

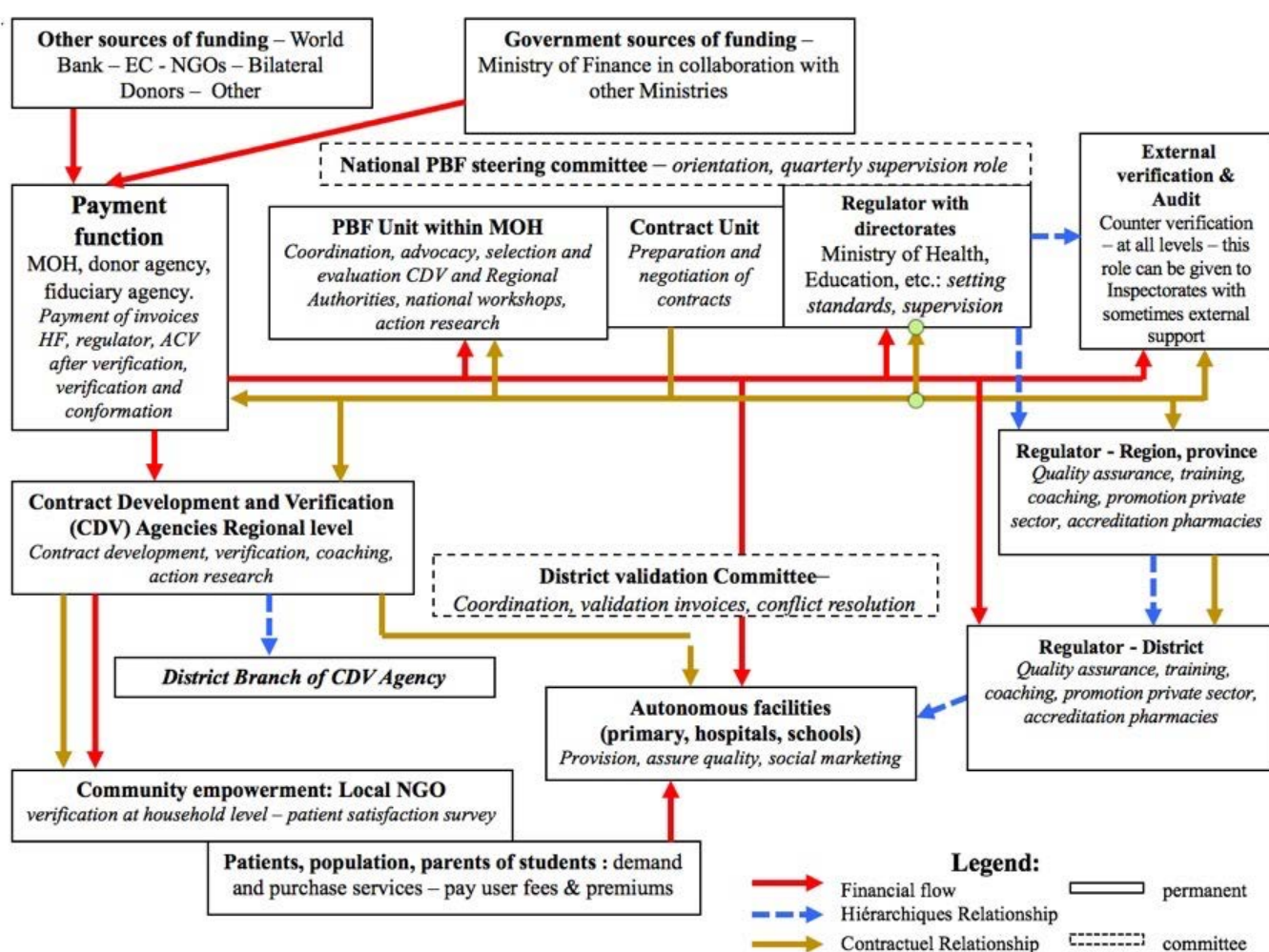


Performance-based financing in Action

Theory and Instruments

Course Guide with 17 modules

The institutional design such as found in many PBF systems



Version September 2026

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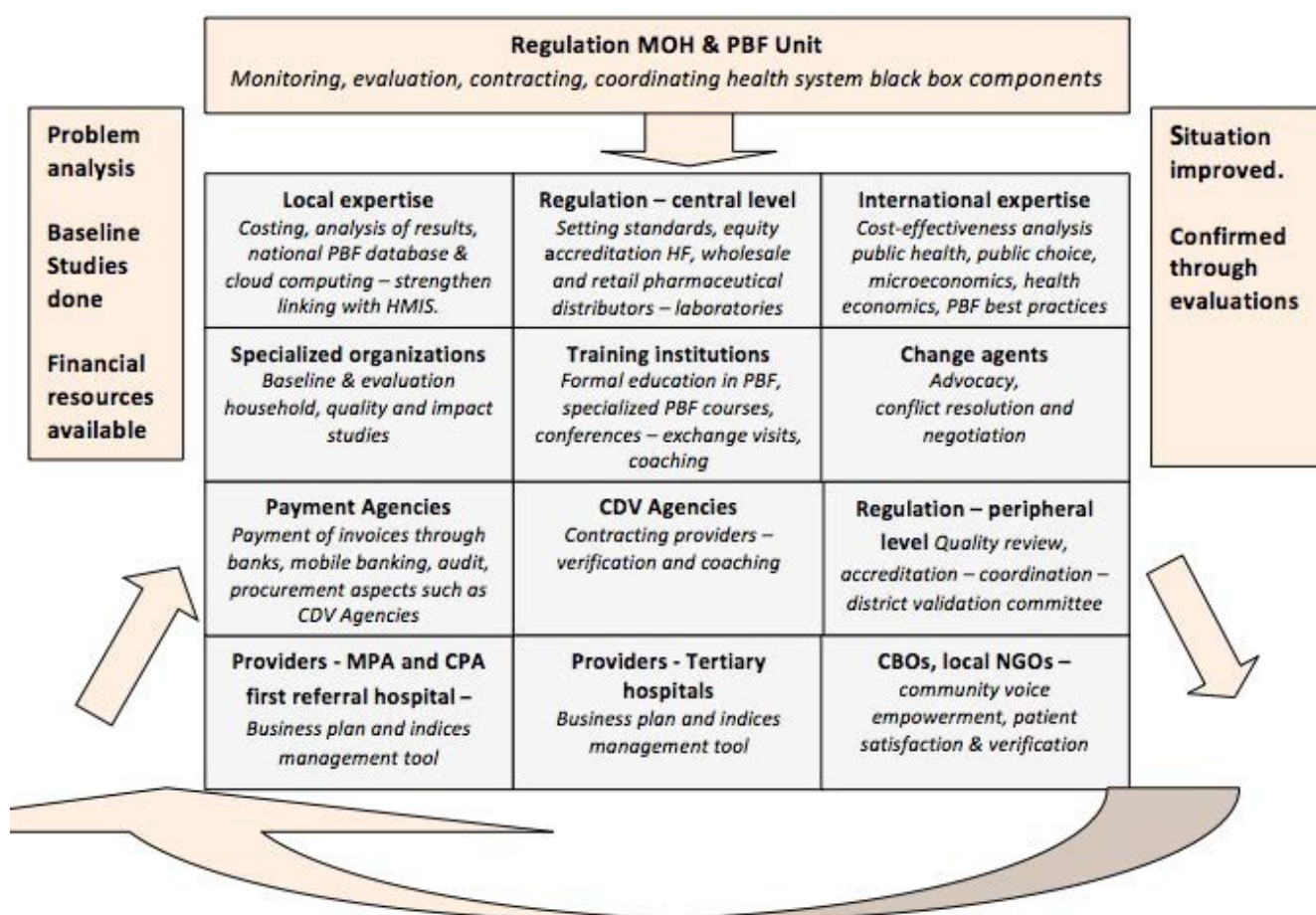
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PBF in Action

