputs – such as essential drugs, medical equipment, etc?
- Suggest new quality indicators.

## Annex: Quality questionnaire

### EVALUATION SUMMARY

HEALTH SERVICE COMPONENTS	Which type of Health Facility	Available POINTS	Nr of composite indicators
1. General Indicators	ALL	10	9
2. Business Plan	ALL	10	6
3. Income, running costs, performance bonus – indices	ALL	10	4
4. Hygiene & sterilization	ALL	20	10
5. OPD department / emergency room	ALL	25	22
6. Family Planning	ALL	25	12
7. Laboratory services	ALL	10	9
8. Essential drugs management	ALL	10	7
9. Tracer essential drugs	ALL	15	5
10. In patient wards	ALL	15	15
11. Maternity	except PS some DP	25	20
12. Operating theatre	HOSP	15	9
13. Tuberculosis services	HOSP - RHC	10	8
14. Immunization and preschool consultations	HC	15	12
15. Antenatal Care	HC	10	6
TOTAL		225	154

In different type of health facilities the following health service components are being reviewed:

- Health centres have all health service components – minus the operation theatre and the tuberculosis services (except in the case of a health centre *with* TB services).
- Hospitals have all health service components minus vaccination and ANC.
- Private health clinics and health posts do not have the components operation theatre, tuberculosis, immunization, ANC and, in certain cases, maternity services.

Thus different types of facilities can earn a maximum of:

Private health centres / health posts: **Maximum = 150** without maternity, 175 with maternity

Health centres MPA: **Maximum = 200** (operating theatre and TB services excluded)

Hospitals – CPA: **Maximum = 200** (immunization + ANC excluded)

## QUALITY QUESTIONNAIRE

### EVALUATION SUMMARY

Date: /... / 20....	Name(s) supervisors: .....	Province: .....
Health District: ... ..	HF : public / religious / private	Name: HF: .....
Number of beds: .....	Population: .....	PS / DP / CS / CHR / HGR <sup>9</sup>
Nr personnel A0: .....	Nr personnel A1: .....	Nr personnel A2: .....
Nr personnel A3: ....	Non qualified staff A4/A5 <sup>10</sup> : ....	Non qualified staff A6: ....
Tot qualified staff: ...	Nr beds : .....	xxxx

<sup>9</sup> HP = Health Post / PD = private dispensary / HC = health Centre /

RH = Reference Hospital / RGH = Reference General Hospital

<sup>10</sup> Non qualified personnel **A4** = medical auxiliaries; **A5** = cleaners - sterilization – maintenance ;

A6 = gardeners – security – laundry

<b>1. GENERAL INDICATORS</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Presence map of health facility catchment area <i>Health map of the health area available and at wall in the HF showing villages / districts, main roads, natural barriers, special points and <u>distances</u></i>	<b>1</b>	<b>0</b>
2. HMIS Reports – business plan – minutes technical meetings and other important documents well stored <i>In cupboard and in box files and accessible by duty manager</i>	<b>2</b>	<b>0</b>
3. <u>Staff duty roster</u> available and well displayed visible for staff	<b>1</b>	<b>0</b>
4. Health facility has an <u>infrastructure development plan</u> responding to the needs of complete MPA / CPA activities	<b>1</b>	<b>0</b>
5. Technical meetings with staff conducted monthly and minutes available. <i>Check minutes last month's technical meeting</i>	<b>1</b>	<b>0</b>
6. Standard sheets for referral available ( <i>at least 10</i> )	<b>1</b>	<b>0</b>
7. Availability of radio or mobile phone for communication between health facility and next level reference centre <i>Radio or mobile telephone functional with batteries and/or credit</i>	<b>1</b>	<b>0</b>
8. Kitchen for inpatients available and clean <i>Evacuation of waste in a bin</i>	<b>1</b>	<b>0</b>
9. Mortuary available <i>A room or a small building</i>	<b>1</b>	<b>0</b>
<b>TOTAL Points - 10 points maximum</b>	<b>..... / 10</b>	<b>XXXXXX</b>

<b>2. BUSINESS PLAN</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Quarterly Business Plan for current period made and accessible <i>Supervisor verifies the current business Plan</i>	<b>2</b>	<b>0</b>
2. Business Plan prepared <u>with key stakeholders</u> - Heads of HF departments, health committee members (if functional) - Representative (s) of subcontracted Private Clinics or Health Posts (if applicable)	<b>2</b>	<b>0</b>
3. Business Plan contains convincing geographic coverage plan - Strategies sub-contracts (villages at more than one hour by foot) - Mobile strategies (PEV, PF, CPN, mosquito-net distribution, latrines)	<b>2</b>	<b>0</b>
4. Business Plan analyses presence <u>untrained informal</u> practitioners in catchment area and suggests strategies of discouragement. <i>HF treated this subject in BP and has suggested a strategy</i>	<b>1</b>	<b>0</b>
5. Business Plan analyses the presence of <u>trained</u> practitioners, operating without any permission. <i>BP may suggest to include them or to discourage if quality conditions are not met</i>	<b>1</b>	<b>0</b>
6. Business Plan shows a plan to assure financial accessibility for the population and has a convincing strategy <i>BP shows negotiated rates with between HF, committee and community.</i>	<b>2</b>	<b>0</b>
<b>TOTAL Points - 10 points maximum</b>	<b>..... / 10</b>	<b>XXXXXX</b>

3. FINANCES, INCOMES, RUNNING COSTS PERFORMANCE BONUS - INDICE	Protocol Respected	Protocol NOT Respected
1. Financial and accounting documents available and well kept - Monthly report of treasury available and correctly filled - Theoretical balance of cash-book corresponds to liquidity in cash	2	0
2. Document available to show that monthly calculation of <b>incomes, running costs, investments and variable performance subsidies</b> are done (a) Representative guarantees <b>running costs</b> : = basic bonus fixes, purchase drugs and equipments, subcontracts, petty cash for small expenditures, social marketing, maintenance and rehabilitation. (b) Representative calculates the performance bonus according to the formula: <b>performance bonuses = income of the month – running expenses</b>	3	0
3. Basic salaries + performance bonuses do not exceed 60% of total HF income Supervisor adds fixed bonuses, performance bonus and government salaries (if applicable) and compares them with total HF revenues	2	0
4. Existence of fixed basic salaries and monthly performance bonus system is known by staff - Established basic salaries - Established criteria for the performance bonus calculation through (a) basic performance index + (b) seniority + (c) responsibility + (d) the hours additional - lost hours + (e) quarterly performance evaluation.	3	0
<b>TOTAL Points - 10 points maximum</b>	<b>..... / 10</b>	<b>XXXXXX</b>

4. HYGIENE & STERILISATION	Protocol Respected	Protocol NOT Respected
1. Fence health facility available and well maintained If fence exist => can be closed at night; without wholes	2	0
2. Availability of a garbage bin in courtyard Bin with lid accessible to clients - not full	1	0
3. Presence of sufficient <b>latrines/toilets</b> and well maintained Clinic or HP at least 2; RHC / RH at least 5; RGH 1 per 10 beds - Floor without fissures with single hole and lid - Closing doors, super structure with roofing - without flies or smell - Recently cleaned without visible faecal subjects	2	0
4. Presence of sufficient <b>showers</b> and well maintained - Clinic, HP at least 2; RHC / RH at least 5; RGH 1 by 10 beds - Shower with running water, or container with at least 20 litres - Evacuation of the wastewater in a sanitation pit	2	0
5. Incinerator and placenta pit within fence and locked - Functional cleaned incinerator - Placenta pit with lid - Well built fence with door closed on key	5	0
6. Waste pit for non contaminated objects available - Hole of minimum 3 metres depth fenced, without infected non decomposable objects	1	0
7. Courtyard clean No waste and dangerous objects in courtyard such as needles – syringes – gloves – used compresses, etc	2	0
8. Maintenance of the courtyard Grass cut – garden well maintained – no animal excrement	1	0

9. Staff sterilises instruments according to standards <i>Sterilizer undamaged. Sterilisation protocol available and utilized</i>	3	0
10. Hygienic conditions assured in wound dressing and injection room <i>Bins for infected objects with lid and foot pedal –security box for needles well positioned and used</i>	1	0
<b>TOTAL Points - 20 points maximum</b>	<b>... / 20</b>	<b>XXXXXX</b>

<b>5. OPD consultancy department</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Good conditions in waiting area <i>With sufficient benches and / or chairs, protected against sun and rain</i>	1	0
2. Tariff for cost recovery displayed for the public <i>Tariffs for patients displayed and easily visible for patients</i>	1	0
3. Existence of waiting card system with numbers	1	0
4. Consultancy room in good condition <i>Walls with durable materials well painted, floor paved with cement without fissures, undamaged ceiling, windows with curtains, and functional doors with lock</i>	2	0
5. Consultancy room and waiting space separated assuring confidentiality <i>Room with closed door – curtains on windows or non transparent glass</i>	1	0
6. Consultancy room (in particular where emergencies are received) has lights 24 hours <i>Electricity or solar light</i>	1	0
7. All the consultancies are done by skilled staff <i>Identification of consulting staff in register</i>	2	0
8. Consulting staff is well dressed <i>Clean blouse - with identification tag and shoes (no slippers)</i>	1	0
9. Correct numbering of registers <i>Correct numbering and closed at the end of the month</i>	1	0
10. Service availability 7 / 7 <i>Supervisor verifies entries in register last 3 Sundays</i>	1	0
11. Malaria protocol put on wall and accessible for staff <i>National protocol for diagnosis and treatment of simple and serious malaria</i>	1	0
12. <u>Simple malaria</u> correctly treated <i>See the register of last 5 cases in register (AS / AQ)</i>	1	0
13. <u>Severe malaria</u> correctly treated <i>See last 2 cases in register (injectable quinine with drip)</i>	1	0
14. Acute Respiratory Infections correctly treated <i>WHO Flow diagram available and applied</i>	1	0
15. Diarrhoea correctly treated <i>WHO Flow diagram available and applied</i>	1	0
16. Proportion of consultancies treated with antibiotics < 50 % <i>See last 30 cases in register, check diagnosis and calculate the rate – no more than 14</i>	2	0
17. Knowledge of tuberculosis danger signs and criteria for referral to TB screening health facility <i>Answer must contain at least 4 of the following signs: Weight loss, asthenia, anorexia – fever, cough more than 15 days, sweating</i>	1	0
18. Stethoscope & BP machine available and functional <i>Check blood pressure of somebody to verify functionality</i>	1	0

19. Thermometer available and functional <i>Inspect the thermometer</i>	1	0
20. Otoscope available and functional <i>Inspect: available charged batteries with strong light</i>	1	0
21. Examination Bed available with mattress	1	0
22. Balance available and functional <i>Inspect in comparison with the known weight of supervisor, after weighing the indicator should come to zero</i>	1	0
<b>TOTAL Points - 25 points maximum</b>	<b>.... / 25</b>	<b>XXXXX</b>

<b>6. FAMILY PLANNING</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. At least one qualified staff in HF trained in Family Planning	2	0
2. Confidentiality in consultancy room assured <i>Room with door closed – curtains at windows – or non transparent glass</i>	2	0
3. Family planning methods available and visible in demonstration box for potential users	2	0
4. Staff <b>correctly calculates</b> number of couples expected monthly for <b>oral</b> and <b>injectable</b> contraceptives <i>For example for 10.000 people = 10.000 x 21 % x 20 % / 12 x 4 = 147</i>	1	0
5. HF attains at least 50 % of monthly target in oral and injectable contraceptive. <i>Example 10.000 people. = 147 x 50 % = 73</i>	3	0
6. Business Plan contains convincing strategy to achieve FP targets - <i>Involvement of HF staff in strategies</i> - <i>Collaboration with private sector and social marketing</i> - <i>Mobile strategies, advocacy among local leaders, etc</i>	3	0
7. Stock of oral and injectable contraceptives is adequate <i>for 10.000 people 72 doses of oral and injectable methods combined</i>	2	0
8. DIU available and staff trained to use it - <i>At least 5 DIU</i>	2	0
9. Norplant Method available and staff trained to use it - <i>At least 5</i>	2	0
10. Strategies available for transfer of persons to hospital seeking permanent FP methods ( <b>tubal ligation and/or vasectomy</b> ) - <i>Good referral system worked out - strategy to reduce prices</i> - <i>Mobile strategies of surgery by hospital staff in health centre?</i>	2	0
11. FP register available and well utilized	2	0
12. FP individual forms available and well utilized (5 forms) <i>(Hypertension, hepatomegaly, varices, weight)</i>	2	0
<b>TOTAL Points - 25 points maximum</b>	<b>..... / 25</b>	<b>XXXXXX</b>

<b>7. LABORATORY</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Laboratory assistant or polyvalent nurse of at least A3 level is available	1	0
2. Laboratory is functional <b>every day</b> of the week <i>Supervisor verifies the last 2 Sundays in laboratory register</i>	1	0
3. <b>Results recorded</b> correctly in laboratory register and <b>match</b> with results in inpatient sheets or OPD examination card <i>Supervisor verifies the last 5 results</i>	1	0
4. List of all laboratory examinations visible for public with tariffs	1	0
5. Availability of parasites <b>demonstrations</b> - On plastic paper, in a colour book, or put on wall - Blood smear: Vivax, Oval, Falciparum, Malariae - Stools: Ascaris, entamoebae, ankylostome, schistosome	1	0
6. <b>Microscope</b> available and functional - functional objectives - immersion oil – mirror or electricity - blades – cover glass –GIEMSA available	2	0
7. <b>Centrifuge</b> available and functional	1	0
8. <b>Waste</b> evacuation correctly carried out - Organic waste in a bin with lid - Security box for sharp objects available and destroyed in incinerator	1	0
9. Personnel adequately wash dirty pipettes in containers with antiseptic	1	0
<b>TOTAL Points - 10 points maximum</b>	<b>..... / 10</b>	<b>XXXXXX</b>

<b>8. In-patient wards</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Guard duty roster clearly visible for staff and followed up <i>Supervisor verifies guard duty's report – names and signature</i>	1	0
2. Furniture available and in good state <i>Beds, mattresses, mosquito nets, sheets, night tables</i>	3	0
3. Good hygienic conditions - Regular cleaning, access to drinking water, enough space between beds - Good ventilation without bad smells	2	0
4. Light available in ward during night <i>Electricity, solar light or rechargeable battery lamp</i>	1	0
5. Confidentiality assured <i>Women separated from men – wards not visible from outside</i>	1	0
6. In-patient register available and well maintained <i>Check identity and hospital bed days</i>	1	0
7. Recording forms for hospitalisations available and well filled - At least 10 blanks – Supervisor verifies 5 filled forms - Temperature TA, laboratory examinations well filled - Treatment monitoring checked	1	0
<b>TOTAL Points - 10 points maximum</b>	<b>..... / 10</b>	<b>XXXXXX</b>

9. ESSENTIAL DRUGS MANAGEMENT	Protocol Respected	Protocol NOT Respected
1. Staff maintains stock cards for ED showing security stock level = <i>Monthly Average Consumption (MAC) / 2</i> - <i>Supply in register corresponds with physical supply</i> - <i>Supervisor takes a sample of three drugs</i>	2	0
2. Health facility purchases drugs, equipment and consumables from at least <b>three</b> distribution centres and is not subjected to one monopolist supplier.	2	0
3. Drugs are stored correctly <i>Clean place, well ventilated with cupboards, labelled shelves, and drugs stored in alphabetical order</i>	2	0
4. Main HF pharmacy store delivers drugs to health facility departments according to requisition <i>Supervisor verifies if quantity requisitioned equals served quantity</i>	2	0
5. Absence of out-of-date drugs or with unreadable labels <i>Supervisor verifies randomly 3 drugs and 2 consumables</i> <i>Out-of-date products well separated from stock</i> <i>Destruction protocol for out-of-date drugs available and applied</i>	2	0
<b>TOTAL Points - 10 points maximum</b>	..... / 10	XXXXXX

10. Tracer Essential Drugs <i>Minimum Stock = Monthly Average Consumption (MAC) / 2</i>	Available YES > MAC / 2	Available NO < MAC / 2
1. Amoxicillin tabs 250 mg	1	0
2. Ampicillin tabs 500 mg	1	0
3. Artesinate tabs 50 mg – amodiaquin 200 mg	1	0
4. Cotrimoxazole tabs 480 mg	1	0
5. Diazepam 10 mg / 2ml - injectable	1	0
6. Iron – acide folique tabs 200 mg + 25 mg	1	0
7. Mebendazol tabs 100 mg	1	0
8. Methergine tabs 10 Unity	1	0
9. Metronidazole tabs 250 mg	1	0
10. Paracetamol tabs 500 mg	1	0
11. Quinine tabs 500 mg	1	0
12. SRO / oral sachet	1	0
13. Sterile gloves	1	0
14. Swabs	1	0
15. Glucose Solution 5%	1	0
<b>TOTAL Points - 15 points maximum</b>	..... / 15	XXXXXX