Theory and Instruments

PBF Course Guide



The components of the PBF black box

Ninth edition, 2026

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ABBREVIATIONS

AIDS	Acquired Immuno-Deficiency Syndrome
ANC	Ante Natal Care
APA	Area of Possible Agreement
ARI	Acute Respiratory Infection
BI	Bamako initiative
BP	Business Plan – Blood Pressure
CAR	Central African Republic
CAR	Central African Republic
CCLR	Clear, Crisp, Large and Readable
CDV Agency	Contract Development & Verification Agency
CHW	Community health worker
COP PBF	Community of Practice PBF
CPA	Complementary Package of Activities
CS	Caesarean Section
DALY	Disability Adjusted Life Years
DH	District Hospital
DHB	District Health Bureau
DHMT	District Health Management Team
DRC	Democratic Republic of Congo
ECD	Early Childhood Development
FCFA	Franc Communauté Financière Africaine
FP	Family Planning
GRH	General Reference Hospital
HC	Health Committee
HC	Health Centre
HDP	Health Development and Performance – A Rwandan NGO
HF	Health Facility
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HRP	High Risk Pregnancy
IEC	Information Education Communication
LMIC	Low- and Middle-Income Countries
MAM	Moderate acute malnutrition
MAR	Monthly Average Consumption
MDF	Management Development Foundation
Mo(P)H	Ministry of (Public) Health
MOE	Ministry of Education
MPA	Minimum Package of Activities
NGO	Non-Governmental Organization
NHIS	National Health Information System
NIPH	National Institute of Public Health (Burundi)
OIC	Officer In Charge
OPD	Outpatient Department
P4P	Pay for Performance
PBF	Performance-based financing

PHC	Primary Health Care
PLHIV	Persons Living with HIV AIDS
PMTCT	Prevention of Mother –To - Child Transmission
PNC	Post Natal Care
PR	Position of Retreat
PTA	Parent Teachers Association
QIB	Quality Improvement Bonus
RBF	Result Based Financing
RDPH	Regional Delegations of Public Health (Cameroun)
RHD	Regional Health Department. <i>Depending on country => provincial, county or State</i>
SAM	Severe acute malnutrition
SDG 15-30	Sustainable Development Goals 2015-2030
SMART	Specific; Measurable; Accessible, Realistic and; Timely
SMC	School Management Committee
STI	Sexually Transmitted Infections
TA	Technical Assistance
TAPIS	Timely, Autonomously, Participative, Innovate, Synthetic
TBA	Traditional Birth Attendant
UHC	Universal Health Coverage
VCT	Voluntary Counselling and Testing
WFP	World Food Programme
WHO	World Health Organisation

KEY INDICATORS IN PBF

- For a PBF program, one should plan at least USD 4.00 per person per year. If the PBF program aims to add more elements (such as community PBF, supplementary feeding, targeting the vulnerable, free care for small children, and major investments in infrastructure and equipment), the budget must increase to USD 5-8 per person per year.
- There are good economies of scale when the PBF program has an administrative cost of around 20%. The administrative cost is linked to the development of contract development and verification (CDV) agencies, support for the regulatory aspects, and training. Administrative costs of 30% or higher must be avoided by developing a design that achieves high administrative and allocative efficiencies.
- A contract development and verification (CDV) Agency can cover 2-3 million people in a province or region, achieving good economies of scale with low average costs and a marginal cost of zero. However, this large target population also requires establishing district ACV stations, with medical (1 per 100,000 inhabitants), community (1 per 200,000 inhabitants), and infrastructure (1 per 500,000 inhabitants) verifiers stationed there. These staff members live in the district but remain members of the regional CDV Agency. A CDV Agency that targets less than 300,000 people or more than 3 million people has poor economies of scale.
- The management of a health center in a low-income country that provides the complete minimum package of activities must generate at least USD 7 per person in the target population annually to ensure high-quality care. Hospitals should generate around USD 20 per person per year. Primary schools should generate at least USD 100 per pupil per year.
- The PBF feasibility scan score based on 23 criteria must be at least 80%. The designers of new PBF interventions should also avoid killing assumptions such as that the budget is less than \$ 4 per person per year, that there are input monopolies, or that providers have no autonomy.
- Primary level health facilities should have at least one qualified staff member per 1,000 inhabitants in their catchment area. For the hospital package, this ratio is also 1 qualified person per 1,000.
- To ensure financial stability, a health facility is expected to generate around 40-60% of its revenues internally through direct cost recovery or health insurance. Managers of health facilities should avoid being dependent on external sources of funding for more than 60% of their revenues, such as government, partners, or PBF programs.
- The essential drug security stock in PBF structures, which have access to competing distributors, should be 14 days.
- The financial reserve of a health facility, held in its bank account or other liquid assets, must cover approximately 3 months of expenses.
- The population's contribution to their health through direct payments or contributions to health insurance schemes should be between 10% and 15% of their revenues.
- It is desirable for the government to allocate around 15% of the budget to health. However, the political will to ensure the actual contribution will depend on the efficiency of their use and on the extent to which those health expenditures are perceived by the public and policymakers to have an impact on better health.
- The proportion of patients exempted from paying fees under PBF may be 5%, 15%, or 25% of the total. This proportion depends not only on the population's vulnerability but also on the resources available. In the event of a humanitarian or natural crisis, this proportion can reach 50% or more.

- The population to be reached by the main contract holder for the Minimum Package of Activities is 10,000, and for a Complementary Package of Activities, the first referral hospital is around 150,000. This will create good economies of scale. Providing the full packages provides good economies of scope.
- A provider can be accredited when the quality reviews conducted by the health authorities achieve a score above 80% on two consecutive visits. A provider that has a score of 35% or less during two quarters and which does not show progress should be closed.

1. INTRODUCTION and the linkage with UHC and the SDGs

Main messages of this module

- Performance-based financing is a systems reform approach that answers the 'how' of achieving Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs) 2015-2030.
- PBF postulates that, in the development process, the delivery of *quality* services comes first, followed by the *efficient* use of scarce public resources, and then by *equity and financial access*.
- Each provider (health, education, etc.) is responsible for generating sufficient revenue to ensure the provision of quality care. Governments or other external financiers are responsible for providing public goods and activities with positive externalities and protecting the vulnerable.
- PBF proposes mechanisms to protect the vulnerable by geographical, provider-specific, and individual equity instruments under general circumstances. During natural or humanitarian emergencies, providers must have access to more PBF resources.
- PBF reforms can be applied in sectors other than health, such as education, administration, and the judiciary.