11. MATERNITY	Protocol Respected	Protocol NOT Respected
1. <b>Sufficient water with soap</b> in delivery room <i>A functional water point or at least 20 litres</i>	1	0
2. <b>Light in delivery room 24 hours</b> <i>Electricity, solar light or rechargeable battery lamp</i>	1	0
3. <b>Waste</b> from maternity correctly collected <i>- bin + security box for needles</i>	1	0
4. <b>Delivery room in well maintained</b> <i>- Walls with durable materials and painted - Paving in cement without fissures, ceiling undamaged - Windows with curtains and functional doors</i>	1	0
5. <b>Availability of the partogramme</b> <i>At least 10 forms</i>	1	0
6. <b>Blood pressure</b> taken during delivery labour <i>BP taken during labour and noted in partogramme – at least once an hour – supervisor verifies 3 partogrammes</i>	1	0
7. <b>APGAR</b> during delivery noted in register <i>Filled in the partogramme 1st, 5th and 10th a minute Supervisor verifies 3 partogrammes</i>	1	0
8. All deliveries performed by <b>skilled personnel</b> <i>Identification of the obstetricians from names in the register</i>	2	0
9. Availability of a <b>scale</b> (to measure height), an <b>obstetrical stethoscope</b> and a <b>aspirator</b> (plunged into a not irritating antiseptic) or functional manual / electrical <b>aspirator</b>	1	0
10. Availability of a functional <b>vacuum extractor</b> <i>Nurse trained in its use and vacuum extractor effectively used</i>	2	0
11. Availability of the <b>sterile gloves</b> (at least 10 pairs)	1	0
12. Availability of at least <b>2 obstetrical sterilised boxes</b> , <i>With at least 1 pair of scissors, 2 pliers, one needle holder</i>	2	0
13. Availability of at least one <b>episiotomy box</b> <i>Catgut and nylon, antiseptic, local anaesthetics, sterile swabs. One sterilised box with needle holder, needles, 1 anatomic pliers and 1 surgical pliers</i>	1	0
14. <b>Delivery table</b> in good state <i>Table in two parts with removable mattress and two functional leg supports</i>	2	0
15. <b>Baby scale</b> available and functional <i>Supervisor verifies the scale with an object of known weight</i>	1	0
16. Available <b>equipment</b> for care of <b>newborns</b> <i>Sterile tying string for umbilical cord, 1 % tetracycline ointment (applied to every new born)</i>	1	0
17. <b>Bucket or basin</b> for dirty linens available	1	0
18. <b>Mosquito nets</b> covering all beds available in maternity ward	2	0
19. <b>Beds</b> with mattress and beddings well maintained in ward <i>Mattresses covered with bedcover and sheets</i>	1	0
20. <b>Pre-delivery labour room</b> available and adequate <i>HC: at least 2 beds with mattress; RHC or RGH at least 4</i>	1	0
<b>TOTAL Points - 25 points maximum</b>	.... / 25	XXXXXX

<b>12. SURGICAL THEATRE</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Operating theatre in good state - Walls of durable material and easy washable walls - Floor paved with cement without fissures, ceiling in good state - Non transparent windows and functional doors	2	0
2. Operating table in good state - Easy to handle mattress covered with oilskin cloths - Functional hand rests with handcuffs	1	0
3. Functional lighting - Scialytique lamp with functional bulbs - Assured reserve light (generator, solar energy, lamp with rechargeable battery)	2	0
4. Basic equipment available - general anaesthesia and rachi anaesthesia - respirator - aspirator – diathermy knife and cauterisation	2	0
5. Intervention kits sterilised and ready to be used for emergency (caesarean – obstructed hernia) - Supervisor verifies the presence of at least 2 kits	2	0
6. Changing room available with adequate washing and brushing space - Pedal or elbow tap with disinfection device - Running water, brushes and soap available	2	0
7. Theatre clothing available and adequate - Surgical blouse, masks, hats, sandals	1	0
8. Surgical theatre register available and up to date	1	0
9. Hygienic conditions assured in the <b>operating theatre</b> - Bins for infected materials with lid - Security box for needles well positioned and used	2	0
<b>TOTAL Points - 25 points maximum</b>	<b>..... / 15</b>	<b>XXXXXX</b>

<b>13. TUBERCULOSIS – screening health facility</b>	<b>Protocol Respected</b>	<b>Protocol NOT Respected</b>
1. Conditions met for DOTS - Nurse trained in DOTS, laboratory assistant trained in screening, - Treatment forms, register and technical book available	2	0
2. Blade Handler available	1	0
3. Diamond pencil available	1	0
<i>Minimum Stock = Monthly Average Consumption (MAC) / 2</i>	<b>Available YES &gt; MAC / 2</b>	<b>Available NO &lt; MAC / 2</b>
1. Rifampicine-isoniazide-pyrazinamide : cp120+50+300mg	1	0
2. Streptomycin 1 gr	1	0
3. Etambutol tabs 400 mg	1	0
4. Receptors for sputum available	1	0
5. Blades and reactive available	2	0
<b>TOTAL Points - 10 points maximum</b>	<b>... / 10</b>	<b>XXXXXX</b>

14. VACCINATION + PRE-SCHOOL CONSULTATION	Protocol Respected	Protocol NOT Respected
1. Personnel correctly calculates target for completely vaccinated children) <i>Target = Population x 4 % / 12 x 100 %</i>	1	0
2. <b>Cold Chain Assured</b> - thermometer available and regular control temperature - <i>Presence of a fridge - temperature form available, filled twice a day – including the visit day</i> - <i>Temperature remains between 2 and 8 Celsius degree in register sheet</i> - <i>Supervisor verifies functionality of thermometer</i> - <i>Temperature between 2 and 8 degree Celsius also according to thermometer</i>	3	0
3. No shortage of toxins (DTC+HEPB, BCG, measles, polio, tetanus, etc) - <i>Presence of stock control cards</i> - <i>Supervisor verifies physical stock in the fridge</i>	1	0
4. <b>Vaccines are correctly stored in fridge</b> - <i>Freezing compartment: VPO – VAR</i> - <i>Not frozen compartment: BCG - DTC+HEPB, VAT, thinners</i> - <i>Absence of vaccines out-of-date or temperature indicator changed colour</i> - <i>Readable labels on vaccine files</i>	1	0
5. State cold chain inputs <i>paraffin fridge: stock of at least 14 L</i> <i>Solar fridge: battery undamaged</i>	1	0
6. <b>Cold accumulators</b> are well frozen	1	0
7. <b>Syringes</b> available - <i>auto blocking – at least 30</i> - <i>for dilution – at least 3</i>	1	0
8. <b>Waste</b> is collected in appropriate bins - <i>Availability of security box (container)</i>	1	0
9. <b>Stock of books</b> or immunization and pre-school growth cards adequate <i>For women - at least 10</i>	1	0
10. Child immunization register well maintained - <i>System capable of identifying drop-outs and completely vaccinated children</i>	1	0
11. Good conditions in waiting area for immunization services - <i>With sufficient benches and / or chairs, protected against the sun and rain</i>	1	0
12. Patients receive numbered <b>waiting buttons</b> according to their arrival	1	0
13. Salter balance (baby scale) available and in good state - <i>Balance calibrated to zero + Pants available, clean and in good state</i>	1	0
<b>TOTAL Points - 15 points maximum</b>	.../ 15	XXXXXXX

15. ANTENATAL CARE	Protocol Respected	Protocol NOT Respected
1. Business Plan contains convincing strategies to effectively conduct ANC for all pregnant women in catchment <i>- Fixed strategy – advanced strategy for distant villages</i>	<b>1</b>	<b>0</b>
2. Scale well calibrated to zero (appropriate scale for ANC)	<b>1</b>	<b>0</b>
3. ANC form (for HF) available and well filled in <i>Supervisor verifies the 5 last forms</i> <i>Examinations: Weight – TA - Size – Parity – Dates Last Period (DLP)</i> <i>Laboratory: Albuminurie – Glucose – Hgl</i> <i>Obstetrical examination done: HNF (Heart Noise Foetal), HU (Height Utr), Presentation, foetal movement.</i>	<b>3</b>	<b>0</b>
4. ANC form (for HF) shows the administration of Iron Folate, and Mebendazole	<b>2</b>	
5. ANC Card (for mother) available – at least 10	<b>1</b>	<b>0</b>
6. ANC Register available and well filled in <i>Complete identity, state of vaccination, date visit, and High Risk Pregnancy rubric well filled including problems and actions taken</i>	<b>2</b>	<b>0</b>
<b>TOTAL Points - 10 points maximum</b>	<b>..... / 10</b>	<b>XXXXXX</b>

*VERIFY THAT ALL QUESTIONS ARE FILLED IN  
Supervisor thanks the staff*

**Problems identified as priority**

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**Suggested for immediate actions**

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## 8. CONFLICT RESOLUTION and NEGOCIATION TECHNIQUES for PBF

Freddy BATUNDI

Most national health policies have goals containing elements such as to render good quality, accessible and equitable health services to the population. However, the strategies and instruments to achieve those goals may greatly differ. Traditional health systems propose more central command and control systems, monopolist district health approaches, little sensitivity to the free choice among patients for service providers, hierarchical relationships and little encouragement of public-private collaboration. PBF approaches are different: they aim benefiting from the superior efficiency of the free market, promote decentralisation and autonomous health facility management, stimulate entrepreneurship, empowerment of patients, good governance practices and actively seek partnerships with the private sector. When shifting from traditional health systems towards PBF the changes may be profound and require fundamental reforms of the manner of doing things. Anxiety and conflicts among stakeholder are then inevitable. This chapter aims at equipping readers to manage those conflicts and to negotiate the best possible outcomes.

### 8.1 Objectives

- To understand the causes of conflict and to be able to apply conflict resolution techniques;
- To identify negotiation techniques and to be able to apply them;
- To be able to carry out negotiations in the public interest and to defend the public interest in general and performance based systems in particular.

### 8.2 Definitions and type of conflicts

A **conflict** is a struggle on values or a claim on power in the context of limited resources. Another definition refers to any situation in which two or several entities perceive that they have mutually incompatible purposes.

Conflicts may be **mechanical** concerning money, land, property, equipment. Conflicts may also be **socio-emotional** whereby the identity or values of persons are at stake. Conflicts of **interest** concern differences in point of view or aspirations. This differentiation is not rigid and often conflicts are a mix of the previous types.

Conflicts may occur at different levels: (a) **Intra-personal**: the conflict is within the person (b) **Interpersonal**: the conflict exist between two individuals; (c) **Intra-group**: these are conflicts within a group and; (d) **Intergroup**: conflicts between social groups or broader entity groups.

### 8.3 Sources of conflict

To better manage conflicts, it is necessary to understand the causes of the disagreement between the individuals or groups. The sources of conflict may be the following:

- **Lack of information sharing.** Failure to share information between individuals or groups reinforces the perception of the difference. Lack of information may be the main source of the conflict. The conflict is a misunderstanding and **active listening** techniques can help to identify those misunderstandings whereby the listener carefully analysis the point of view of the other person before jumping to conclusion and giving his or her opinion. This may prevent the continuation of the misunderstanding and solve the problem.
- **Differences of opinion about values or the right on assets.** Both entities may have the same understanding concerning a situation or fact but they differ on values or experiences and adopt different positions. Sometimes people may differ about the right on money or assets and they both claim the same limited resource. This leads to competition and conflict. For example concerning values in health systems there are some who argue that free market principles are

inherently wrong and that for ideological reasons there should be no competition among health providers. The advocates of PBF consider the free market as an effective instrument to distribute scarce public resources and simply more cost-effective to achieve the same social objectives also shared by the opponents of free markets. When differing about such fundamental values it may be difficult to arrive at a compromise.

- **External factors.** This type of conflict are based on issues such as personality, history, ethnicity or nationality, which has nothing to do with the objective situation or facts. This requires a more fundamental intervention as the conflicts tend to be irrational whereby the belligerents are unwilling to express the reasons behind their standpoints and lack an interest even to solve the disagreement. There is a personality shock, generalisations about behaviour of the other group or outright discrimination. To solve such conflicts it requires a complex intervention of mediation, information and social marketing of new ideas. Negotiation may require to meet the opponents separate and over a longer period of time.

#### **8.4 Change as the source of conflict**

Development is inherent to change because it assumes shifting from one situation to another that is supposed to be better. However, even if change improves a situation, not everybody welcomes it. This is even more the case when the changes are profound.

##### **Why do people or groups resist change?**

###### **1. Loss of control**

Most people wish to have the feeling that they control events around them and therefore accept change depending on whether they can control it or not. Change is OK when it is done **by us** but it is a threat when it is done **for** (= against) **us**. Also for the changes in PBF systems there is a need for individuals to control events. This implies that it is wise to involve as many as possible stakeholders / partners as early as possible in the PBF transition process and thereby to seek acceptance and ownership for the change. The more people feel they have the power to influence decisions, the more they are likely to accept them. To the contrary, when decisions and activities are imposed, opposition becomes likely.

###### **2. Uncertainty**

Change will make people feel uneasy and uncertain if they don't have enough information. It is difficult to accept change when unsure whether it will make things better. People also feel more comfortable when their leaders have already accepted the change. Decision-makers and leaders should therefore be involved as early as possible in the change process and thereby to reassure their group or electorate.

###### **3. The “surprise” effect**

People resist change when it surprises them. The logical reaction to something completely new and unexpected is “no”. Just giving information may then not be enough because the process is also important and new ideas should be given time to “sink down”. Sometimes it is good to simply express and explain a new idea without immediately demanding a response. After a few days the same topic may be discussed and there will be a chance that in the meantime the person concerned has changed his position or opinion.

###### **4. Loss of face**

Change creates resistance when it gives the impression that people have done things wrong all the time. Nobody likes to admit this and to lose face as stupid or backward. To increase the chance of adoption of the new idea it is wise to put the previous behaviour in perspective. For example, that it was the best way of doing things within the given context or historical fact but, at the same time, acknowledging that “those days are over”. Thus, there is no loss of face and people may claim that they are at the same time strong and flexible.

## 5. Worries about future competencies

Sometimes people resist change because they wonder whether they will be capable to adapt or to obtain the required skills. It is important to assure that the new system will be properly explained and to communicate that there is no need to worry about skills. It is also better when the knowledge and skills will come naturally without that people feel judged as incompetent by their colleagues.

## 6. The “snowball” effect

People may resist change because they feel this will negatively influence other personal or work-related activities. Sometimes change can disrupt other plans or projects and personal activities which have nothing to do with the proposed change. Therefore, change may be refused but for the “wrong reasons”. A good change manager will be sensitive to these effects and show flexibility. For example a manager could postpone a transfer until children are on holidays. Sensitivity in for the problems related to change helps people to move forward, they will feel themselves esteemed and may not longer oppose change.

## 7. More work

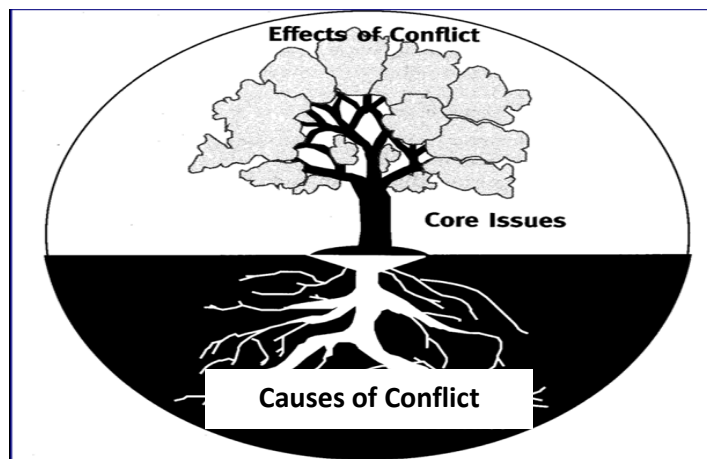
Another reason why people may resist change is when it means more work. Change may require a long learning process or it implies moving away from quick old routines. It may effectively mean “more work” such as in PBF systems whereby health facilities must start new services and attract more patients to achieve targets. This managers or health workers may consider as a threat in particular when the rewards are not clear or not high enough. Such change processes and scaling up of activities need to be well managed in the sense that for example more staff is recruited.

## 8. The threat may be real

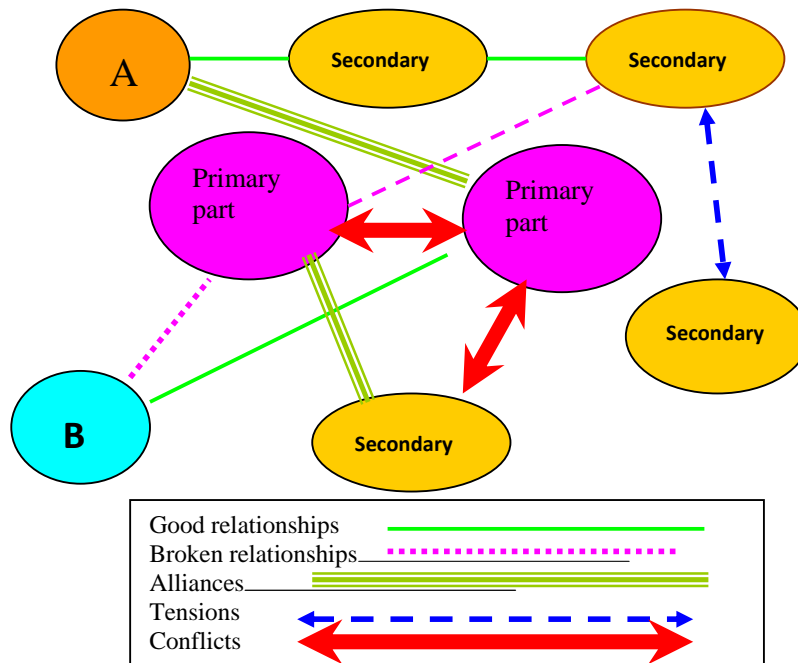
The last reason for resistance to change is the most reasonable and that is when the threat is real such as losing a job or having to move away from easy money making or a powerful position. For example, change in DRC away from essential drugs monopolies and monopolistic power of certain stakeholders was met by fierce resistance and incomprehension from those who lost their powers. Whether it is socially just or not, the fact is that some individuals or groups may lose power and this has to be taken into consideration during the change process; there are winners and losers. To better manage such a situation, it is important also to be direct and not to make false promises. If somebody loses his job, it is better than to communicate this as soon and direct as possible and thereby to prevent a protracted situation of uncertainty, which may allow the person or group to mobilize unnecessary opposition.

### 8.5 Conflict Analysis

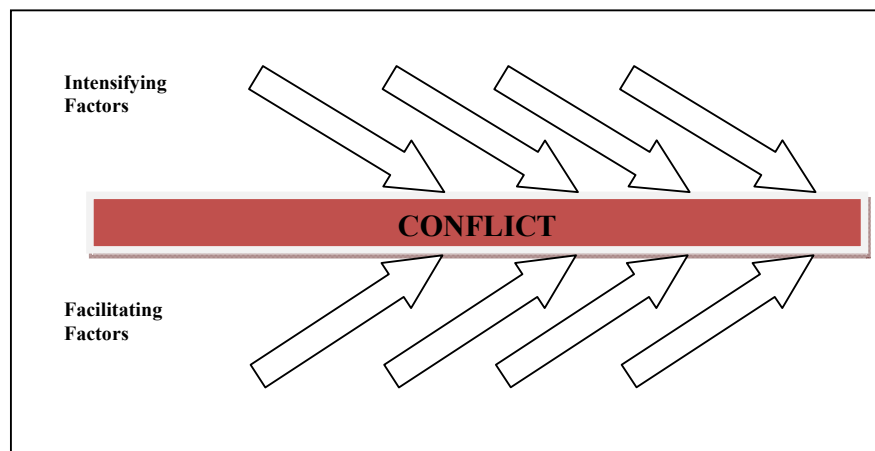
A conflict is often part of an underlying network of sub-conflicts, which needs to be understood. One must answer the following questions: (a) **What** is the conflict about? Sometimes we only perceive the effects without seeing the root cause of the conflict.



(b) **Who** is involved in the conflict? If there are many entities how do they interact, who is at the centre of the conflict but also which are the positive relationships between the belligerents;



(c) The **how** of the conflict? This question helps to identify the elements which intensify the conflict and elements which reduce the conflict.



Thus, the analysis of a conflict helps us: 1) to acquire information about the conflict so that we can analyse how to intervene; 2) to identify the stakeholders (primary and secondary in the conflict; 3) to identify the main objective causes of the conflict; 4) to understand how the conflict develops.

### 8.6 How to manage conflicts

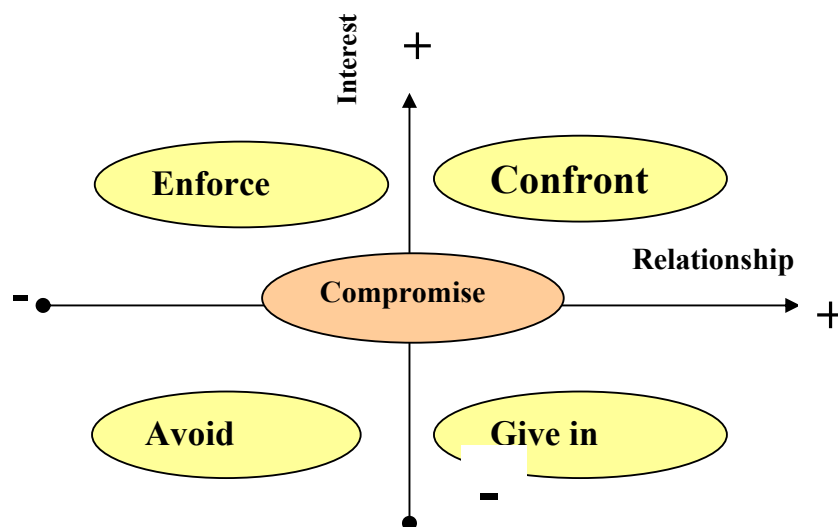
Conflicts are inherent to human relations and it is utopian to think that they can be eradicated. However, when conflicts are not well managed it may result in enormous damage in terms of anxiety, unhappiness, disease, loss of goods and sometimes even loss of life. Different individuals react differently to conflicts. This depends how important the issue is and how close the relationship is between individuals or groups.

There are the following conflict management styles:

- **Enforce.** An individual or a group in a position of authority may decide to impose its position on others by cohesive techniques such as accusations, warnings or punishment. This manner of conflict situation usually ends in a “win - lose” situation. This way of conflict management may be applicable in situations where something must be done in the public interests. This is how the police works, “when you violate the law, you will be punished”. There is little or no personal relationship between the entities involved and one entity has the power to enforce the outcome of the conflict.
- **Confront and collaborate to find a solution.** The individual or the group faces a problem, confronts the other but aims at finding a satisfactory solution to all; a win – win situation. This is usually the case when two entities have an interest to find a common solution for example because they work for the same organization or because they have a direct personal relationship. There is therefore a favourable climate without autocratic behaviour to influence the process. The people or groups are willing to express their needs, requests and feelings to the opposing party. They are open for new ideas, change and opportunities because they are motivated to find a solution.
- **Avoid.** Persons try to deny or avoid the conflict for example because they consider the issue at stake not important enough. This is the likely outcome of a conflict when there was no direct relationship between the opponents. They simply ignore it or act as if the conflict never existed. The problem is tolerated and communication about the issue with the opponent is avoided. There is no real solution but there is also no direct conflict.
- **Give in.** The group or the individual is aware of the problem, decides to minimise its importance and to give in and thereby to save the good relationship. Giving in, however, also implies that important facts may be overlooked and are not discussed. It may lead to new conflicts in the future as the underlying causes are not removed.

Finally, in the middle of conflict management styles of enforcing, confronting, avoiding and giving-in individuals and groups may try to negotiate a **compromise**. Each belligerent in the conflict abandons part of its initial viewpoints and they are willing to formulate a third alternative which includes parts of what each wanted initially. Compromise implies sacrifice: something is given up for something received.

The following diagram illustrates the different ways of managing conflicts based on the importance either interest or relationship:



## 8.7 Negotiation techniques

Negotiating does not mean to “fight” but it assumes that concessions are made between opposing persons or groups. Negotiating means obtaining something from an opponent through a mutually agreed process when a solution cannot be enforced by one party. It is a form of (bilateral) communication intended to produce an agreement between people who have at the same time common and opposite interests.

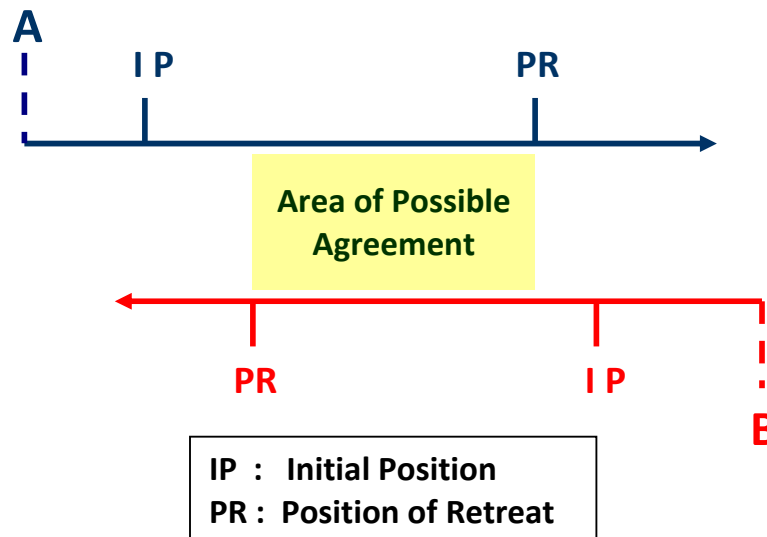
Negotiation is a **voluntary act** of discussions with the aim to **reach an agreement**. It means getting involved in a **dynamic process** whereby the opponents become more and more **interdependent**. Negotiation aims at achieving the “**best possible agreement**” and aims at promoting the common interests of the opponents.

Negotiations can be based on a **competitive “win-lose” situation**. This implies that what one person or group gains will be lost by the other and the objective of this type of negotiation is to gain as much as possible from the other. Negotiations may also be based on **collaboration and seeking voluntarily compromises** that are complementary and which aim at identifying mutual gains. It seeks “win – win” outcomes. Negotiation should result in the “best possible agreement” under the given circumstances and the agreement should also be legitimate. It does not mean that the agreement will be ideal or perfectly fair but that the fundamental interests of the opponents are generally taken into account.

### 8.7.1 Preparing negotiations

When preparing negotiations for a cause it is necessary to know: (1) Who is your opponent and who are the negotiators? What authority and decision-making power do they have? Are they motivated to reach an agreement? What are their likely points of view? (2) What are your own negotiation objectives and what is your own initial negotiation position? What space is there in your standpoints to change your standpoint but also what are the non-negotiable points or your position of retreat from the discussions.

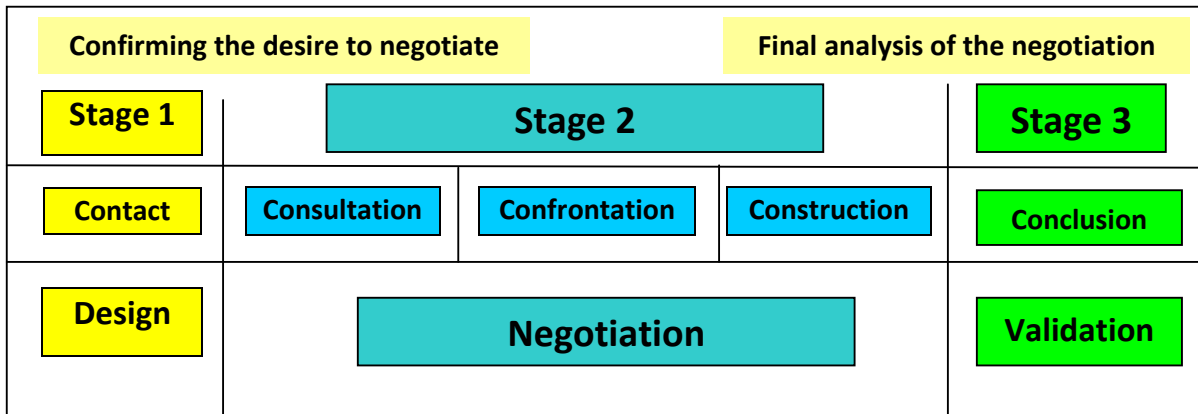
The diagram below shows the negotiation positions of entities A and B with their initial negotiation positions and position of retreat where the entity stops negotiating and withdraws from the discussions. In the middle there is the Area of Possible Agreement (APA) where the two entities could theoretically reach an agreement.



### 8.7.2 Conducting negotiations

In negotiation one can identify the following three phases: (1) the design stage; (2) the actual negotiations with consultation, confrontation and constructing the compromise and ; (3) the completion stage of conclusion and validation of the agreement.

The actual negotiations starts with a phase to search of consultation and to confirm with the adversary what are the problems and the initial positions and non-negotiable points. The next step is the confrontation whereby the wishes, needs or requests are presented to the opponent and whereby you actively listen to the same from the opponent. The next step is to construct the compromise. During this phase the aim is to build up a new framework for the new relationship including the description of the agreements and the interests of the partnership. The last phase the **conclusion and validation of agreements.**



The table below gives the necessary actions to take during each negotiation phase :

Phase	Action
<b>1. Design Phase</b>	
	<ul style="list-style-type: none"> <li>• Choose a favourable moment to negotiate</li> <li>• Provide adequate means of communication and logistics:               <ul style="list-style-type: none"> <li>○ Pleasant negotiation environment (transport, accommodation, entertainment, ...)</li> <li>○ Practical tools (meeting room, audiovisual equipments, work schedule)</li> </ul> </li> </ul>
<b>2. Negotiation Phase</b>	
<b>Consultation</b>	Information may come from various sources: documents, internet, meetings, telephone discussions, etc. The information may be contradictory and it may be useful to verify the information and to avoid misunderstandings. During the consultation stage, one must: <ul style="list-style-type: none"> <li>• <b>Obtain information</b> that helps confirm hypotheses about the objectives and interests of the opponent.</li> <li>• <b>Information to give:</b> It is important that some information is known by the opponent.</li> <li>• <b>Information to hide:</b> This concerns strategic information; if given, it might reveal the negotiation objectives or fundamental interests and may weaken the negotiator’s position. This, however, is also culturally determined. In some cultures it may be contra- productive when one seems to hide information.</li> </ul>
<b>Confrontation</b>	The actual negotiations are done whereby the interests, standpoints and needs are discussed. The points must be presented as clear as possible while maintaining an atmosphere whereby the discussions do not block or end in repetitions of standpoints. This can be achieved by “active listening” techniques. It may require competent negotiators. Such techniques can be learned by role plays and training.

<b>Construction</b>	During this step concrete, creative proposals and solutions must be identified. Concessions should be made with a clear understanding of what was exchanged. Each person or group should win something and lose something. Demand equivalent value for each concession and the negotiations should be is a process of progressive satisfaction for each and NOT necessarily mutual sacrifices.
<b>3. Conclusion Phase</b>	
	The results of the negotiations should be "validated" in a summary, memorandum of understanding or contract. At this point <b>there should not be more negotiations</b> . It is time to sign the contract.

### 8.7.3 Negotiation principles

Negotiations should take place on content (interests, needs, values) and not on positions (statements). Problems should be dissociated from individuals. Try to negotiate separately issues concerning content and persons or relationships. Try also to have a Plan B . What is the best possible next alternative if your main standpoint cannot be achieved? Always use active listening and avoid already giving answers before your adversary has finished talking.

An agreement that is well negotiated should satisfy the interests of both parties and be legitimate, it should preferably also aim at developing good relationships, be developed through effective communication and finally contain realistic and clear commitments.

## 8.8 Negotiating for change in PBF systems

### 8.8.1 Public choice and negotiating the best possible outcomes

As already described in chapter 3 the behaviour of the individuals may be best explained by taking into account the private interests of the different stakeholders. When living conditions and salaries are very low, private interest behaviour becomes almost inevitable (a policeman asking for bribes, health authorities collecting informal taxes from health facilities). Public choice theory argues that defending the public interest can best be done by creating a situation whereby the public interest are as close as possible also to the private interest of the civil servant or stakeholder involved. For example, health facility subsidies are designed in such a manner that it serves also the private interest of the health workers because a part of the subsidies are understood to be paid as bonuses. Yet, at the same time the subsidies are a reward for desirable social activities such as family planning services, constructing latrines at households, using bed nets against malaria. Therefore the health worker has a private interest to do things right. Following the same logic, organisations negotiating with health facilities should have managers who are well paid. They should not be tempted to corruption as this may lead to dismissal, loss of reputation and thereby the loss of their high salary. Failure to achieve the social objectives should lead to lower incentives while corruption or fraud should lead to immediate dismissal. Therefore, the designers of PBF interventions should put into place good monitoring systems so that managers know they are being evaluated.