1.1 Content of the manual

The 14-day course is constantly evolving: it describes the boundaries of current knowledge on PBF and aims to present the most recent experiences and debates, including those not yet published. The following PBF course modules outline the usual course structure, but depending on each group's specific needs, the program can be adjusted daily. Course organizers know the course book is too much to absorb in 14 days; therefore, we must choose what to cover in detail. For this, we strongly encourage participants to read the book before the course begins.

Module 1: Introduction, course objectives, and methodology. The module begins with introductions and the establishment of the course village rules. The course objectives and methodology are presented, and the reasons PBF has become important in health (or other sector) reforms are explained.

Module 2: A Simple Example of how PBF works

The module presents the course objectives, the rationale behind the FBP course, the history of FBP, the academic evidence supporting FBP, and academic references. The module explains how FBP operates within a health center and why the paradigm shift is important. This module compares the PBF approach with Primary Health Care and the Bamako Initiative.

Module 3: The PBF Definition, Best Practices, and the PBF Equity Instruments.

This module introduces the definition of PBF, the 11 best practices of PBF, and the PBF equity instruments for achieving universal health coverage.

Module 4: The theories related to PBF

The module presents the theories of systems analysis, public choice, contracting, good governance, and decentralization.

Module 5: Microeconomics and Health Economics

The module explains how economic principles and laws apply to health systems and health facility management. This module is often considered "difficult" for those without prior knowledge of economics. Therefore, it is strongly encouraged to have already studied this module in the PBF manual study before the course.

Module 6: National Policy, Regulation & Quality Assurance

This module explains the role of regulation at the national, regional, and district level, how PBF can be made sustainable in emerging health systems, and how the regulatory institutions can be put under performance contracts. It also explains quality assurance and accreditation mechanisms.

Module 7: Contract Development & Verification Agencies (CDV)

This module explains the roles of CDV Agencies in the PBF system and how they can be placed under performance contracts. The module also explains the stages from the declaration of results by PBF actors until the payment of the invoices.

Module 8: Community - Provider & Social Marketing Interaction

The module presents the community PBF approach and social marketing indicators, including protocol-based home visits, follow-up on dropouts, and cases referred by community relays. It also discusses the role of volunteering and intrinsic motivation.

Module 9: Development of a PBF Project, feasibility score analysis & advocacy

This module explains how to start new FBP programs, examine the feasibility of a new PBF proposal, and advocate for making the PBF approach as "pure" as possible. It also explains the importance of avoiding "killing assumptions". This module is linked to participants' action plans and explains how to conduct advocacy through role-plays.

Module 10: Conflict Resolution and Negotiation

This module provides participants with the skills and expertise needed to manage conflict arising from change.

Module 11: Basic & Evaluation Studies in PBF Programs

The module shows the importance of studies before and during PBF interventions and provides some ideas on how to do the studies

Module 12: PBF output indicators and their subsidies

The module shows the differences between output, quality, impact, equity, and process indicators and how to develop SMART indicators. Participants conduct an EXCEL exercise to calculate output targets and the budget required to pay the subsidies for the output indicators, the quality bonus, and the geographic equity bonuses.

Module 13: Health Facility Management: Business Plan

This module presents the key principles of autonomous health facility management and how to use the business plan to negotiate the contract with the CDV Agencies. The module also presents a standard contract between a health facility and an employee, as well as the Quality Improvement Bonus (QIB).

Module 14: Health Facility Management: The Indices Management Tool

This module focuses on how health facilities and other actors use the indices management tool to analyze revenue, pay key expenses, and calculate staff performance bonuses. This tool simultaneously stimulates autonomy within structures and both internal and external transparency.

Module 15: PBF in Emergency Situations.

Experience has shown that FBP is relevant in emergency situations such as wars, disasters, or epidemics, such as Ebola virus disease.

Module 16: The costing of a PBF intervention

This module focuses on costing a PBF intervention.

Module 17: PBF in Education**1.2 Acknowledgements**

Hundreds of PBF “family members” worked during the last decades to innovate and develop the ideas that are at the basis of this book. The PBF journey often began with frustration over ineffective health systems and a desire to move toward good governance, efficient facility management, improved staff motivation, and consumer empowerment. The PBF practitioners, in fact, share a strong desire to work towards a “just” world.

Since the late 1990s, PBF has been established worldwide and, as of 2019, reached around 250 million people. A few large countries, such as Nigeria and Cameroon, unfortunately stopped PBF in the early 2020s. As of 2026, around 15 countries implement some form of PBF, and its popularity is rebounding in the absence of convincing alternative reform strategies.

The funding initially came from organizations such as the Asian Development Bank and NGOs such as Cordaid. Later, bilateral cooperation, the European Union, and the World Bank became interested in financing PBF programs. More recently, governments have taken over the financing. So far, more than 3200 participants have attended the 14-day PBF courses.

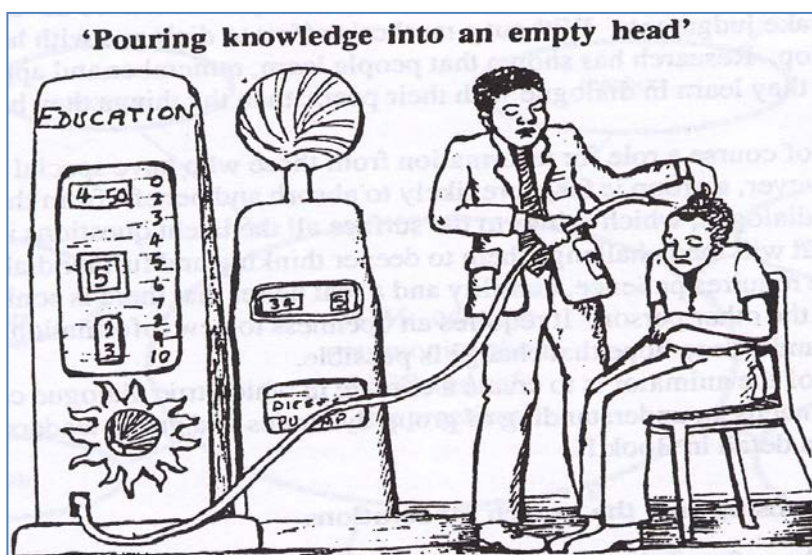
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1.3 Course methodology

Traditionally, it is assumed that the trainer alone has the knowledge and skills and that the student has little knowledge of what she must learn. The student accepts and assimilates what the ‘master’ has taught her and must reproduce it when asked. Thus, the teacher is at the center, and the student merely must memorize. The learner’s mind is like an empty vessel, which is to be filled with knowledge, as shown in the following image.



In adult learning, participants actively contribute towards their own training and adopt a participatory approach throughout the learning process. In adult learning, the student becomes a *participant* in the training process and is therefore *at the center*, whilst the teacher is a *facilitator*. Together, the participant and the facilitator explore and find the path forward. The participant learns through his own activity, personal commitment, and intrinsic motivation. He actively participates in the group work with fellow participants and collaborates to complete common tasks.

Traditional training programs often begin with theory, with practice coming afterward. The adult learning cycle works the opposite way: learning starts with each participant's experience.