### 8.8.2 Examples of negotiation points in PBF

The innovations suggested by PBF require change of actors' behaviour and practices and this may be a source of conflicts. PBF change agents must negotiate respect for the principle of separating the functions of regulation and fund disbursement. Without adoption of this principle and when government imposes a monopolistic solution it may become difficult for a PBF intervention to become successful. It may constitute a "killing assumption" for the success of the intervention. At this point the PBF negotiator may propose to stop the negotiations because a non negotiable point has been reached.

PBF advocates must have the skills of a “leader” but also of a “negotiator” who can bring different views together but **without** violating the main PBF best practices. Another important issue in PBF interventions is that the budget should be sufficient of at least \$ 2-3 per person per year. The fixed cost of the intervention are around \$ 0.50 and a too low budget implies that most funding concerns administrative costs instead of assisting the health facilities and the population. This is also a killing assumption for the success of the intervention and negotiations may better stop.

### 8.8.3 Practical strategies for negotiation PBF interventions

Inform stakeholders as completely as possible on proposed changes. This may be done by presentations for decision makers or during workshops. Scientific articles should be shared to show that ideas are not personal opinions but peer group reviewed ideas. Exchange visits to other countries may be useful. Stakeholders and in particular decision makers should participate in the preparatory process concerning PBF interventions. It is wise to stress during this phase that PBF is not a “revolution” but a gradual change process with pilots to show whether it works under the specific circumstances of a country or area. PBF is not a “model”, but a number of best practices that need to be adapted and which is flexible. Decisions and the development of “procedures” should not be final but a gradual process of trial and error and action research. For this purpose scientific intervention – control studies are important so that decision makers can observe the results and decide on basis of “what works” and “what does not work”. PBF rarely opposes the already existing national health goals or international goals such as the Millennium Goals. PBF, however, does differ on the implementation strategies and may add new ideas such as the right for patients to have free choice of provider, effective decentralisation and strategies to stimulate economic development and multiplier effects.

Training and information is important and for that reason courses should be organized. Those who have experience with PBF know that the system is not too complex and can easily be scaled up and taught to new fund holder directors and other local change agents. Praise those who pioneer and innovate. Reward risk takers and in particular when their efforts have an impact on achieving social objectives.

Opposition may sometimes be irrational or based on private interests that objectively ignores or even violates public interests. The question should then be asked how to neutralize that opposition? Which administrative or political pressure can be applied? Sometimes it is better to quickly shift to the “plan B” strategy. For example, when the authorities of a given province seem not open for the changes suggested, negotiators may communicate that they intend to start negotiations in another province. This may in fact also change the initial position of the authorities in the first province.

At peripheral level fund holder managers may find themselves in another situation. Once the PBF intervention has been accepted by national decision makers and aid agencies, the fund holder managers are in a strong position to enforce change. They should then also be skilled in doing so and this requires a strong personality. For example when a health facility or an local essential drugs distributor defend their monopolistic position of power, the fund holder manager should simply not accept the status quo because it fundamentally opposes the core values of PBF. Sometimes it is said that hospitals have a natural monopoly position and therefore it is difficult to enforce change. However, this in practice is rarely true. It *is* true that a poor performing hospital cannot be put under competitive pressure by building overnight a new hospital. However, the management of a poor performing hospital *can* be changed. While being firm is important, the fund holder manager must also at the same time move carefully and sometimes decide to wait for a message to sink down. After a few weeks the situation may have changed among the adversary and have shifted considerably his initial negotiation position PBF and then the change will be accepted. This may be helped by informing other local stakeholders. In general health workers (and labour union representatives) tend to favour PBF because their incomes will increase and this also increase the pressure on local managers opposing change.

However, the instrument of the “stick” should always be there. The next step in the negotiation process is therefore to delay or not to renew the contract with a health facility. This implies that the problem is now with the health facility manager and not anymore with the fund holder or the local regulatory authority. PBF systems should therefore also be contractually clear and that fund holder managers have the contractual right to delay or block contracts when health facilities do not achieve targets.

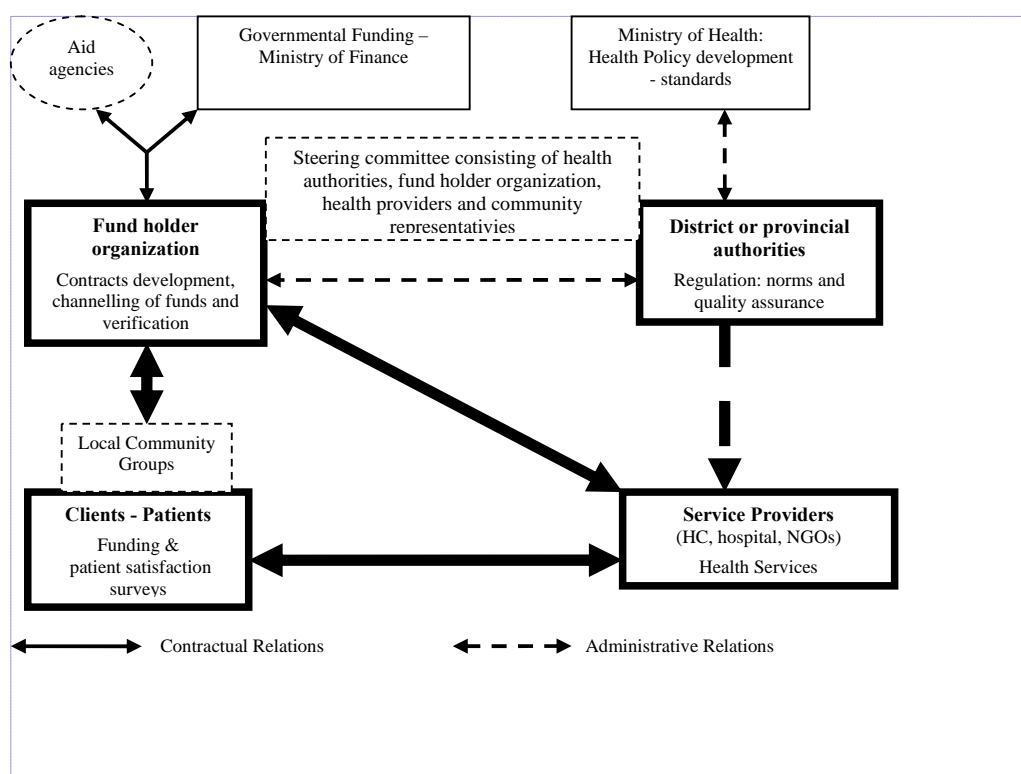
## 8.9 Exercise on negotiations

### Objectives:

The participants will identify and analyse different potential conflicts among PBF actors. They develop negotiation strategies to reach agreement on collaboration and present the scenarios in the form of role-plays.

### Time:

40 minutes of preparation; 10 min of presentation per group and 5 minutes of feedback from other groups.



Group 1: Analyse relation between **aid agencies** and **fund holder**

Group 2: Analyse relation between **fund holder** and **local NGOs** for patient satisfaction surveys

Group 3: Analyse relation between **fund holder** and **service providers**

Group 4: analyse relation between **fund holder** and **district health authorities**

### Tasks:

- Identify the potential conflicts in these relationships
- Set up a negotiation scenario for the collaboration between the institutions and take into account the identified conflicts.
- Present your scenario in role-play.

## 9. Health facility management: the BUSINESS PLAN

Dr Canut NKUNZIMANA – Mr Jean Baptiste HABAGUHIRWA

### 9.1 Objectives

- Understand the key principles of the health facility black box approach and the business plan
- Be able to apply it including for infrastructure improvements.

### 9.2 The “black box” and the “business plan”?

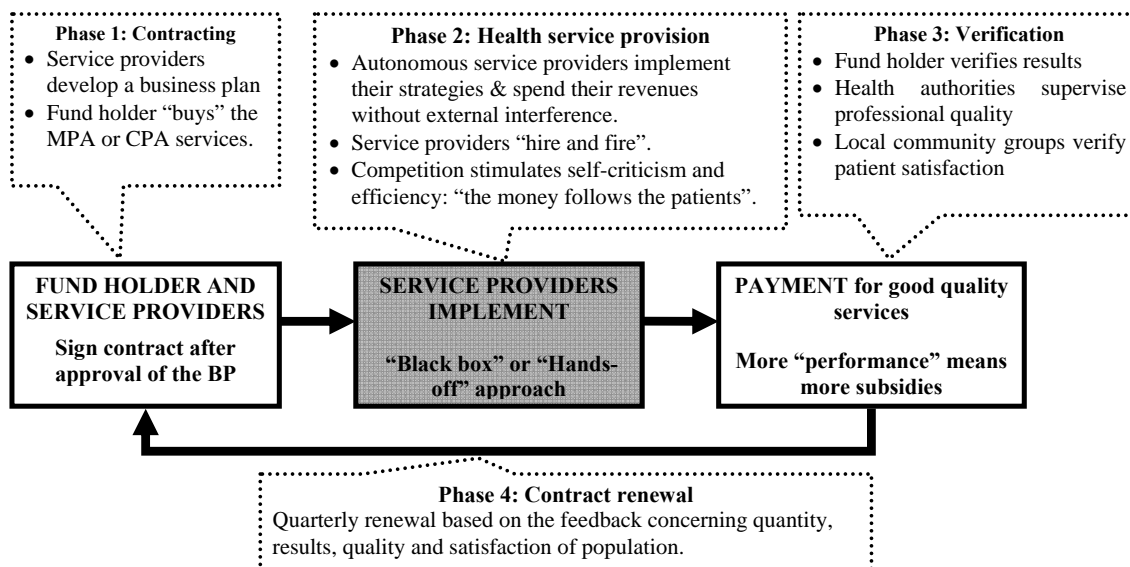
Why using words such as “black box” and “business plan”? Are health services a “business” and does a “black box” not imply something which is not transparent, which is “black”? The reason why using them is to underline that performance contracting changes the way of doing things and that we move away from traditional health systems, which also requires a change in attitude. For health services to be cost-effective we must identify a different type of manager. They must be skilled to identify specific health service problems in their catchment area and in finding specific solutions. The manager should not be a “marionette” implementing instructions of central “bureaucrats” but an innovator and entrepreneur, who identifies opportunities and seeks local resources to realize health service targets. Besides achieving social objectives, he “owns” the health facility and considers the health facility as the source of income for himself and his staff. The health facility becomes a social business or enterprise. As explained in the microeconomics chapter, health facilities are economic actors of supply, which should operate independently and be able to respond to market signals to achieve the best possible outcome in terms of using scarce resources. In these autonomous and market oriented health facilities managers must find human, material and financial resources to provide the social activities. In this market logic, health facility management and strategies become an internal affair in which fund holder- and regulatory representatives should not directly interfere. It is like the kitchen of a restaurant whereby it would be strange when customers watching how food is made or ask the cook which ingredients he exactly uses. Systems analysis theory describes this also as “the black box” approach.

However, that does not imply that managers can do whatever they want. They must be equipped with the skills and management techniques required to become good and transparent managers. With this in mind black box management instruments were developed for PBF systems. The first “black box” instrument is the business plan. Another important instrument is the “indices” management tool that helps managers to analyse their revenues for the calculation of balanced expenditures including for individual performance bonuses (see chapter 10). Managers can use these black box instruments or adapt them as long as the management is transparent. The decisions made using those instruments is their responsibility and there do not exist good or bad decisions as long as solutions are found for problems in the specific area and circumstances. No central planner will be able to make all those millions of small decisions made by all the hundreds of the health facility managers in a given country. However, for this system to work the results and quality of the services to be realized should be clear with objectively verifiable output (chapter 5) and quality (chapter 7) indicators.

We also use the word “business plan” to clearly distinguish the management style from the style associated with “action plans”, which are commonly used in traditional health systems. During performance contract negotiations the acceptance or not of the business plan has immediate financial consequences for all concerned and constitutes an important instrument. Not implementing it implies no subsidies and therefore no individual staff bonuses. This contrary to an “action plan” in traditional health systems whereby there may not exist any relationship between results and rewards so that implementing an action plan or not has no consequences.

### 9.3 The business plan management cycle

The business plan management cycle goes through four stages (see the following diagram). During the *first stage* of the contracting process, the fund holder invites the health facility managers (with their teams) to develop a « business plan » which explains how to provide the essential package of quality health care. The *second stage* concerns the implementation of the business plan by the health care providers. During the *third stage*, the fund holder, local regulation authorities and community based organisations strictly control the results declared by the health facility in terms of "quantity" and "quality". The *fourth stage* of the cycle involves the examination of this feedback, renegotiation and the renewal of contracts.



### 9.4 How does the business plan work?

A business plan is a quarterly work plan which proposes the **strategies** required to reach the **targets** set by government for the minimum package at health centre level and the complementary package of activities at hospital level. It focuses on the output of services but equally on their quality. The business plan is a tool to help managers to develop their ideas and innovations. It describes how the subsidised activities will be implemented and is usually made every three months to allow the renewal of the contract with the fund holder. The business plan is the result of a process whereby health facility managers involve the stakeholders in their catchment area such as health workers, private clinic representatives and health committee members. The plan identifies problems in the catchment area such as why health service objectives and targets are not achieved and proposes realistic strategies for a three months period. The plan serves as the basis for the performance contract after which the health facility activities will be monthly verified and so that subsidies can be paid. When results increase the subsidies increase and thereby the individual staff bonuses and this also motivates health workers.

Some argue that preparing business plans each three months is too labour intensive and propose less regular intervals such as once per 6 or 12 months. However, evidence suggests that preparing a plan every three months allows more flexibility, will accelerate improvements and timely flag serious problems in a given health facility. When a health facility is poorly managed the health authorities and fund holder have an important tool to intervene by renegotiating the contract, to delay the contract or even to cancel it. This would be difficult when the contract cycle would be for one year. The regular contract renewals also allow government and fund holders to flexibly change the indicators as well as the subsidies per indicator if there is need to do so.

The *elements* of a business plan are the following: (a) to calculate the target per indicator; (b) the problem analysis as to why output and quality targets are not achieved; (c) the strategies proposed to solve the problems; (d) the human resources required and how to motivate staff; (e) the infrastructure and equipment requirements and (f) the financial planning.

Business plans are not limited to health facilities and they can also be developed and submitted to fund holders by: (a) local regulatory authorities; (b) NGOs and other providers in the health sector who meet conditions to be subsidised by PBF funds; (c) service providers in other sectors such as education and rural development.

The business plan usually contains the following key elements:

- How to improve the *quality* of health services?
- How to assure the *geographical* access for the population? For example, health facility managers are encouraged to sign subcontracts with other collaborating facilities in order to solve geographical access difficulties.
- How to assure the *financial access* of the population to health care? Considering the production costs including salaries and drugs, health facility managers must analyse how much revenues they need to provide the services. Obviously the potential to generate revenues from cost sharing also depends on the purchasing power of the population and health managers should then propose realistic subsidies from government or aid agency sources. Equity problems of the population are *not* the problem of the individual health workers and they have the right to earn minimum salaries. Where to find external, additional resources is the responsibility of the government and local decision makers. When health facilities receive adequate subsidies they can reduce prices and should assure that minimum quality standards are maintained and health worker motivated.
- How many staff should each health centre catchment area have ? The health facility must decide in increasing or decreasing *their staff* depending on criteria such as workload, national standards for qualified staff and the willingness of staff to work overtime or to the contrary to have more free time with a lower salary. When government or aid agencies fail to sufficiently support the health facility with funding the only solution is to increase the user fee tariffs.
- How to carry out social marketing strategies with the aim to make the population aware about new services or to change unhealthy behaviour? It explains the **how** but also the **who** will conduct social marketing such as health committee members, religious leaders, traditional birth attendants, etc .

## 9.5 The infrastructure component in business plans

Improvements of the health facility infrastructure may be achieved as follows:

- Health managers must reserve part of their revenues for minor rehabilitations with the aim to regularly improve the quality of the services.
- When major rehabilitation is required requiring more funds, the health facility management may request the fund holder to advance an interest free loan, which will be reimbursed on the basis of the future subsidies.
- When the overall state of the infrastructure is so poor that it requires the new construction of (parts) of the health facility the fund holder PBF budget may include a significant amount for infrastructure improvements such as 10-30% of the total budget. Infrastructure improvements will then be included in the business plans and can be negotiated with the fund holder. This infrastructure rehabilitation may be paid in tranches whereby an infrastructure supervision takes place each few weeks to monitor progress. When previously agreed benchmark are achieved a new tranche of money is released. Good results have been achieved in DRC by recruiting an engineer who conducts the supervision tasks but who also helps the health facilities with the design and the specification of the materials required so that the rehabilitation is of good quality.

In all the above scenarios it remains the responsibility of health centres and hospital managers to organize the construction activities. The fund holder organization and the health authorities verify the results and assure that the infrastructure is built according to the standards of the MOH.