There are four main stages in an adult learning cycle:

- **Experience:** observe, do an activity, provide the learner with situations to simulate the process of experimentation; for example, *present work experience, conduct role plays, and ask questions through Turning Point*
- **Analyze:** reflect on the activity, discuss, and provide feedback to probe the experience; facilitate *dialogue* and conduct *group work*.
- **Generalize:** help the participant generalize from the experience and identify best practices that can be applied elsewhere.
- **Apply in practice:** participants develop practical plans to apply what they learned and are encouraged to use the generalization to change behavior and become more efficient.

Training objectives aim at meeting the following **learning domains**:

- Accumulate knowledge (= to know);
- Learn skills (= the know-how) and;
- Change attitudes (= behavior).

The three learning domains are hierarchical. Someone may know something but lack the skills to apply it. At the next level, someone may know something and have the skills to apply it but lack the attitude or willingness to do so. In PBF, we aim to advance all three learning domains at once. Often, attitude changes appear the most challenging. The three domains are reflected in the course book chapters on knowledge (theories and best practices), skills (applying the PBF instruments), and attitude (how to become change agents and how to negotiate and deal with opposition and conflict).

1.3.1 From the comfort zone towards becoming a change agent

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
▪ Consumes the material ▪ Let's wait and see ▪ Refers to own references ▪ Checks ▪ Seeks truths ▪ Seeks affirmations ▪ Seeks routine procedures ▪ Wants a toolbox ▪ Is on holiday	▪ Participation ▪ Responsible for his own learning ▪ Allows new approaches ▪ Curiosity ▪ Allows Surprises ▪ Questions ▪ Allows to change ideas ▪ Is an actor ▪ Travels

To obtain the maximum from the learning process, participants must:

- Be willing to move from their comfort zone towards the change environment;
- Everybody is responsible for his/her own learning;
- Have a clear idea about one's expectations;
- Actively participate in the training dynamics (participate in group work, conduct daily summaries and do presentations during plenary sessions);
- Deal with the unexpected. Some knowledge, skills, and attitudes may be presented during the course that some participants may find unpleasant or not feasible. The goal is to add new ideas while also identifying attitude problems that can block change. Such discussions, of course, never have the goal to offend anybody.

1.3.2 Learning strategies during the PBF course

- a) Election by the participants of the PBF course **of a village chief and officials** to ensure the link between facilitators and participants concerning the logistical and disciplinary aspects of the course;
- b) Recapitulation. Work groups will be created to summarize the work of the previous day;

The recapitulation and presentations must be **TAPIS**, i.e., Timely, Autonomously prepared, Participative, Innovative, and include a Synthesis. During presentations, notes or PowerPoints should also be **CCLR**: Clear, Crisp, Large enough, and Readable.

1.3.3 The participants' action plans per country or theme

During the course, each country or thematic group will present their situation and action plans to be implemented upon returning from the PBF course. Groups or individuals will first review their baseline situation regarding PBF in their workplace and the challenges to implementing PBF. Participants will develop action plans that answer *who* will do *what*, *when*, and *where* in the period immediately following the course. In these plans, the participants will address the *knowledge* aspects (what we want to achieve and the principles guiding it), the *skills* aspects (how to apply the PBF instruments), and the *attitude* aspects. The attitude section concerns why people oppose PBF, what lies behind resistance, how

to address it, and which advocacy techniques to use. This requires all participants to work on their own skills and attitudes towards change and on resolving conflicts.

1.4 **The hierarchy of priorities in PBF: quality, efficiency, and equity**

Performance-based financing is a reform approach that aims at achieving universal coverage in health, education, and other sectors. Unlike other financing mechanisms, PBF proposes a **hierarchy in which** the delivery of quality services comes first, followed by the efficient use of scarce public resources, and only then by equity and financial access.

1. *Quality* comes first because without it, health centers or schools may become dangerous to public health or fall below acceptable standards.
2. *Efficiency* comes second because public resources are limited and the system should be sustainable.
3. Only when quality and efficiency are settled can we consider *financial access for patients and equity* considerations

In traditional approaches, affordability and free health care often came first, regardless of available resources; as a result, services are often so poor that it is doubtful they lead to better health or educational outcomes.

We have learned that while it is important to remain firm on the PBF best practices, it is equally important to listen, to seek compromises, and learn from the strengths and weaknesses of the respective financing tools. Good ideas are always welcome and must be integrated into the PBF (or RBF) health-reform concepts or instruments.

1.5 **Universal Health Coverage, RBF equity instruments, and cost recovery**

First, we propose that PBF is the best reform strategy for achieving universal health coverage, universal access to education, and related goals. PBF helps finance quality services efficiently and targets vulnerable regions or individuals who cannot afford them. The PBF reforms propose that private financing remain important for sustainability and encourage those able to pay to contribute financially to the services they receive.

In most low- and middle-income countries (LMICs), out-of-pocket expenditure through *direct cost* recovery accounts for 30%-80% of total health expenditures. This is undesirable because it creates financial hardships or leads to the non-utilization of services. WHO estimates the cost of achieving Universal Health Coverage at around USD 86 per person per year. Yet the WHO calculation seems to be based on inefficient input financing, which PBF aims to replace with performance financing. Moreover, the WHO calculations do not seem to account for the potential to use out-of-pocket health expenditure more efficiently by both government and private-sector providers. PBF reforms, public-private collaboration, and system efficiency improvements significantly reduce the need for public financing to around USD 10-15 per capita per year. This would finance comprehensive primary- and hospital-level health packages with several free health care components. Yet so far, no low- or middle-income country has generated more than USD 4-5 per capita per year from government resources for PBF reforms. Financing this minimum amount is challenging. Cameroon proposed USD 4-5 for its 2020-2022 budget; in Rwanda and Burundi, PBF financing amounts to around USD 2 per capita per year, but these countries also receive substantial external support. Other countries such as Lesotho, Zimbabwe, DRC, and CAR mainly depend on external resources for their PBF systems.

Therefore, *direct cost-recovery remains important*, and the PBF reforms propose an intelligent mix of financing sources to: (1) *Generate sufficient health facility revenues* to assure quality services. To provide quality health services in LMICs at the primary level costs at least USD 7-10 per person per year and at the hospital level at least USD 20 per person per year; (2) *Prevent informal fee payments*. This risk is particularly high when governments impose free health care at a price below the market equilibrium and without a robust reimbursement system. (3) *Stabilize provider revenues* because external government and partner funding is often irregular. To ensure the sustainability of health facilities, they should generate 40-60% of their revenue internally through fee payments and insurance reimbursements.

Direct payments also create problems for financial access for patients, and the PBF approach proposes the **following equity instruments**:

1. Provide substantial subsidies for activities with *public-good* characteristics, such as health promotion and *positive externalities* like family planning, immunization, and tuberculosis control. These subsidies should be high enough to make the service free for the patient.
2. Provide smaller subsidies for *curative activities* such as OPD consultations, deliveries, and inpatient care at a modest proportion of the total cost. These push service prices downward and provide a market signal for both public and private providers;
3. Provincial, regional, or district bonuses reduce *geographic inequalities*;
4. Specific health facility- or school bonuses reduce *intra-district inequalities*;
5. Target *highly vulnerable* individuals with much higher subsidies so services are free of charge or at a nominal cost. Yet the proportion of patients eligible for exemption must be capped to prevent cost overruns and moral hazard.
6. Target those affected by *humanitarian or natural emergencies* by temporarily increasing subsidies for facilities so they can exempt larger groups from paying fees.

Stand-alone voluntary insurance schemes have proven to be less effective for equity. Yet, *insurance initiatives can co-exist with PBF schemes for those who can afford to pay a premium*. These can be individuals or groups, such as civil servants or company employees. So, the main objective of such insurance health-financing components would be *financial risk sharing for the non-poor*.

Compulsory large-scale health insurance schemes are theoretically a good solution. However, experiences with compulsory insurance schemes in Ghana and Gabon show that these programs are often unsustainable and that a proportion of health providers' claims remain unpaid. In addition, evaluation reports for Ghana and Gabon point to problems with reimbursement management efficiency, inadequate verification systems, moral hazard, and the exclusion of promotional and preventive activities from the assured package. Coverage is only 45% in Ghana and around 70% in Gabon, so true universal health coverage has not been achieved. Currently, Rwanda's compulsory insurance scheme has a good reputation, but since 2005 it has been implemented alongside performance-based financing. The Rwandan government can also require premium payments from citizens, a practice that might be challenging in other countries.

We believe the best health system reform will "marry" FBP (which ensures quality of care, efficiency, and strong verification) with the principles of mandatory health insurance (which will ensure financing and sustainability).

1.6 PBF and humanitarian crisis, natural catastrophes and epidemics

Experiences in DRC, CAR, Cameroon and Mali have shown that PBF can be a useful tool during crises such as wars, disasters, or outbreaks such as Ebola Viral Disease (EVD).

In the Central African Republic from 2013 onwards, when an insurgency took place, we were able to compare a PBF emergency intervention with the classical emergency approach of input financing through international NGOs. The PBF approach continued to provide subsidies to health facilities, which proved more cost-effective. None of the PBF health facilities stopped operating during the war. Qualified staff continued to work in the facilities. In contrast, in traditional emergency-response areas, several health facilities stopped operating, and qualified staff left. The main problem with the emergency-input approach managed by international NGOs was that it did not promote local staff ownership.

In May 2025, the World Bank's end-of-project report for 2020-2024 in Mali, with a \$90 million budget, demonstrated spectacular results, including increased healthcare coverage and improved quality of care. The program carried out rehabilitation and infrastructure construction in hundreds of health facilities, including hospitals. Insecure areas were well covered. The program provided free care to one million underprivileged persons. The PBF program was well integrated into existing health insurance structures and covered 8 million people (40% of Mali's population). The program's purity was 92%, indicating that when PBF best practices and instruments are used correctly, PBF programs will achieve good results.

1.7 PBF and education

The education sector shows encouraging results in the Democratic Republic of Congo (DRC) and the Central African Republic (CAR), where primary schools have been under performance contracts since 2008. Currently, 5-6 countries have developed performance contracts in their schools with promising results. In Malawi, SINA Health helped develop the quality review questionnaire (see module 17 of this course book). New education PBF programs are proposed in Cameroon.

2. COURSE OBJECTIVES, WHY PBF, AND THE CHANGE PROCESS

Main messages of this module

- Knowing how PBF works is important but not sufficient. Equally important is mastering transition management and change processes and developing advocacy and negotiation skills.
- Evidence for PBF comes not only from scientific studies but also from practical experience, common sense, and pragmatism. Increasingly, it appears that there is no “plan B” for the PBF reforms to achieve universal health coverage.
- PBF promotes good governance, introduces competition, and utilizes the comparative advantages of the public, private, and faith-based sectors. It is based on the simple principle: “if a person works more, in terms of results or quality, his reward will also be greater.”
- If experts propose alternative reform approaches, they should also explain why they deviate from PBF best practices and instruments and provide evidence that these approaches yield better results.

2.1 Overall aim of the PBF courses and training objectives

The PBF course *aims* to improve the health or educational status of the population by providing accessible, affordable, high-quality services.

The course has the following *specific course objectives*:

- a) To help master the theories, best practices, and instruments that are relevant to putting performance-based financing into practice and develop the skills and attitudes to manage transitions and create change.
- b) To explain what markets do well, but also when markets fail and how these failures can be addressed by applying specific market-based instruments.
- c) To reach a critical mass of people who adhere to PBF and can apply PBF practically, and who will replace systems based on traditional input financing and management.

2.2 The history of the PBF courses

The first 14-day PBF course was organized in 2007 in the DR of Congo with 30 participants. Cordaid financed it, and the Public Health School of Kinshasa and the CDV Agency in South Kivu supported its development. The first 80-page course manual was edited in 2009. By mid-2026, 98 courses have been organized for over 3200 participants. Approximately 3100 participants passed their final test. The courses are participatory and meet the specific needs of each participant by helping them to develop their action plans

2.3 Why is PBF expanding?

- For the *population*, PBF systems potentially offer higher-quality services with increasingly respectful, qualified personnel.
- *Government authorities* may find PBF attractive as they look for ways to improve social services and, in turn, the status of the population. Ministries of Finance may appreciate PBF, as it can demonstrate the results of the budget it consumes.
- *Politicians* may consider PBF interesting in answering the demands of their electorate;
- *Aid agencies* may favor PBF, as it can help achieve the Sustainable Development Goals and other social objectives.

- For staff working in the *social sector*, PBF is appealing because it increases their remuneration, so they earn more when they work more. They may also appreciate stronger supervision when authorities are subject to performance contracts.

In short: PBF makes a lot of sense.

PBF promotes good governance, introduces competition, and leverages the comparative advantages of the public, private, and faith-based sectors. PBF is based on the simple principle that “if somebody works more in terms of outputs or quality, the reward will be higher”. It promotes autonomous provider management and uses effective strategies to decentralize the service system for consumers. These underlying ideas are easy to explain to audiences, because they make sense. Several governments therefore adopt PBF ideas, sometimes even before impact studies are concluded in their country, to demonstrate positive effects.

2.4 The academic evidence for PBF

Often, PBF reforms appeal to certain decision-makers, implementers, consumers, and aid agencies who are keen to change. In academic circles, the question about ‘evidence’, however, remains.

The literature shows mounting evidence that service utilization and quality increase after the introduction of PBF. There is little doubt that payment of a bonus/subsidy for each service delivered incentivizes providers to put in more effort. Yet PBF does not only introduce financial incentives. PBF also promotes greater autonomy for facilities, creates a more competitive environment, shifts from input payments to performance payments, seeks collaboration with the private sector, and aims for economic multiplier effects. Impact studies should therefore consider the full package of reform proposals, not only the financial incentive component.

When reviewing the impact of PBF, the question should therefore also be: “*What is the alternative?*” or “*What is plan B?*” What is, for example, the scientific evidence that traditional input-financing systems improve sustainable outcomes? So far, this question has remained unanswered because the case may be difficult to make. Obviously, doing more of the same is not the way forward, and the free health care or voluntary health insurance approaches have not been convincing.

Cost-effectiveness also matters, and PBF clearly makes a difference here. A study in the DRC showed that both PBF and input financing improved the system, but *PBF did so at about a quarter of the cost of the input approach* (Soeters et al., 2011).