## 9.6 Business plan exercise

### A. Presentation of the IBO Health centre

The monthly income of the IBO Health centre is \$ 950 for a population of 20.000 inhabitants. Thus the income of the HC is of \$ 0.57 a year per capita. The density of the population is 400 persons per square kilometre and cultivation lands have become rare; this constitutes a source of many demographic conflicts.

Incomes Categories	FCO	US \$
Direct incomes-costs recovery	F 100.000	\$ 200
Incomes of other aid agencies	F 300.000	\$ 600
Incomes of mutual insurance companies	F 50.000	\$ 100
Incomes National police and Armed Force	F 25.000	\$ 50
<b>TOTAL INCOMES</b>	<b>F 475.000</b>	<b>\$ 950</b>

Table 6: Monthly incomes of the IBO Health centre.

The HC has 3 qualified nurses A2 – all are men, and 10 unskilled employees. Average salaries per month are \$ 40 for the skilled and \$20-25 for the unskilled. The fixed fee cost sharing tariff of the HC is set by a NGO that supports the health facility at \$ 1 for external consultations and \$ 5 for a delivery. According to the IBO HC manager, this area has several informal health providers of doubtful quality. However, they also noticed the opening of some private clinics with qualified nurses in the catchment area. The most distant villages in the catchment area are 10 kilometres away.

The HC conducts 500 external consultations per month, 20 deliveries and 20 in-patient admissions of 2 days per month. A study conducted by a Rural Development Technician showed that 10 latrines are more or less functional in a village of 1000 persons and 20 mosquito nets are used.

A newly installed fund holder wants to buy the health centre production at \$ 0.35 per consultancy and \$ 1.50 per delivery. On top of that, the family planning consultations are subsidised at \$ 2.00 per three cycles of pill or one contraceptive injection.

Check the following annex in which a standard example of a business plan is being shown and analyze external consultancies (2), distribution of bed nets (7) and , family planning (10).

**9.7 Annex : Example of a business plan for a principal health facility contract**

**Analysis of results October – December 2009 & plan for the first trimester 2010**

**1. GENERAL INFORMATION**

Health district..... Health center..... Population 2009: .....  
 Are there sub-contracted private clinics or health posts? Yes / no  
 If yes, which ? ..... Qualified staff : ..... Non qualified staff : ....

**STATISTIQUES DU CENTRE DE SANTE**

2009 & 2010 Months	OPD Consul- tancies New cases	Hospital bed days	Assisted deliveries in health facility	Nr of women using FP (new + re-attendants) oral (3 mois) & injectable	Nr ANC consul- tancies (new)	Nr ANC consul- tancies (standard visits)
October						
November						
December						
January						
Fébruary						
March						

**2. CONSULTATIONS EXTERNES**

What is the monthly target for OPD consultations in your catchment area health: .....  
 (Total population in the catchment area /12)

What are the problems concerning OPD consultancies attending your health center?

*Analyze the possible factors such as purchasing power of the population to pay fees, fee payment per act or fixed fees, competition with other health facilities, lack of medicines, are there remote villages, is there a lack of qualified personnel, problems with staff motivation. Any other problems?*

.....  
 .....  
 .....

What are the strategies proposed to solve the above problems?

*Consider increasing qualified staff, outreach strategies, propose new sub contracts with health posts and/or private clinics, decrease fees, the flat-fee pricing or pricing per activity, discuss with untrained practitioners how they will stop practicing, involve the local health authorities.*

.....  
 .....  
 .....

**3. IN PATIENT CARE**

What is your monthly target for in-patient bed days in your catchment area? ..... (= population / 1000 x 0.5 x 30 days) What type of patients are hospitalized (observed) in the health facilities?

.....  
 .....

What are the problems related to in patient care ?

*Analysis factors such as the hygiene in the health facility, availability of latrines and showers, permanent presence of qualified staff, how is the duty roster organized for the night and weekend, availability of hospitalization equipment (beds, bed nets, mattresses, linen, night table) conditions of hospitalization (separation of men-women-children, space, ventilation), clinical examinations in accordance with flow charts, updating of the hospital registers, treatment in accordance with flow chart.*

.....  
 .....  
 .....

What are the strategies and proposals for improvement?

.....  
.....  
.....

#### 4. REFERRAL OF PATIENTS

What is the target for the referral of the seriously ill patients in your catchment area?

(= *population / 12 x 4 %*) .....

What problems do you encounter for referral of seriously ill patients? *Is feedback receive from referral centre? How is transport organized? Are patients willing to be referred?*

.....  
.....  
.....

What strategies do you propose to solve the above problems?

.....  
.....  
.....

#### 5. DISTRIBUTION of VITAMIN A (children between 6 et 59 months) PRE-SCHOOL- CONSULTATIONS (children between 12 et 59 monthd)

Calculate the number of children in the age of 6-59 months that should receive each month a vitamin A capsule in your health area? ..... = *population x 18 % / 12 x 2 caps*

What strategies have you developed to achieve the target? Visits to schools, visits to villages, etc...

.....  
.....  
.....

Calculate the number of children each month that should finish six standard visits for preschool consultations in the age of 12 and 59 months? ..... = *x 16 % population / 4 / 12*

What strategies have you developed to achieve the target?

.....  
.....

#### 6. VACCINATION

*The target group of children aged less than 1 year is 4.5 % of the population of the catchment area. The number of pregnancies in the catchment area is estimated at 4.8 %.*

Vaccin	Nr of children immunized previous 3 months	Target	% achieved	% To achieve during next trimester
BCG				
DTC3				
Measles				
Fully immunized children				
Fully immunized pregnant women				

Which problems do you encounter in your catchment area?

.....  
.....

What strategies have you developed to achieve the target?

.....  
.....

Which resources will you receive for immunizations from other organizations (UNICEF, other ?)

.....  
.....

**7. DISTRIBUTION of BED NETS**

Calculate the monthly target for bed net distribution to be 100% in your catchment area? .....  
= *The area of health population / 5 years / 12 months / 1.5 people. One bed net has a life span of 5 years and is used by 1,5 persons on average (child with moth – couple)*

What was the bed net coverage rate in the previous quarter?  
= *Number of nets distributed during the last quarter / (catchment area population / 4 quarters / 5 years / 1.5 people) =..... %*

What are the problems related to the distribution of bed nets in your health area?  
.....  
.....

What strategies have you developed to achieve the target?  
.....  
.....  
.....

Where do you plan to buy the bed nets?  
.....  
.....

**8. TUBERCULOSIS**

What are the monthly targets the for tuberculosis detection (*population / 100,000 x 150 / 12*) and the TB treatment(*population / 100,000 x 150 / 12*) in your catchment area?  
.....

What are problems do you encounter with the TB detection and treatment?  
.....  
.....

What are the strategies do you propose to achieve the targets?  
.....  
.....  
.....

**9. LATRINES CONSTRUCTED**

What is the monthly target for latrines constructed in your catchment area? .....  
*Population / 6 people per household / 12 months / 3 years*

What are the problems to achieve the target?  
.....  
.....

What strategies do you propose to achieve the targets?  
.....  
.....  
.....

**10. FAMILY PLANNING**

Calculate the number of couples (women) who should use per month in oral and injectable FP methods in your catchment area if we take as 22 % as target? .....  
*New + re-attendants = population x 21 % / 12 x 22 % x 4*

How many cases of birth spacing you think you can reach per month during the next quarter?  
.....

What problems do you encounter concerning the use of oral & injectable methods in your area of health?  
.....  
.....

What are the strategies you propose to achieve the target?

*Recruit additional nurses, collaboration with local NGOs, outreach strategies, use private sector through sub-contracts, social marketing strategies, advocate with local politico-administrative authorities, opinion leaders, churches, well explain how to deal with side effects.*

.....  
.....  
.....

Where you do obtain the inputs for family planning?

.....

Explain your strategies for applying IUD and implants in your catchment area?

.....  
.....

Explain your strategies for tubal ligations and vasectomy in your catchment area in collaboration with the referral hospitals?

.....  
.....

**11. ANTENATAL CARE**

Calculate the target for the number of new antenatal care consultancies per month?

= *population x 4.8 % / 12* .....

Calculate the target for the number of standard antenatal standard consultancies per month to achieve the target for pregnant women who visits at least 3 times the standard consultations?

= *population x 4.8 % / 12 x 3*.....

What are the problems concerning the targets and the quality of care in antennal care?

.....  
.....

What strategies do you propose to achieve above targets?

.....  
.....  
.....

**12. DELIVERY CARE ET ABORTIONS**

Calculate the rate of coverage of pre-natal assisted in the quarter spent? .... %

= *Number of realized births / population x 4.8 % / 12 months*

What is the target for your health area? ... deliveries per month.

= *Population x 4.8 % / 12 months*

What are the problems encountered in your catchment area?

*Availability of qualified staff with permanent duty roster? Clean delivery room confidentially assured, equipment (delivery be, sterile delivery boxes, vacuum extractors, suture), Sterilization procedures (gloves, plastic apron, produced disinfection) conditions of hospitalization (space, ventilation, bed net) existence of partogramme and correct use.*

.....  
.....  
.....

What strategies do you propose considering the above factors?

*Increase qualified staff, buy equipment, change hygiene and sterilization procedures, rehabilitate infrastructure, training staff, open a new maternity, etc*

.....  
.....  
.....

What are the problems concerning unsafe abortions in your catchment area?  
*Maternal deaths after illegal abortions, cases of pregnancy after rape, lack of access to safe abortions?*

.....  
 .....

What strategies to solve the above problems do you propose?

.....

**13 SEXUELLY TRANSMITTED DISEASES (STD)**

What is the monthly target for STD consultations for your catchment area? .....  
 = *population x / 12 x 5 %*.

What problems are encountered medical to diagnose and to treat STD in your catchment area?

.....  
 .....

What strategies to solve the above problems do you propose?

.....  
 .....

**14. HUMAN RESSOURCE MANAGEMENT**

What remuneration the health facility pays to staff based from different revenues such as government salaries, cost-recovery and performance subsidies?

Staff A1 \$ ..... A2 \$.. ..... A3 \$.. ..... Unskilled workers \$.....

Is this reasonable related to the needs of the health staff?

.....  
 .....

What additional revenues would be required to increase the staff remuneration? .....

What is the proportion of staff remuneration related to total revenues? .....

Staff categories	Current staff numbers	Staff required next quarter
A1		
A2		
A3		
Administrative staff		
Unskilled medical staff		
Cleaners, drivers, etc		
Gardeners, security		
TOTAL		

**13. OTHER RESSOURCES**

Describe the situation regarding the availability of *essential drugs* (including for family planning and bed nets) and how will you improve it during the contract period?

.....  
 .....

Describe the situation concerning the availability of *medical equipment* and how will you improve it during the contract period?

.....  
 .....

Describe the situation regarding the availability of *furniture and office supplies* and how will you improve it during the contract period?

.....  
 .....  
 .....

Describe the situation with regard to *infrastructure* and how will you improve it during the contract period?

.....  
 .....  
 .....

**14. FINANCIAL PLANNING**

Estimate your financial needs based on the above proposed strategies :

Expenditures	Current monthly expenditures	Proposed monthly expenditures new quarter
Fixed salaries and performance bonuses		
Drugs and medical equipment		
Subsidies for sub contracts		
Cleaning and office costs		
Transport costs		
Social marketing		
Infrastructure rehabilitation		
Equipment, furniture		
Setting aside for reserve		
Other ....		
<b>TOTAL</b>		

Revenues	Current monthly revenues	Proposed monthly revenues per trimester
Cost recovery revenues (user fees)		
Cost recovery (pre-payment schemes)		
Salaries from government – other source		
Subsidies from fund holder		
Contribution other aid agencies		
Taking from reserve in bank account		
Other ....		
<b>TOTAL</b>		

Signed at..... the ...../...../2009

Signatures :

.....

.....

Director of health facility

Director of fund holder

Name .....

Name : .....

Copies : Health facility, fund holder and health authority

## 10. Health Facility Management: The INDICES system

Dr Canut NKUNZIMANA – Dr Robert SOETERS

### 10.1 Objectives

- Learn to use (in EXCEL or manually) the “indices” health facility management instrument of calculating health facility revenues, plan health facility expenditures and calculate the indices for individual staff bonus payments;
- Understand and learn how to calculate individual staff bonuses.

### 10.2 Health facility revenues, expenses and balance

#### **Health facility revenues may come from:**

- Cost recovery – (reimbursements insurance companies or direct user fees)
- Government subsidies (investments, salaries or for running cost)
- PBF subsidies
- Contributions from other aid agencies
- Income generating activities

#### **Health facility expenditures lines may be:**

- Fixed basic staff salaries
- Procurement of essential drugs and small equipment
- Running costs
- Investments (rehabilitation of buildings, equipment, solar energy, motorbike, computer, etc.)
- Social marketing expenses
- Other expenses
- Increase of bank reserve
- The remaining expenditure in PBF systems is for the variable performance bonus payments

**Drug procurement** expenses are important to assure that the health facility has an adequate supply of medicines. Usually there should be a security stock of at least 15 days (= average monthly consumption / 2). The consumption is calculated of each drug over the previous 6 months divided by 12.

**Running costs** include travel costs, maintenance of equipment, stationary, cleaning, security costs, water and electricity bills, etc.

**Investments** are important for any health facility to improve the quality of the health infrastructure and services. Infrastructure improvement is a continuous process. The state of health facilities may be so bad that it is better to build new ones. *Investment* also include the purchase of beds, equipment, rehabilitation, building of staff accommodation. It is desirable that staff is stable because this reinforces the feeling of ownership for the facility and its equipment.

It is wise to involve staff in decision-making concerning investments because in the PBF system this implies a decrease in staff *bonuses*. It is easy to persuade staff to forego bonus payments if for example the health facility is electrified, which increases the activities and subsidies. This investment will be quickly earned back so that individual (higher) bonuses can be paid. Equally, it will be easy to persuade staff to invest in the improvement of their homes.

A **sufficient bank reserve** is important for the sustainability of the health facility. This to prevent the breakdown of the services when unforeseen events take place as the need for emergency repairs or when government or aid agency payments are delayed. A bank reserve should be build up for depreciating infrastructure or equipment. A financial reserve of at least 2-3 months running costs is recommended.

### 10.3 Calculation of individual performance bonuses

**Individual performance bonuses** are calculated as follows = **Monthly total income less the sum of all other expenses** (fixed salaries, running costs, purchase of drugs, investments, social marketing, and the increase of bank reserve).

Staff remuneration is based on a fixed part (= fixed basic salary) and a variable part (= performance bonuses). The fixed part is usually defined by government. It's still arbitrary in the DR of Congo, but in Rwanda, it are fixed by law. In Burundi, the basic salaries are fixed at around \$ 80 for a nurse. Within PBF systems the fixed salaries may constitute around 50% of the total remuneration, the other part being generated by variable staff bonuses. The variable part of the performance bonuses may be based on criteria that management autonomously develops for their health facility "in the black box".

**To guide the health facility managers on bonuses, the following criteria may be applied:**

1. Basic performance bonus according to the staff category. This is the fixed part of the performance bonus based on the category of each staff. It prevents that a doctor does not receive the same variable bonus as the cleaner.

The employee may be qualified: A0 (doctor, university graduate), A1 (registered nurses), A2 (nurse), A3 (lowest category of qualified nurse)

The employee may also be unskilled: A4 (on the job trained nurses), A5 (laundry or sterilization workers), A6 (cleaners, security, gardeners);

2. Seniority or years worked by the employee;
3. Responsibility of the employee;
4. Hours overtime and hours *not* worked;
5. Performance evaluations of the employee done each three months or at any different interval.

#### 1. Fixed basic salary and basic indices for the performance bonus

The following table shows an example of staff categories with fixed basic salaries and their basic indices for the performance bonus. For example, an A2 nurse has a fixed basic salary of \$ 80 and a basic indices for the performance bonus of 80 %.

Categories	Fixed Basic Salary	Basic Indices for performance bonus
A0: Doctor	\$ 200,00	200%
A0: Graduate	\$ 150,00	150%
A1: Registered level	\$ 100,00	100%
A2: Mid level nurse	\$ 80,00	80%
A3: Low level trained staff	\$ 65,00	65%
A4: On the job trained health worker	\$ 40,00	40%
A5: Ward attendant	\$ 30,00	30%
A6: Worker	\$ 30,00	30%

Table: Fixed basic staff salaries and basic indices for performance bonus in a PBF health facility.

#### 2. Seniority bonus – number of years worked

By considering the numbers that an employee has already worked, there may be for example an increase of 1% for every working year until a maximum of 30 years .

#### 3. Responsibilities bonus:

All health workers do not have the same responsibility in a health facility and this may be taken into account by the responsibility bonus. This may concern the responsibility for medical decision making, management issues, responsibility of handling finances or security.