A “pure” PBF approach (meaning it incorporates at least 80% of the best PBF practices and instruments) tends to produce quality enhancements and several quantitative improvements. However, the value of PBF approaches has been debated in the literature. A complicating factor has been the definition of PBF, with a number of authors interpreting PBF narrowly as a contracting methodology mainly focusing on financial incentives (Fretheim, Witter, et al., 2012; Eldridge and Palmer, 2009) while others consider it a more comprehensive health reform (COP PBF, 2010; Soeters, Habineza et al., 2006; Soeters, Peerenboom et al., 2011).

Most studies of contracting schemes have focused on outcomes in terms of service outputs and service quality in health service delivery (Basinga et al., 2011; Eichler et al., 2009; Meessen et al., 2007). In Cambodia, Loevinsohn and Harding (2005b) found that contracting was more robust than routine government health services in access to and delivery of basic health services. Keller, de Jong, et al. (2008) showed that performance-based contracting implemented by NGOs, with additional resources

for hiring more staff and staff incentives, led to enhanced service delivery compared to non-contracted health districts without the intervention. Elsewhere, the impact of pay-for-performance schemes (including PBF) on health service delivery and health outcomes was found to vary, with some indicators improving more than others (Banerjee, Duflo et al. 2010; Basinga et al. 2010; Basinga et al. 2011; Soeters, Peerenboom et al. 2011; Miller, Luo et al. 2012).

In 2014, four studies were published on PBF in Burundi, and there was a convergence of findings in those studies showing that quality improved as well as several output indicators (Bonfrer, Soeters et al, 2014; Bonfrer Van de Poel, Van Doorslaer, 2014; Rudasingwa, M et al, 2014; Falisse et al, 2015). The World Bank has completed several impact studies in countries such as Zimbabwe and Nigeria that also show positive results (World Bank 2014). Not surprisingly, some impact studies also concluded that when programs only apply part of the PBF best practices, the results are less convincing.

In 2017 and 2018, articles on PBF were published, including those from Mozambique, Zambia and Armenia. Mozambique's PBF intervention resulted in a significant improvement in the prevention of mother-to-child transmission (PMTCT), HIV treatments, and mother-child services (Rajkotia, Y et al, 2017). The Zambia paper found that coverage and quality-of-care indicators increased significantly more under results-based financing than in the control districts (Zeng et al., 2018). The article from Armenia describes the successful integration of RBF into the primary health care system from 2000 to 2015 (Petrosyan V et al., 2017). In 2018, a very critical and derogatory article on PBF also appeared (Paul et al., 2018). Yet this article was, in our view, convincingly refuted by a group of African experts (Mayaka Ma-Nitu S et al, 2018).

In May 2025, the World Bank's final project report for Mali for the 2020-2024 period, with a \$90 million budget, demonstrated significant results in increasing health coverage and improving the quality of care. The program carried out rehabilitation and infrastructure construction at hundreds of health facilities, including hospitals. Insecure areas were well covered. The program provided free care to one million underprivileged people. The performance-based financing (PBF) program was well integrated with existing health insurance structures and covered 8 million people (40% of the Malian population). The program purity was 92%, indicating that when PBF best practices and instruments are used properly, PBF programs achieve good results.

In short: PBF works when best practices and instruments are applied correctly.

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2.6 **How does PBF function: a simple example of a health centre**

The following table presents the financial statement of a PBF Health Center, with 24% of revenue generated by PBF subsidies, 40% by cost recovery, and 36% by government salaries. Eighteen percent (18%) of revenue was directly based on the center's quantitative results. Four percent (4%) was added as a remoteness allowance and two percent (2%) as a quality bonus. In practice, each activity (or indicator) received a fixed subsidy: US\$4.00 for a fully vaccinated child and US\$0.30 for a routine consultation, while the subsidy for consultations with vulnerable patients (exempt from payment) was US\$1.20, four times higher than that granted to patients who pay for care. As we will see in more detail later, the Contracting and Verification Agency (CVA) verifies quantitative results monthly, and district supervisors verify service quality.

In this example, revenues balance expenses. Performance bonuses constitute a variable component intended to balance revenues and expenses. This portion is drawn from the health facility's "profit." When the health center's "profits" increase, the performance bonus increases. This system stimulates staff to increase revenue and reduce unnecessary expenses, thereby incentivizing everyone to be efficient.

Revenues	Nbr provided	Unit Price	Total	%	\$ / person / year
<i>Health Centre for a population of 15,000 people</i>					
Subsidies PBF					
Children fully vaccinated	60	\$ 4.00	\$ 240		
Deliveries by trained personnel	50	\$ 10.00	\$ 500		
OPD Consultation - for paying patient	1380	\$ 0.30	\$ 414		
OPD Consultation - vulnerable patient (maximum 20% of paying patients)	207	\$ 1.20	\$ 248		
Home visit following a protocol	124	\$ 3.00	\$ 372		
Sub -Total PBF revenues			\$ 1,774	18%	
Equity bonus health facility	20%		\$ 355	4%	
Quality bonus - Example: 60% score multiplied by 20% of the total amount of output subsidies	= sub-total x 20% x 60%		\$ 213	2%	
TOTAL PBF subsidies			\$ 2,342	24%	\$ 1.87
Fixed salaries (paid by government or by HF)			\$ 3,500	36%	
Direct cost recovery revenue			\$ 2,330	24%	
Health Insurance Income			\$ 1,560	16%	
TOTAL REVENUES			\$ 9,732	100%	\$ 7.79
Expenditures			Total	%	\$ / person / year
<i>must balance with the revenues</i>					
Fixed salaries (public or specific function)			\$ 3,500	36%	\$ 2.80
Operational expenses			\$ 550	6%	
Drugs, consumables, equipment			\$ 1,600	16%	
Social marketing			\$ 925	10%	
Payments for secondary contract holders			\$ 727	7%	
Rehabilitation			\$ 550	6%	
Increasing the reserve at the HF bank account			\$ 500	5%	
Sub Total expenditures:			\$ 8,352	86%	
Payment performance bonuses (<i>revenue minus sub-total</i>)			\$ 1,380	14%	\$ 1.10
Total Expenditures			\$ 9,732	100%	\$ 7.79

Staff remuneration should not exceed 60% of total expenditures; in this example, it is 50% (36% salaries + 14% performance bonus), which is okay. Drug expenditures - in a competitive environment – could amount to around 15%. The health center manager does well by investing 5-10% of its earnings in rehabilitation. Yet these proportions may be higher or lower depending on each health facility's specific circumstances.

Once a “*profit*” is made, the issue is how to distribute this profit fairly. The following table shows how to do this. The distribution tool considers several criteria, including each staff member's academic level (i.e., the salary index value), staff responsibility, overtime or hours lost, the non-private practice bonus, the department quality score, and individual performance.

When other expenses decrease and revenues increase, profits, and consequently staff bonuses, can also rise. Higher bonuses can reduce unnecessary spending, strengthen team spirit, and incentivize staff to better meet patient needs and improve service quality.

Module 6 presents the method for measuring service quality. Module 15 shows the indices management tool, which measures each staff member's individual performance.

Staff Categories	Salary index value	Fixed (basic) salary	1. Responsibility bonus	2. TOTAL points over time	3. NON Private Practice Bonus	4. Quality Score Department t = Score Max X Score Qual	5. Individual Performance Bonus Score = Maximum Score X Obtained	TOTAL SCORE of 5 Positive Incentive Criteria	BONUS TOTAL	Basic Salary + Bonus
Medical doctor - in charge	715	\$ 408.77	80	1.4	72	122	100	375	\$ 515	\$ 923
Ass Med Officer - deputy	480	\$ 324.99	50	5.8	48	82	67	253	\$ 347	\$ 672
Clinical officer	335	\$ 273.30	30	13.4	17	40	47	147	\$ 198	\$ 471
Accountant	300	\$ 260.82	20	0.0	30	24	42	116	\$ 159	\$ 420
Nurse Midwife	335	\$ 273.30	20	0.0	34	54	47	154	\$ 212	\$ 485
Cashier	115	\$ 99.98	10	0.0	0	9	16	35	\$ 0	\$ 100
Nurse	335	\$ 273.30		3.4	34	34	47	117	\$ 161	\$ 434
Nurse Aid	180	\$ 156.49		0.0	18	18	25	61	\$ 84	\$ 241
Unskilled staff	105	\$ 91.29		0.0	11	11	15	36	\$ 49	\$ 140
Nurse Aid	200	\$ 173.88		0.0	20	32	28	80	\$ 110	\$ 284
Unskilled staff	105	\$ 91.29		0.0	11	17	15	42	\$ 58	\$ 149
Assistant Medical Officer	560	\$ 353.51		0.0	56	67	78	202	\$ 277	\$ 630
TOTAL	\$ 2,781	210	24	348.25	508.15	527.1	1617.44	\$ 2,169	\$ 4,950	
13%1%22%31%33%100%44%										

For the PBF system to work, the right conditions must be in place so that health center managers have the authority to influence decisions on input purchasing, human resource management, and cost-recovery tariff setting. Management must be proactive innovators, equipped with management skills and autonomy, rather than passive recipients of instructions from above. This also requires regulators at the national, regional, and district levels to stimulate autonomous management among providers and coach them to ensure quality standards are met. The CDV Agencies develop performance contracts, verify results, and coach provider managers.

2.7 Change issues in PBF

Change issues may be *time-specific*, *country-specific*, or *person-specific*.

Change issues may be *time-specific*. For example, some years ago there was an intense debate about the best balance of subsidy distribution between ‘quantity’ and ‘quality’ indicators, or about the need to separate functions. These debates now appear resolved, but have been replaced by new discussions focusing, for example, on how to strengthen community-based performance-based financing (PBF) or ensure access to financing for the poorest people.

Other change-related issues that generate significant debate may be *country-specific*, such as Burundi, where the debate on free healthcare is ongoing. In the DRC, there is also a fierce debate on the question of "why NGOs and donors should continue to monopolize the market for essential medicines."

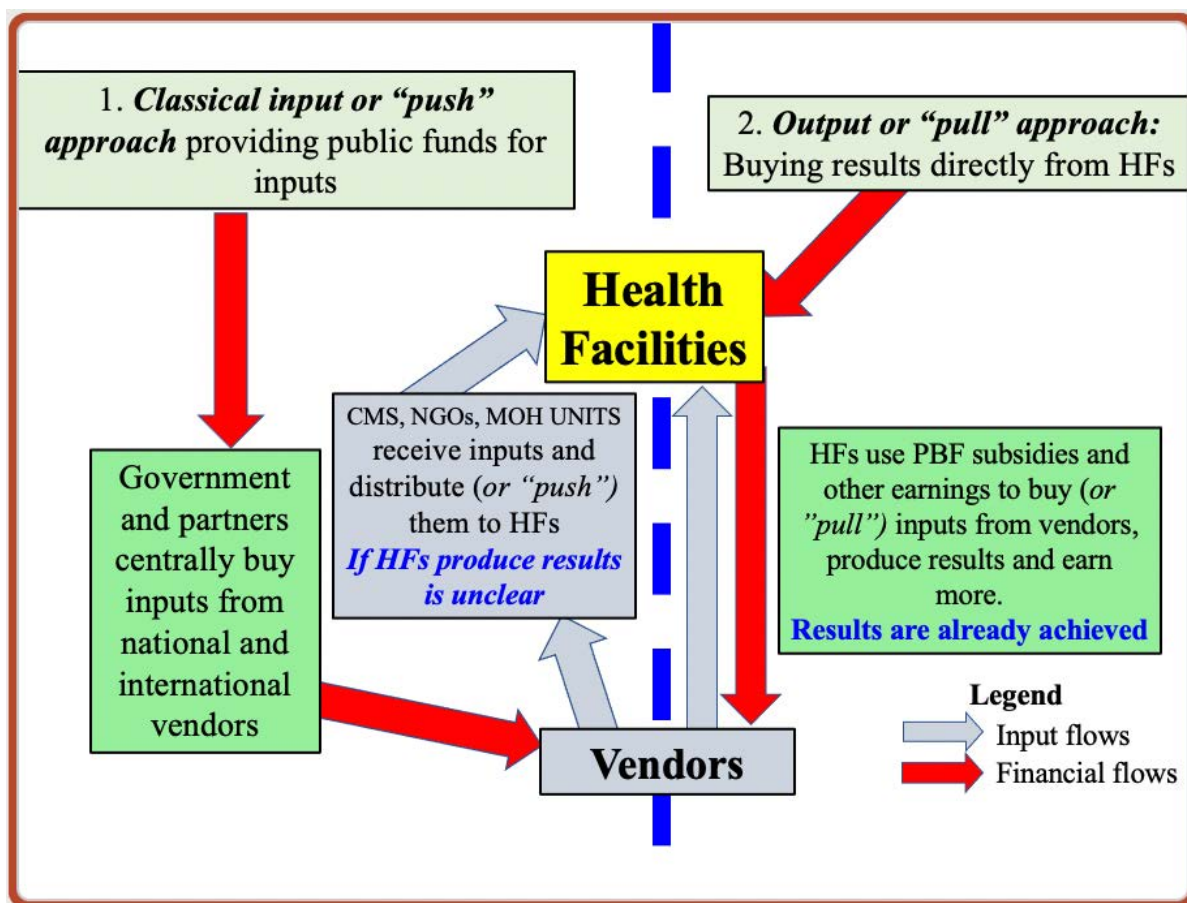
Other *change issues may be person-specific*, such as for each PBF course participant. Some participants are already involved in PBF, so they do not need to change their ideas. Others know PBF only superficially and may still need to develop their ideas.

In Module 9 (advocacy skills) and Module 10 (conflict resolution and negotiation skills), we will present the processes that lead to successful changes toward improved health systems.

2.8 How does PBF relate to Primary Health Care and the Bamako Initiative?

The biggest paradigm shift in PBF lies in its financing:

It moves from an *“input or push” approach*, whereby central administrators use public funds to purchase drugs, equipment, means of transport, and rehabilitation, mostly through one central medical store, towards using public money to pay health facilities (and other stakeholders) for their results through the PBF *“output or pull” approach*. In the PBF approach, the autonomous providers then purchase their inputs from independent distributors. See diagram.



The table below presents the differences between the FBP approach and those of primary health care and the Bamako Initiative.

Performance-based financing shares the same social aims as the Alma-Ata Primary Health Care concept of the 1970s and the Bamako Initiative of the 1990s. Yet the hierarchy of aims and the strategies for achieving them have developed over the years.