<b>Example of responsibility bonus in a hospital:</b>			
Director:	50%	Deputy Director:	40%
General Administrator:	35%	Hospital matron:	35%
Medical head of department:	30%	Department nursing head:	20%
Accountant:	20%	Cashier:	10%
<b>Responsibility bonus in a health centre</b>			
Health centre chief:	25%	Deputy chief:	15%
Department head:	10%	Administrator:	10%
Cashier:	5%		

## 1. Overtime hours or hours not worked (lost)

Staff may work overtime, be absent or late for work. For one hour overtime during daytime, staff may for example benefit from a bonus of 0.25% and during night of 0.30%. The same for losing hours: - 0.25% during day time and - 0.30% during the night. This system allows people who work more to obtain the bonus lost from the person who is absent. It is more just and is very effective in motivating employees to be punctual. For example in several Rwanda health facilities an employee already loses an hour when they are 10 minutes late for duty. This may seem rigid but it is basically the choice the management of each health facility can make without central imposition.

## 2. Staff performance evaluations

An health facility may wish to conduct regular staff performance evaluations such as every three months or at a different interval. The performance “score” of the employee may be between 0% and 100%. This score is then multiplied times 35% because alternatively the performance score would too much influence the final performance bonus. Evaluations must be done on the basis of objective criteria which should preferably be developed by an internal health facility committee and not necessarily alone by the health centre manager or hospital director. The health centre managers themselves may also the score of the quarterly quality reviews conducted by the local health authority supervisors and the hospital managers from the peer group reviews (see chapter 7).

**Individual performance evaluation criteria.** Each health facility may develop their own criteria for performance evaluations based on the specific problems or weaknesses in the given situation. They may include criteria such as: (a) Conscientiousness (punctuality, availability, job clothing); (b) team work (interpersonal relations, collaboration, devotion, initiative) and ; (c) technical competence (organisation, job quality, job quantity).

## 10.4 Health facility efficiency indicators

The indices health facility management tool assists managers to calculate a number of efficiency indicators such as:

**Cost – effectiveness indicator for human resources expenditures** = The sum of the fixed salaries PLUS the staff performance bonuses divided by the total of expenses. For a health facility to be viable, in Rwanda, this proportion should not exceed 60%; the ideal standard was 52 % and not less than 47%. This is an important indicator because when the proportion of health facility expenses exceeds 60% it is almost inevitable that other expenses such as running cost, the purchase of drugs, or rehabilitation will suffer. Equally when the proportion is below 47% it is likely that there will be motivational problems for staff or staff shortages.

**Health facility bank reserve:** This may be a reserve for three months of operating expenses.

**Production analysis per staff category.** This analysis helps to identity production problems in terms of output per staff category. So, for some health facilities it may be concluded that there is too much staff or a shortage in comparison with the productivity. The analysis helps managers to plan the number of personnel. Health facility managers are not obliged to follow ministerial instructions on personnel recruitment. Each health facility may recruit according to its actual needs.

## 10.5 Exercise: IBO Health centre

The monthly revenues of the IBO health centre for September 2007 was \$1.500 for a population of 20.000. Thus, the revenue was \$ 0.90 per person per year. The population density is 400 persons per square kilometre and agricultural land is scarce, which is a source of demographic conflicts. The curative services have improved since the introduction of PBF. However the last quality review conducted by the health authorities showed that the FP services, hygiene and vaccination still require important improvements with regards to the number of female skilled personnel, health promotion and the maintenance of the cold chain. The building is in a very poor state and there is no permanent light in the HC.

Revenue categories	US \$	FCO
Costs sharing revenues	\$ 1.000	F 800.000
Fund holder subsidies	\$ 1.000	F 800.000
Reimbursement form health insurance	\$ 150	F 120.000
Government subsidies		F 0
Income generating activities	\$ 50	F 40.000
Assistance form other aid agencies	\$ 100	F 80.000
Expenditure from Reserve		
<b>TOTAL REVENUES</b>	<b>\$ 2.300,00</b>	<b>F 1.840.000</b>

Table: Monthly revenues of IBO health centre.

**Exercise 1:** Enter the above incomes of the IBO HC in the «Incomes and Expenses» EXCEL sheet.

**Question 1:** Which is the proportion of revenues coming from cost recovery?

**Question 2:** Is this cost-recovery proportion reasonable?

Currently the HC has the following Staff:

	Categories	Post
1	A1	Manager
2	A1	Nurse
3	A2	Vice manager
4	A2	Nurse
5	A2	Administrator
6	A3	Nurse
7	A4	Nursing auxiliary
8	A4	Nursing auxiliary
9	A4	Nursing auxiliary
10	A4	Nursing auxiliary
11	A4	Nursing auxiliary
12	A5	Cashier
13	A6	Worker
14	A6	Worker

**Exercise 2.** Enter the fixed basic salary in the «Staff bonuses», (in \$), in the EXCEL sheet and the basic percentage for the bonus of performance (in %) in the « Category bonus» column. Find the figures (in \$ and in %) in the « bonuses explanation » sheet of the spreadsheet application. It is done to identify values by category of personnel (A0, A1, A2, etc) in the sheet «explanation of bonuses» of the EXCEL document "Mod10log-ExercEmptyIBOHCV220709 " (see table below).

1	Categories	Fixed basis salary	Base category indices	
	A0	\$ 150,00	110%	Doctor
	A0	\$ 150,00	90%	Graduate
	A1	\$ 100,00	66%	Nurse, etc.
	A2	\$ 80,00	39%	Nurse, etc.
	A3	\$ 60,00	30%	Nurse, etc.
	A4	\$ 40,00	25%	Nursing auxiliary
	A5	\$ 30,00	20%	Cleaner
	A6	\$ 20,00	15%	Casual worker

Exercise 3: Enter in EXCEL in the sheet "primes staff" the seniority bonus in % on basis of the explanation in the following table. The health center chief has 8 years of seniority, all qualified staff 4 years, and all non qualified staff 10 years.

2	Seniority		
	1 years = 0,5%	1%	
	2 years	2%	
	3 years	3%	
	4 years	4%	
	5 years	5%	
	6 years	6%	
	7 years	7%	
	8 years	8%	
	9 years	9%	
	10 years, etc	10%	

**Question 3:** Do you find the mechanism of giving 1% percent per year reasonable? Give your opinion and suggestions?

**Exercise 4:** Enter the responsibility bonus in the «Staff bonuses » sheet according to explanation of the « bonuses explanation » sheet (see the table below).

3	Responsibility	Not more than 25%
	Manager	25%
	Vice manager	15%
	Chief of nursing	10%
	Administrator	10%
	Cashier	5%

**Question 4:** Does the responsibility bonus allocation seem reasonable?

**Exercise 5:** Enter the overtime or lost in the «Staff bonuses» sheet. The deputy manager worked 10 hours overtime during the month and the cashier had left for her brother's wedding and she lost 20 hours.

4	Lost hours	
	Additional hour day time	0,25%
	Additional hour night	0,30%
	Lost hour day time	-0,25%
	Lost hour night	-0,30%

**Question 5:** Do you find this system reasonable? Give your opinions and suggestions?

**Exercise 6:** Enter the percentage in EXCEL in the «staff bonuses » sheet for the quarterly evaluation of the personnel. All personnel were assessed at 60 % and enter the percentage according to the following explanation.

5	Scale of quarterly individual evaluation	
	<b>Evaluation</b>	<b>All categories</b>
	Evaluation Score between 0% and 100%	SCORE in % x 0.35

**Question 6:** Do you find the system reasonable as well as the weighting factor for the quarterly performance reviews? Give your opinion and suggestions? Which criteria and methods for evaluating the staff performance would you suggest?

**Exercise 7:** Enter **precisely** the following expenses in the «Incomes and Expenses» sheet. Running costs of the HC \$100. In September the subcontracts payments were \$ 200. Other categories of operational expenses \$150, drugs procurement \$ 300, investment \$ 200, social marketing \$40.

**Exercise 8:** What is the total amount for the performance bonuses (Cell C23) and what indices (C26) is the Excel application giving you?

**Exercise 9:** Does the total amount of salaries PLUS bonuses exceed 60%?

**Exercise 10:** What are the September salary + bonus for the health centre manager and the cashier?

**Exercise 11:** IBO health centre has a Bank Reserve of \$ 2.000. Enter this amount in the C36 cell in the “expenses and income” sheet. It corresponds with how many working days. Is it sufficient?

**Final question:** *What is your opinion about the « indices» health facility management system? Do you think this system is applicable for your work?*

## 11. COMMUNITY-PROVIDER INTERACTION & SOCIAL MARKETING

Dr Juvénal NDAYISHIMIYE & Claude WILONDJA

### 11.1 Objectives

- Understand the theories behind the interaction between community and health providers consisting of social marketing and empowering the community voice;
- Understand and be able to apply the tools for the community verification process

### 11.2 Community participation versus social marketing

According to the community participation principles of *the Alma Ata Conference on Primary Health Care in 1978*, health committees members were usually proposed to be elected from the community. They were the interface or *bridge* between the health facility and the community in two ways: (a) they bring health services to the population; (b) they involve the population in managing the health facility.

A criticism on this *traditional interpretation of community participation* was that while the health committee members were supposed to work voluntarily they were more linked to the interests of the health facility and to their own interests than to the community interests. Another often observed problem was that when nominal or zero user fee tariffs were supposed to be applied but without the necessary health facility resources that health committee members often became “policemen” controlling whether health workers obeyed the low fees. Health committee members then often became directly involved in the daily health facility management for which they were rarely trained.

In the *PBF system*, health committee members are also considered important to liaise between community and health facility for example for the negotiation of user fee tariffs. However, the committee members are not involved in the daily health facility management, but rather they assist with social marketing tasks and help health management to better understand community problems. By applying public choice theory, the private interests of health committee members and other community organisations (religious groups, local NGO, community health workers, traditional obstetricians) must be taken into consideration. Therefore, social marketing expenses of 3-8 % of the total health facility revenues are justified. These are necessary to reach specific community objectives but the decisions exactly which social marketing strategies to apply remains an internal affair “in the black box” of each health facility.

### 11.3 Marketing and Social Marketing

The primary aim of social marketing is to promote social objectives, while in commercial marketing the aim is primarily financial. However, this does not mean that commercial marketers cannot contribute to achievement of social objectives. In order to better understand social marketing there it is useful also to understand some marketing principles.

**Marketing** is a communication process for individuals or groups - that are directly or indirectly able to purchase. They are made aware of products and services that may satisfy their existing or newly-identified needs and wants.

**Marketing mix and the four Ps.** Company actions can influence the consumer decision to purchase goods or services. All those company actions together represent a “marketing mix” containing of four elements: product, price, place and promotion.

- **Product:** The product aspects of marketing deal with the specifications of the actual goods or services, and how it relates to the end-user's needs and wants.

- **Pricing:** This refers to the process of setting a price for a product, including discounts.
- **Placement** (or distribution): Refers to how the product gets to the customer. This third P has also sometimes been called Place, referring to the channel by which a product or service is sold (e.g. wholesale or retail), which geographic region or industry, to which segment (young adults, families, business people).
- **Promotion:** This includes advertising, sales promotion, including promotional education, publicity, and personal selling.

**Social marketing** is the systematic application of marketing, along with other concepts and techniques, to achieve specific behavioral goals for a social good.

Social marketing can be applied to promote goods with positive externalities (merit goods), or to make a society avoid goods with negative externalities and thus to promote society's well being as a whole. For example, this may include asking people not to smoke in public areas, asking them to use seat belts, or prompting to make them follow speed limits.

### **Additional Social Marketing "P's"**

**Publics** - Social marketers often have many different audiences that their program has to address in order to be successful.

**Partnership** - Social and health issues are often so complex that one agency can't make a dent by itself. You need to team up with other organizations in the community to really be effective. You need to figure out which organizations have similar goals to yours - not necessarily the same goals - and identify ways you can work together.

**Policy** - Social marketing programs can do well in motivating individual behavior change, but that is difficult to sustain unless the environment they're in supports that change for the long run. Often, policy change is needed, and media advocacy programs can be an effective complement to a social marketing program.

**Purse Strings** - Most organizations that develop social marketing programs operate through funds provided by sources such as foundations, governmental grants or donations. This adds another dimension to the strategy development - namely, where will you get the money to create your program?

### **11.4 Social marketing and PBF**

Social marketing in PBF interventions concerns changing attitudes such as using latrines to prevent communicable diseases or changing sexual behavior to prevent HIV/AIDS. It may also advocate and advertise newly introduced services such as family planning or other reproductive services. Social marketing needs resources and in PBF interventions health managers are encouraged to develop strategies and to involve any effective change agent in their catchment area and to motivate them with incentive bonuses. Also the members of health centre committees or hospital boards may receive bonuses for specific activities in the community. However, this should not become a right to receive money just for being a member of the committee or to attend meetings. Similar incentives may be agreed with community health workers of traditional birth attendants, for example, to encourage women to deliver in the health facility or to seek family planning. Effective social marketing strategies may require health workers to visit the target audience at home. To sustain change it is often important to target religious and political leaders.

However, there are no inherent "good" or "bad" social marketing strategies. In one specific health facility catchment area it may be effective to involve the health committee members while in another working with religious groups or using the local radio station may be more effective. Obviously often this is a mix which can best be developed locally. Health managers should therefore be innovative and entrepreneurs to identify opportunities, analyze problems and become the change agents in their community.

## **11.5 The role of local NGOs for audits and community voice empowerment**

Community voice empowerment is crucial for success in performance based financing. A first instrument to express opinions and preferences is by the free patient choice for health providers. Patients express their power if they directly pay for the services in the sense that health providers must compete for the consumer preference. Third party payment through fund holder organizations or an insurance company may have a similar effect. A coinciding issue is that for the PBF subsidy system to be effective it is important to verify and audit at household level in how far services indeed took place and are not falsified data in health facility registers. For these two reasons, government and aid agencies should systematically reserve part of the budget in further strengthening of the consumer voice and to audit the health services. Therefore, in Rwanda, Burundi and DRC a successful approach was developed of selecting local associations or NGOs in the catchment area of each health facility. The community groups collect information from households but have no direct relationship with the health facility staff to guarantee their independence. The community groups have performance contracts with the fund holder organizations and these elements makes the approach distinctly different from the traditional community participation system with voluntary health committees working directly with health facilities.

**The local associations or NGOs conduct the following activities:** (1) They verify every three months from patients in how far the activities for which the fund holder pays subsidies to the health facilities indeed took place. The verification is done on the basis of a sample from the health facility registers representing 2-3% of all patients who visited the health facility during the previous three months. The sampling is done by a fund holder community verification officer after which they organize with the local NGOs the surveys. (2) The community group interviewers also review the patient satisfaction with the services conducted in the health facilities. This information helps the fund holder organization and the local health authorities during the three-monthly contract renewal negotiations with the health facilities and the results have immediate effects on contract renewal. Justified complaints and recommendations from the surveys are presented to the concerned health facility managers. The results of the patient satisfaction surveys may also be presented by the fund holder organization and health authorities during meetings with all health facility representatives. During these meetings community group representatives are not present. This separation between health facility and the community groups is done to further assure the independence of the community groups.

### **Selection of local NGO**

The fund holder selects one local association or NGO per health centre with a principal contract. The choice is done preferably among associations with objectives linked to the fight against poverty, health activities in general or reproductive health. The local association must be known by local authorities, have a good reputation and already be operational during at least 2 years.

### **Selection of local community group interviewers**

The NGO proposes the interviewers and the fund holder community verification officer may then accept four interviewers among whom there should be at least one woman for auditing the family planning activities. She should be trained in counselling sensitive issues with respect for confidentiality.

The choice of interviewers may be based on criteria such as: (a) Being able to read, write and understand local languages; the knowledge of other main languages being an added advantage; (b) Being available for about 6 days per three months to conduct the interviews; (c) Being capable and willing to reach households at two hours travelling distance by foot or by own means of transport (for example a bike); (d) Having the skills to fulfil the tasks in a friendly atmosphere, with commitment, discipline, honesty and integrity.

### **Choice of households to investigate (patients to verify)**

The fund holder community verification officer draws randomly a sample of patients to be verified from the health facility register. The health facility managers must make available all the registers including those from the health facilities with a sub-contract. The random selection from the registers concern the 90 previous days. If the chosen household is more than 2 hours walk, or in another health area, the verification officer requests the closest local NGO to visit the household. In case the patient comes from another country or province, which is not in the PBF intervention area, then it is difficult to confirm the existence of the patient. Statistics can then be applied by checking whether the proportion of patients from faraway places seem reasonable. If this proportion is unreasonable it may constitute a case of fraud of false entries in the register by health workers knowing that these patients will not be verified.

The community verification officer three-monthly may randomly select a sample of 60 - 90 patients per health facility depending on the volume of the activities. For example:

1. External Consultancies	16
2. In-patient hospitalisations	8
3. Children's fully immunized	8
4. Institutional Deliveries	8
5. Sale of mosquito nets	5
6. Antenatal Visits	10
7. Referral of serious patients	<u>10</u>
TOTAL	65

### **Conducting the patient surveys**

The fund holder verification officer completes for each selected patient a data sheet with the details concerning patient identification and address, services provided by the health facility (which day, length of hospitalisation, laboratory examination conducted, etc.). The verification officer gives to the local association interviewers the information required to find the patient (name and surname, commune, village, head of household) but not all the information. The data collection sheet of the interviewers does not have certain information such as which laboratory examinations took place, or the sex of the child. This is done to make sure that the interviewers indeed visit the household and that they do not simply "cook" the information and to receive money without having visited the patient.

### **Contract with the local association**

The fund holder organization signs a contract with the selected NGO. This contract concerns every three months to conduct interviews: i) to verify the existence of patients that visited the health facility; ii) to estimating average user fee payments and the perception of these fees; iii) the patient satisfaction concerning the services provided; iv) to collect suggestions for improvement.

The contract between fund holder and local NGO may be terminated in case of non-execution or long delays in the execution of the surveys, poor quality work, or fraud.

## **11.6 Data entry and analysis of patient interviews**

The survey data must be cleaned by community verification officer and then entered in a database for analysis:

### **1. Verification of the existence of the patient.**

Calculate the proportion of patients that were confirmed at household level compared to the number of patients declared in the health centres registers using the following tables:

### Proportion of patients actually interviewed

Catchment area	Sample drawn	Interviewed Patients (n)	%	Patients not interviewed	%
1					
2					
3					

### Reason why patients were not interviewed.

Reasons	Catchment area 1	Catchment area 2	Catchment area 3
Patient not visited			
Questionnaires was poorly filled			
Patient could not be found			
<b>Total patients not interviewed</b>			

### 2. User fees paid per patient

Compare the user fees paid reported to the community interviewer with the fees, which patients should pay according to the information in the health facility.

#### Average user fee payment per activity per health facility

Catchment area	Seen/interviewed Patients	Patient having paid (n)	%	User fee paid	Average user fee payment
1					
2					
3					

### 3. Appreciation of user fees by patients.

What is the opinion of the patient about the user fees? Were there changes since the start of the PBF intervention? Are the poorest of the poor excluded from fee paying?

#### Appreciation of costs by the users per health facility catchment area and per activity

Catchment area	Patient having paid (n)	Cost is too high according to the patients (n)	%	Payment was done with difficulties	%
1					
2					
3					

#### Relationship between the fees paid and the proportion of patients that had difficulties to pay.

Catchment area	Average user fee cost		% de patients having paid with difficulty	
	External consultancy	Delivery	External consultancy	Delivery
1				
2				
3				

### 4. Patient satisfaction with health centre services

Were the patients satisfied with the service provided or not and did the PBF intervention have a positive impact on this proportion?

## Patient satisfaction with health services

Catchment area	Interviewed Patients	Patients Satisfied (n)	%	Patients <i>not</i> satisfied	%
1					
2					
3					

### 5. Patient suggestions how to improve the health services.

What suggestions and recommendations were made by the patients such as concerning infrastructure, equipment, user fees, drugs availability and respectful treatment by staff?

#### Main suggestions made by users of health services

Suggestions	Catchment area 1	Catchment area 2	Catchment area 3
Improve equipment			
Improve buildings			
Reduce prices			
Increase medicines			
Increase staff or staff respect			

## 11.7 Examples of data collection sheets

### A. EXAMPLES OF COMMUNITY VERIFICATION OFFICER COLLECTION SHEETS

#### 1. EXTERNAL CONSULTATIONS (Verification officer)

Sample	Date	N°	Name	Surname	0 - 11	1 - 4	5 - 14	> 14	Sex	Com-mune	Village	Head of family	C	OC	OD	Laboratory tests
1																
2																

#### 2. HOSPITALISATIONS (Verification officer)

Sample	No. Of new cases	No. EC Register	Name	Surname	Commune	Village	Head of family	Age	Sex	C/OC/OD	Hospital bed days
1											
2											

#### 3. FULLY VACCINATED CHILDREN (Verification officer)

Sample	No. Of register	Name of child	Sex	Father's Name	Mother's Name	Commune	Village	Date of final vaccination	Birth Date
1									
2									
3									

## 12. DEVELOPMENT of a PBF PROJECT & ADVOCACY

Sosthène HICUBURUNDI, Dr. Michel BOSSUYT

### 12.1 Objectives

- Understand how to prepare a memorandum of understanding and a PBF project document for a PBF intervention.
- Be able to conduct advocacy for PBF.

### 12.2 Initiating a PBF intervention: brainstorming phase

When starting a PBF intervention there may be several constraints such as: (a) Lack of information among the main stakeholders about the new system or fear for the unknown; (b) Lack of willingness to change from the daily routines of many years; (c) Fear of losing power. Other change problems are described in chapter 8. Such constraints need to be identified and during a brainstorming phase it should be determined in how far an attempt can be made to start a new PBF intervention.

### 12.3 Initiating a PBF intervention: negotiation phase

Who should take the initiative to promote a PBF intervention? PBF promoters must have the characteristics of a “leader” but also of a “negotiator” who can bring different views together but without violating the main PBF principles. When preparing the intervention and even after starting the intervention, it is wise not to aim at settling too many details, but rather to discuss the outline and the best PBF practices and to leave some of the details for later. Explain that PBF is not a “revolution” but rather a gradual change based on action research and pilot experiments, a “step- by step” approach. Avoid debates about **who controls the money**. This role should be given to any actor who is available and capable to develop performance contracts, conduct the verification, and which has the trust of authorities as well as of the aid agencies. Not all organizations are automatically suitable as fund holder organization. For example the EC has strict procedures for which organizations qualify to channel their funds such as that they need to have significant own resources.

**The nature of the constraints may also have the characteristic of killing assumptions.** In logical framework analysis a killing assumption means that under the given condition the project cannot take place. For example if an organization wishing to start a PBF intervention does not accept the minimum required budget of \$ 2.00 per person per year this may make success difficult. Another aid agency may not agree to pay subsidies in cash for procedural reasons and only allows in kind payments. Local health authorities may not accept the separation of powers and insist that only they should manage the funds. It is not wise to start the project before such problems are solved. Sometimes it is better to stop negotiations and wait for another occasion. Another negotiation strategy may be to have a “plan B” such as to negotiate the same intervention in a different geographic area.

An aid agency may argue that they worked since many years in several geographically scattered provinces for example in vertical health programs. However, PBF intervention aim at addressing the health system holistically and this requires sufficient resources per capita in a given geographic area. Thus, due to this change in orientation it becomes difficult to serve several geographical areas and it is not rational to spend the largest part of the available resources on administrative costs. Another NGO may primarily aim at “planting its flag” for visibility reasons in a maximum of places. These type of problems requiring major changes in how organizations do their business. Such old attitudes may be difficult to influence, but they are important to address.

## 12.4 Memorandum of Understanding to establish the outline for a PBF intervention

When the negotiations were successful the next step is to draft a memorandum of understanding containing the main outline of the intervention. This may be a small document of not more than 3-10 pages. It specifies the best practices on which there is agreement and practical issues such as the funding source, volume and per capita budget, the geographic location and who will play the role of fund holder.

It is better to begin the process of performance contracting with experienced organizations irrespectively whether they are national or international. When they are international the emphasis should be on training and long term sustainability. However, the exact institutional set up of the system may not be the first priority as such discussions tend to block innovation and pilot experiences. Furthermore, the institutional aspects of a PBF project often profoundly change during the course of the project due to external (political) factors, which are difficult to control .

### **Elements for a memorandum of understanding among main stakeholders at the start of a PBF intervention:**

#### **Introduction**

This agreement contains the results of discussions which took place between the health authorities of xxx province, the local organization xxx and the representatives of the xxx aid agency for the future collaboration as part of the contracting approach in xxx Province. These discussions were based on the evaluation report conducted by Dr. Xxx, etc.

#### **Agreement on the collaboration principles**

The undersigned parties agreed on the following best practices which will be the basis for the development of the contracting intervention:

1. Develop an institutional set up in the province which **separates the following functions**:
  - a. *Regulation* (provincial and district health authorities). Their main role will be to conduct quality reviews and to ensure the standards of the national health policy as well as monitoring and issuing licences for private sector operators. They will also monitor progress of the PBF intervention and assure that training course are organized.
  - b. *Financing* (which will be assured by the xxx organization). Responsibility for verification and audit of public funds. This autonomous Fund Holder Organization works under the control of national regulatory authorities and in case of problems it may lose its contract and be replaced by another organisation.
  - c. *Service providers* (health centres, dispensaries, hospitals, but these may also be primary schools, rural development groups, or others). Service providers are encouraged to organise their activities in an autonomous way to make available Minimum and Complementary Health Packages of Activities at respectively health centre and hospital levels.
  - d. *Empower the consumer voice* through patient satisfaction surveys by local associations or NGOs concerning the services provided by the health facilities. Community voice empowerment also implies that patients are free to chose their provider.

Each of the above actors has their own autonomous responsibility but work together and are members of the steering committee to discuss progress and to settle disputes. The objectives of this separation are to assure transparency and to create monitoring and verification capacity to assure the good use of public funds.

2. Respect for all elements of the health packages such as defined by the Ministry of Health, including for **modern family planning**.
3. Assure that the subsidies for the purchase of the minimum package of activities reach the most **efficient organization**, which can be **government, religious or for profit privately owned**. Therefore, the subsidies for the purchase of services will go to the most competent and the most efficient health provider in the catchment areas.
4. Subsidies given to health facilities should aim at improving output and to render new services to the population but should at the same time also be invested in quality improvements if required after the quality reviews.

## 12.5 Advocacy for the PBF system

Advocacy is a process by which a cause or theme is supported. An advocacy campaign is a group of actions aiming at supporting a cause or a theme. Lobbying is a method of putting pressure in order to influence decision-makers using sometimes unofficial procedures. The theme must be well defined, clear, and usually concerns defending the public interest. The objectives of the theme should have objectively verifiable indicators which are SMART. The promoters make an advocacy business plan, which identifies: (a) The actors or the decision-makers, who hold power to make the advocacy objectives a reality; (b) Necessary actions to reach the objective and; (c) the timetable for the desired change.

PBF advocacy is the process whereby PBF is promoted as an efficient and effective strategy to attain social purposes.

The actors may be put in one of the following categories: (a) **Allies** also searching to innovate or to enhance development such as specific ministries, aid agencies, NGOs, political parties; (b) **Adversaries**. These may be groups or individuals who are not informed, who fear change, who are mostly searching their private interests or who genuinely think PBF is the wrong way to go; (c) **Undecided**. These groups may be important because they can make the decision balance swing toward one side or the other.

Based on the identified power dynamics between the main actors, the PBF advocates will develop strategies: (a) to reinforce support for PBF among the allies and to enter into alliances; (b) to neutralise the opposition by either information campaigns or pressure; (c) to convince the undecided. The promoters must prepare convincing messages that are adapted to the interests of the target audience. Appropriate communication channels must be identified to get the message to the target audience (conferences, technical work groups, public debate, PBF courses, and meetings with decision-makers). The advocacy business plan, strategies and activities are then implemented. The main advocates monitor and evaluate the activities and objectives related to the Business Plan.

## 12.6 Exercise

- Group #1, conducts PBF advocacy at the **central level**: Presidency, MSP, central directions and specialised programmes, Ministry of Plan, Ministry of Finance.
- Group #2, conducts PBF advocacy at the **fund holder agency level** and **religious leaders**.
- Group #3, will do PBF advocacy at **peripheral level** (Provincial health authorities, Office of the Governor, managers of health centres, hospital directors).

Every group works out a specific PBF advocacy plan.

**Groups will answer the following questions:**

1. The theme is PBF. What are the subtopics?
2. What are objectives and strategies of the PBF advocacy? (Business Plan of the PBF advocacy campaign)
3. Which actors to target? (decision-makers, stakeholders, allies, adversaries, undecided).
4. With which organisations / individuals one may constitute alliances?
5. How will the monitoring of advocacy activities be assured?
6. How will you assess if the advocacy objectives were reached?

Methodology: Role-play

## 13. COSTING A PBF INTERVENTION

Dr. Canut NKUNZIMANA – Dr Robert SOETERS - Dr Peter Bob Peerenboom

### 13.1 Objectives

- Design the outline and budget required for a PBF intervention with the “costing” instrument;
- Master the costing instrument in EXCEL

### 13.2 Designing a new PBF project with the “costing” instrument

The first outline for a PBF project may be done with the EXCEL “costing” instrument, which helps to quickly estimate the required budget on the basis of number of standard variables such as:

1. Target population (*\$ 1,20 per capita a year for MPA & CPA only for the subsidies*);
2. Living cost, current staff salaries, geographical isolation area and poverty of the population => These factors justify the increase of subsidies per indicator to increase salaries;
3. How many indicators and activities to include in the project? (*MPA health centre package, CPA – hospital packages, HIV / AIDS indicators, education, rural development*);
4. The starting condition of infrastructure and equipment. If in poor condition and if the equipment is deficient an additional budget should be planned to be able to provide start-up subsidies or advances.
5. Number of Fund Holder Organizations: the target population per fund holder should preferably not be under 200.000 and not above 600.000. When for geographic or political reasons there is a need for more fund holder organizations the administrative costs will be higher.
6. The availability of qualified staff. If it is difficult to find qualified national staff for example because PBF is new in a given country there may be the need to recruit international expertise. This increases the cost of the intervention.
7. Other resources? Do other (non PBF related) funding sources exist from government, user fee revenues, or from other aid agencies. If these funds are significant, this may reduce the PBF budget.
8. Free health care or nominal user fees. If government imposes free health care or nominal costs for curative services, this will reduce the revenues from cost-sharing and requires a higher PBF budget.

By using the “costing” tool it is possible to design the outline of a new PBF project within a few hours. By estimating the above costing variables the approximate budget can be calculated for the given target population. This quick scan allows the PBF advocates to decide whether to continue or not the negotiation process. It is important to establish whether the proposal is financially viable and that there are no unrealistic expectations. At least 70% of the budget should cover the health package subsidies, contracts with the local associations, infrastructures improvement and training. The administrative costs = fund holder, technical aid, coordination NGO, should not exceed 30%. The “costing” tool may then be used to discuss the intended collaboration with the main stakeholders such as the MOH and aid agencies.

### 13.3 The costing tool

**The PBF costing lines are the following:**

1. **Human resources** for the fund holder at peripheral level as well as support for the PBF programme at national the level and technical assistance.
2. The **investment** line can include cars, motorbikes, computers, Internet for the fund holder, but also investments based on a Business Plans to speed up infrastructure development of health facilities.

3. The **service provision improvement** line concerns:
  - Minimum Packet of Activities (MPA) in health centre catchment areas
  - Complementary Packet of Activities (CPA) in hospitals.
  - If the intervention also concerns other sectors than health the budget can include education, rural development, etc. In DRC indicators were developed for primary schools (girls and boys attending schools, life style and sexual education) as well as for rural development (construction of roads and bridges).
4. Strengthening **regulation** for quality assurance and other regulatory tasks
5. **Community voice empowerment** through local associations;
6. **Operational costs for the Fund Holder Agency**
7. **Training.**

An example of the EXCEL costing summary sheet is shown in the following table containing the main PBF budget lines.

<i>Budget Details</i>		Budget Year 1	Budget Year 2	TOTAL Budget	Total	%	Exp. per pers per year
<b>Directs Costs</b>							
<b>Human Resources</b>					€ 189.658	12,5%	\$0,49
1.1	Expatriate Staff Fund Holder	€33.000	€33.000	€ 66.000			
1.2	National Staff Fund Holder	€42.829	€42.829	€ 85.658			
1.3	Technical Assistance	€19.000	€19.000	€ 38.000			
<b>Investments</b>					€ 249.605	16,4%	\$0,65
2.1	Infrastructure rehabilitation	€66.920	€100.381	€ 167.301			
2.2	Investments Fund Holder	€32.922	€49.382	€ 82.304			
<b>Service provision improvement</b>					€ 834.592	55,0%	\$2,17
3.1	Subsidies for MPA	€137.706	€167.099	€ 304.805			\$0,79
3.2	Subsidies for CPA (hospital)	€36.201	€61.334	€ 97.535			\$0,25
3.3	Education	€154.359	€261.740	€ 416.099			\$1,08
3.3	Rural Development	€8.077	€8.077	€ 16.153			\$0,04
<b>Regulation - Quality Assurance</b>					€ 70.208	4,6%	\$0,18
4.1	District health authority	€23.566	€23.566	€ 47.132			\$0,12
4.2	Provincial health authority	€11.538	€11.538	€ 23.076			\$0,06
<b>Reinforcing the voice of the population</b>					€ 48.737	3,2%	\$0,13
5.1	Verification & satisfaction studies	€24.369	€24.369	€ 48.737			\$0,13
<b>Running costs Fund Holder</b>					€ 73.843	4,9%	\$0,19
6	All lines	€36.922	€36.922	€ 73.843			
<b>Training</b>					€ 51.536	3,4%	\$0,13
7	All lines	€33.498	€18.038	€ 51.536			
<b>TOTAL:</b>				€ 1.518.179	€1.518.179	100%	\$3,95

Table: Example of summary sheet for the costing of a two-year PBF project

This PBF standard format must sometimes be changed in a format specifically requested by an aid agency such as the EU. However, it is better to negotiate when using the PBF format as this tool once developed allows the quick changes in the assumptions such as for example the target population and to adapt the budget accordingly. When during the negotiations it becomes clear that the aid agency is not interested a lot of time will be gained. Only after that the initial negotiations are promising it becomes a useful investment to work out the details, and to adapt the costing estimates in an aid agency adapted format.

**Detailed budget per indicator.** The following table shows the detailed costing of a part of the standard format of the EXCEL costing instrument. For example for the indicator external consultancies for adults assumes that adults constitute 70% of all consultations, that each person visits the health facility once per year and this divided by 12 months. That provides the target and we then assume that during the first trimester of the PBF implementation 50% of that target will be reached. The payment of the subsidy includes a 15% isolation – equity bonus.

<b>Population: 1.150.000</b>						
<b>Equity/Isolation Bonus: 15%</b>						
MPA Activities	Target Calculation per month	Monthly Target	Basic subsidy	Isolation - equity bonus 15%	% target achiev	1st Trim09 budget
External Consultancies (new cases) - adults	population / 12 x 70%	67.083	\$ 0,20	\$ 0,23	50%	\$ 23.144
External Consultancies (new cases) - children	population / 12 x 30%	28.750	\$ 0,40	\$ 0,46	50%	\$ 19.838
Hospital bed days	pop / 1000 x 0,5 x 30 days	17.250	\$ 0,70	\$ 0,81	50%	\$ 20.829
Serious patients referred and reaches hospital	pop / 12 x 4%	3.833	\$ 1,00	\$ 1,15	50%	\$ 6.613
Minor surgery	pop x 1% / 12	958	\$ 0,50	\$ 0,58	70%	\$ 1.157
PEV: Completely vaccinated children	pop x 3,94% / 12 x 100%	3.776	\$ 1,50	\$ 1,73	100%	\$ 19.540
VAT 2 - 5: protected pregnancies	pop x 4,3% / 12	4.121	\$ 0,50	\$ 0,58	100%	\$ 7.108
Assisted birth at the HC	pop x 4,3% / 12 x 80%	3.297	\$ 2,50	\$ 2,88	50%	\$ 14.217
ANC: Total New + Standard visits	pop x 4,3% / 12 x 80% x 4	13183	\$ 0,50	\$ 0,58	50%	\$ 11.370
FP: TOTAL New + former users	pop x 21% / 12 x 20%	16.100	\$ 1,75	\$ 2,01	20%	\$ 19.441
FP: Implant or IUD 2% per year	pop x 21% / 12 x 2%	403	\$ 5,00	\$ 5,75	40%	\$ 2.777
FP: Tubal ligation / vasectomy referred & arrived at hospital	pop x 21% / 12 x 1%	201	\$ 1,00	\$ 1,15	20%	\$ 139
Diagnosis and treatment of STD	pop / 12 x 5%	4.792	\$ 0,50	\$ 0,58	20%	\$ 1.653
Adequate testing of positive TBC (3 spits)	pop / 100.000 x 150 / 12	144	\$ 10,00	\$ 11,50	50%	\$ 2.480
TBC Patients treated with BK - after 6 months	pop / 100.000 x 150 / 12	144	\$ 20,00	\$ 23,00	50%	\$ 4.959

Table: Calculation of the budget required per activity or indicator.

### 13.4 Developing a more detailed PBF proposal

Once there is a good chance of obtaining funding the organisation carrying out the PBF intervention may make a detailed proposal which may contain the following element:

- Description of 8 best PBF practices;
- Present findings and experiences from comparable pilot PBF experiments;
- Description of suggested activities (*MPA / CPA / HIV / schooling / rural development / others?*);
- General objective of the programme, logical framework and intervention assumptions with risk analysis;
- Scientific design of the programme with baseline and evaluation studies (intervention – control design with pre- and post analysis);
- Institutional design of the programme in the context of separation of functions (*funds disbursement – regulation – service provision – population voice empowerment*);
- Describe the starting up phase and how to train the main stakeholders;
- Costing and budget per head a year;
- Description of programme sustainability– partnership with national actors.

### 13.5 The scientific design of the PBF intervention

In general, a scientific design in PBF programs proposes household surveys, the mapping of government, religious, and private lucrative health facilities, professional quality studies, evaluation studies whereby the impact of the intervention is compared with control areas and the identification of the topics for further action research. With these studies MPA / CPA / HIV / AIDS indicators

will be identified and their proposed subsidies. The indicators are often also based on national policy priorities and national studies but it is prudent to review the specific conditions in the intervention area.

### 13.6 Costing Exercise

Participants use the EXCEL costing instrument.

#### Information

The target population for the PBF programme is 250.000, there are two health districts, two hospitals and 30 health centres and local associations.

Using the EXCEL application in the « Budget Proposal » sheet, and the elements already filled in, the participants practise to change some of the parameters, observe changes of totals in the synthesis “Proposal” sheet where only the population and the period can be changed but where all the other information is calculated automatically from the sub-sheets.

1. In the human resource sheet: add a «data entry officer» with a monthly salary of \$ 350.
2. In the Investment sheet:
  - a. There are 30 Health centres to be rehabilitated for \$ 1000 each,
  - b. School rehabilitation is not included in this project.
  - c. Two hospitals will be rehabilitated for \$ 30.000 each
3. Considering the MPA and CPA targets there the following simulations have been made concerning the expected results.

	1er Trim 2008	2 <sup>nd</sup> Trim 2008	3 <sup>st</sup> Trim 2008	4 <sup>nd</sup> Trim 2008
<b>MPA</b>				
External Consultancies (new cases )	45%	60%	80%	90%
Mosquito net distributed	45%	60%	70%	80%
Assisted deliveries	60%	90%	90%	90%
<b>CPA</b>				
New Consultancies by medical doctors	50%	70%	80%	80%
Caesarean Section	50%	70%	80%	80%

	1 <sup>er</sup> Trim 2009	2 <sup>nd</sup> Trim 2009	3 <sup>st</sup> Trim 2009	4 <sup>nd</sup> Trim 2009
<b>MPA</b>				
External Consultancies (new cases )	100%	100%	100%	100%
Mosquito net distributed	80%	90%	100%	100%
Assisted deliveries	90%	90%	90%	90%
<b>CPA</b>				
New Consultancies by medical doctors	100%	100%	100%	100%
Caesarean Section	100%	100%	100%	100%

Fill in the target percentages to be reached in the right sheet.

4. Add a province with a population of 100.000 inhabitants and observe the modifications of the budget.
5. Support for district health authorities is \$ 1000 per month
6. Office rent and maintenance : \$ 500 per month
7. Training, a scholarship is granted to a staff for training in Health Economics: \$ 7000

Note: The exchange rate for €1 is \$ 1.35.

## AUTHOR'S BIBLIOGRAPHY

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**Ndayishimiye** Juvenal is a public health doctor and currently director of the Bubanza province Fund Holder organization, one of the first in Burundi. Working for Cordaid he has participated in several PBF training courses in the Great Lakes region.

**Nkunzimana** Canut is a public health doctor since 1997, Director of AAP Makamba, following the experience of the PBF since its launch in Rwanda in 2002. Trainer on the PBF since the launch of this system to Burundi.

**Ntabuyantwa** Claude is doctor from DRC with a master's degree in public health from Belgium. He was district medical officer during 8 years in DRC and since 2008 Director of the Agency's purchase of Shabunda Fund Holder organization in Shabunda – South Kivu. He initiated the first multi-sector PBF programme in DRC which included health, education and rural development.

**Ntitoranya** Astyanax Didier, born in 1973, in Burundi. He has a University Degree in License in economics and a postgraduate degree in health economics. It was coordinator for health within the Ministry of Plan in Burundi. He is since 2008 director of the Ruyigi & Karuzi provinces Fund Holder organization and for Cordaid one of the PBF course facilitators.

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public health programs in Burundi. He is currently an independent consultant and one of the PBF course facilitators in the Great Lakes Region.

**Peerenboom** Peter Bob was a medical practitioner in Cameroon (1976-1985). He has a Master Degree in Public Health (1989) and Business Management (1991). He is currently consultant (Tangram ETC) in the Netherlands and francophone Africa (Crystal ETC). His work focuses on the health financing (pre-payment schemes and PBF) institutional strengthening of health services.

**Soeters** Robert, has a PhD in public health and health economics and has worked for 15 years on PBF in several countries in Africa and Asia. His work concerns the PBF advocacy, conducting baseline and evaluation studies and he is the coordinator for the PBF courses.

**Tsafack** Jean Pierre is a public health doctor and is the director of the REDSSEC (Redynamisation des Soins de Santé à l'Est-Cameroun) Fund Holder Organization in the East Region. In this position, he initiated the first PBF program in Cameroon.

## GLOSSARY

**Adult learning approach.** This is an active learning method and is characterised by participatory learning in which the exchange of practical experiences among participants is important.

**Advocacy campaign** is a group of actions aiming at supporting a cause or a theme.

**Advocacy** is a process by which a cause or theme is supported.

**Bias** is a term used to describe a tendency or preference towards a particular perspective, ideology or result, especially when the tendency interferes with the ability to be impartial, unprejudiced, or objective. In scientific studies we identify: (a) systematic bias and; (b) statistical bias.

**Business Plan (PB).** It a quarterly work plan developed by health facilities (or other organizations such as schools, local NGOs, health authorities). In PBF they are submitted to fund holder organizations to obtain a contract and to receive regular subsidies based on the performance in terms of output and quality.

**Central plan economy.** Central decisions makers tell people how to produce, what to produce, and what to consume. This was the way how it was done under the communist regime in the former Soviet Union.

**Complementary Package of Activities (CPA).** It is a list of priority activities for first level referral hospital and their catchment areas.

**Conflict.** A struggle on values or a claim on power in the context of limited resources. Another definition refers to any situation in which two or several entities perceive that they have mutually incompatible purposes.

**Economics.** It comes from two Greek words: OIKOS meaning “home” and NOMOS which means “order, principle, rule or law”. Economic science studies the use of scarce resources intended to meet unlimited human needs.

**Free market system.** This is a form of economic organization in which resource allocation decisions are left to individual producers and consumers acting in their own best interest without central direction.

**Fund holder organization :** Organization that verifies the performance of health facilities. It examines whether health facilities meet the condition for a PBF contract and pays subsidies based on output and quality performance. It is often composed of a public health specialist (or a health economist), an administrator/accountant and 3-5 verification officers.

**Health economics:** the study of scarcity and choice within the health sector.

**Health facility:** An structure whose mission it is to provide care to the sick as well as preventive and promotive care in hospitals, health center, health posts, or private clinics, etc.

**Health system.** It comprises of all organizations, institutions and resources devoted to producing actions whose primary intent is to improve health.

**Household survey:** a survey to obtain a better understanding of the health seeking behavior of the population. In general, PBF household surveys seek to investigate on one side the unmet demand for the minimum health package activities at health centre level (such as the prevention of malaria by bed nets, childbirth care, family planning) and on the other side the availability of these services and problems affecting the supply (for example, the problems concerning the availability of the services, poor quality care or excessive or too low pricing).

**Indicator.** A measurement which indicates the degree of achievement (level of fulfilment) of an objective or target. It points out the progress towards the set target. An indicator must be **SMART**.

**Individual performance bonus.** A variable bonus paid monthly or three-monthly to individual staff of providers. This bonus is allocated based on criteria such as academic qualification, seniority, responsibility, over-time and performance evaluations. However, in PBF systems health facility managers are free to determine the criteria and their relative weight.

**Interviews with key stakeholders such as health facility directors:** These are often "semi-quantitative" surveys. They complement the household and professional-quality surveys. The objective is to collect additional information about such issues as cost recovery, supervision, external financing and particularly the financial aspects of health facilities.

**Lobbying** is a method of putting pressure in order to influence decision-makers using sometimes unofficial procedures.

**Macroeconomics** = the study of economic exchanges at national and international macro level of entire aggregate economies. It studies such issues as overall price levels, unemployment, inflation and economic growth.

**Marketing** is a communication process for individuals or groups - that are directly or indirectly able to purchase. They are made aware of products and services that may satisfy their existing or newly-identified needs and wants.

**Memorandum of Understanding (MOU).** This is a document developed by stakeholders who have agreed on the outline of an issue. This may for example be to start a PBF intervention. It summarizes the discussions. The MOU is short (2-3 pages) and does not spell out details but mostly the main principles determining the future cooperation. In PBF this may be the government (or a local government authority), a local NGO or organization that will be involved in the implementation and an aid agency or international NGO.

**Microeconomics** = the study of economic exchanges of individual decision-making units. This may be individual consumers (demand) and companies producing goods or services (supply).

**Minimum Package of Activities (MPA):** It is a list of priority activities for health centers and their catchment areas, intended to cover the main basic health problems in a fair and efficient manner. It enables better planning and facilitates resources management. Its determination must take into account professional and population-based demand but must also consider the limited availability of government and household resources.

**Monopoly** is an industry in which there is only one supplier of a product for which there are no close substitutes and in which it is very difficult or impossible for another firm to coexist.

**Monthly activity report.** This is a document prepared by providers summarizing the output indicators subsidized by the PBF program. It serves as a document that can be audited and is countersigned by the fund holder verification officer, the director of the health facility and the director of the fund holder. Based on this document the health facility receives its monthly subsidy.

**Opportunity cost** of any decision is the value of the next best alternative that the decision forces the decision maker to forgo.

**Output indicators** (also called quantitative indicator): It is a quantitative measure of the results produced by health facilities. They directly influence the monthly payment of subsidies by fund holder organizations. Output indicators are few (15-25 for an health center and around equally 20 for hospitals).

**Output subsidies.** This is the (usually monthly) payments from the fund holder linked to the quantitative activities or "production" of the health facility.

**Perfect competition** occurs in an industry when that industry is made up of many small firms

producing homogenous products, when there is no impediment to the entry or exit of firms, and when full information is available.

**Performance base financing (PBF):** Since the late 1990s, PBF - also known as result based financing, pay-for-performance (P4P) or strategic contracting - has been introduced in a growing number of countries. PBF has become a reform strategy among an increasing number of governments and aid agencies. The Center for Global Development defines performance contracting as the 'transfer of money or material goods conditional upon taking a measurable action or achieving a predetermined performance target'. For this book we define PBF broader than the mere establishment of contracts but also as an approach to reform the relationships between consumers, providers, regulators and fund holder agencies in order to make performance contracts effective. However, PBF is not a model but based on 8 best practices that need to be adapted to the specific circumstances of each country or region.

**Providers.** This is a general term for any person or facility, which provides services such as health care and education.

**Quality bonus.** This is a bonus assigned quarterly to providers on the basis of a number of evaluation criteria. It is intended to stimulate providers under contract to improve the quality of their services. The bonus may for example be 15% of the subsidies already paid for the output indicators if the quality score is 100% and proportionally less when the score is lower.

**Quality indicators:** It is a qualitative measure of the results produced by health facilities. One quality indicator is usually based on a number of composite criteria. Quality indicators (between 120-200) are more numerous than output indicators (around 20). Quality indicators are usually evaluated once per quarter. The health facility quality reviews usually contribute to the three-monthly payment of a quality bonus.

**Quality surveys:** Enables to establish the quality of care in health facilities and is often part of the baseline study for a PBF intervention. At the same time, the questionnaire used in these types of studies can further develop into a systematic quality assurance tool that will be used by health authorities.

**Regulation** is defined as the rules designed to control the conduct of those to whom it applies. Regulations are official rules, and have to be followed.

**SMART** = Specific; Measurable; Achievable Realistic and; Timely.

**Social marketing** is the systematic application of marketing, along with other concepts and techniques, to achieve specific behavioral goals for a social good.

**Standard register.** A document that contains the daily output activities of a provider. There should be one register for each output indicator (OPD consultancy, delivery, etc) that is contractually subsidized. It has a standard format and provides the basis for the Routine Health Management Information System as well as for the subsidy payments.