The differences in strategies are shown in the following table:

Primary Health Care 1975 - onwards	Bamako Initiative 1987 - onwards	Contracting – RBF - PBF 1998 and beyond towards SDG
Aim: Health for all of quality care	Aim: Improved access to quality care	Aim: Quality provision of health care packages with as much equity as possible
Equity first, quality second and third efficiency & cost containment	Efficiency & cost containment become more important	Quality first, efficiency second and in third place equity if resources allow
Focus on public interest and medical deontology theories	Theories concerning workers' behaviour theory unclear	Public choice theory instruments allow staff private and public interests to overlap
Government provides services through public central hierarchy and district health system	Government provides services through public central hierarchy and district health system	Government concentrates on regulation. The principle of separation of functions enhances decentralisation and good governance, whereby verification and provision are done by different organisations.
Competition not considered important.	Some competition for patients enhanced by user fees.	Competition among providers for contracts and subsidies is <i>the</i> guiding principle
Private sector not considered important or even a nuisance	Role private sector not clearly described	Private sector actors are treated as equals and encouraged to apply for contracts
Conceptually a rural system and little adapted to 2017 urban reality	Conceptually still a rural system not little adapted to 2017 urban reality	Urban PBF has become a strong selling point by involving the private sector
Regulator only vaguely defines output, quality & equity indicators	Regulator defines packages – but indicators are not yet SMART	Regulator defines SMART output (25-40), quality (150-200) and equity indicators
Focuses in theory on primary level but in practice little funding.	Focuses in theory on primary level but in practice little funding.	Earmarks high proportion of public funding for primary level and referral hospitals.
Equity in theory important but in reality, below standard quality provided by poorly motivated staff	Cost sharing exemptions for equity are little effective	Equity important by financing public goods & externalities and bonus systems for: (a) remote districts; (b) remote providers; (c) vulnerable consumers; (d) emergencies
Staff distribution through central bureaucracies leading non-equitable distribution of staff between rural and urban areas	Staff distribution through central bureaucracies. Cost sharing revenues allow some local recruitment	Staff distribution by favouring higher per capita budgets to remote providers in rural areas. Providers recruit staff
Based on fixed salaries for qualified workers. Important role unskilled workers (CHWs, TBAs)	Some incentives qualified workers from cost sharing. Continued role for unskilled workers.	Based on performance subsidies to attract qualified staff in underserved areas. No role unskilled workers in curative care
No independent organisation in place to verify results.	No independent organisation in place to verify results.	Creation of independent contract development & verification agencies separate from regulator and providers
Community participation system does not work well, and the concept of volunteerism is not convincing	Some patient empowerments through cost sharing	Independent local NGOs reinforce patient voice. Social marketing by introducing SMART indicators with subsidies
No concerns expressed on cost containment	Importance of cost containment acknowledged => user fees	Cost containment important => focus on targeting the poor and accepting cost sharing
Inefficient central monopolistic purchase and distribution of inputs	Inefficient central monopolistic purchase and distribution of inputs but user fees revenues introduce some efficiency	Providers purchase inputs from distributors operating in competition. Central input budget is directly injected to periphery based on performance. USD 1 in PBF typically equals USD 4 compared to input systems
Cumbersome NHIS system with demand for 1000s of data elements	Cumbersome NHIS system with demand for 1000s of data elements	PBF assures quality of 25-40 performance indicators and thereby improves NHIS
Does not aim to invest public money in local economy	Does not aim to invest public money in local economy.	PBF promotes economic multiplier effects by injecting cash in local economy
Collaboration with other sectors exists in theory, but is not effective	No clear strategies in place for collaboration with other sectors	PBF also introduced in other sectors such as education, administration

3. DEFINITION PBF, BEST PRACTICES and EQUITY INSTRUMENTS

Main messages of the module

- The PBF definition emerged from a discussion within the PBF community of practice in 2010. The definition and related best practices reflect that PBF is not merely a financing or contracting mechanism but a full-fledged (health, education, social sector) reform approach like Primary Health Care and the Bamako Initiative.
- The PBF equity strategies are: (1) To subsidize positive externalities and public goods; (2) To provide price signals for suppliers to reduce the curative tariffs; (3) Implement a geographic equity bonus; (4) Apply the provider equity bonus; (5) Exempt a proportion of vulnerable people up to 5 to 25% of all fee-paying patients; (6) Target 50% or 100% of a population for exemption in case of natural or humanitarian emergencies.

3.1 PBF definition

*“Performance-based financing is a system approach with an orientation on results defined as quantity & quality of service outputs **and inclusion of vulnerable persons**. This approach entails making facilities autonomous agencies that work for the benefit of health- or education-related goals and their staff. It is also characterized by multiple performance frameworks for the regulatory functions, the contract development & verification (CDV) agency, and community empowerment. Performance-based financing applies market forces while seeking to correct market failures to achieve gains in health or other sectors. PBF also aims to contain costs and sustain a mix of revenue from cost recovery, government, and international contributions. PBF is a flexible approach that continuously improves through empirical research and rigorous impact evaluations, thereby informing best practices.*

Footnote: PBF draws from microeconomics, systems analysis, public choice, and new institutional economics theories. Demand-side interventions such as equity funds, conditional cash transfer programs, voucher schemes, and obligatory health insurance programs can enhance its effectiveness.

At first glance, the above definition may puzzle the reader due to its complexity. Yet the definition shows that PBF is more than a contractual or financial mechanism. In fact, PBF is a reform approach for health, education, and other social sectors.

Some countries use the term performance-based financing (Cameroun, DRC, CAR, and Nigeria); others use the term result-based financing (Zambia, Zimbabwe, Guinea), while the WHO prefers the term strategic purchasing. The name is not the issue; the definition and underlying best practices matter. This book will use the term PBF.

3.2 How does PBF work: the 11 best practices

A best practice is a technique, process, or activity that is believed to be more effective in delivering a particular outcome than any other technique, process, etc. PBF bases its approach on scientifically supported best practices, which are continually improved and adapted as new evidence emerges.

We identify the following best practices:

1. *Separate the functions* of regulation, provision, fund disbursement, contract development & verification, and community empowerment;
2. *Stimulate competition* for contracts among facilities and other stakeholders;

3. *Promote public-private partnerships* with equal treatment of public, religious, and private providers;
4. The *regulator* at the national, regional, and district levels defines output, quality, and equity indicators. The regulator also costs out the public budget, with equity bonuses for vulnerable regions, facilities, and individuals. The regulator intervenes when a facility poses a danger to public health or is engaged in criminal activities.
5. *Providers are autonomous* to hire and fire, set user fees, and respond to government-defined packages and patient or consumer demand;
6. Providers must ensure that *revenues and expenditures are balanced* while providing quality and equitable services with motivated staff at the risk of non-renewal of contract and bankruptcy;
7. *Contract development & verification* (CDV) agencies negotiate contracts, verify results, and coach managers in using business plans and the indices management tool; a different organization handles subsidy payments.
8. Local community groups *enhance patient interests* and health facilities conduct *social marketing*;
9. Promote efficiency and cost containment by CDV agencies and the government to pay *in cash or via bank transfers* for results, rather than providing inputs in kind. Facilities must have the free *choice to purchase their inputs* from independent distributors operating in competition;
10. Seek economic multiplier effects to generate employment, economic growth and tax revenues by deliberately injecting cash into the local economy;
11. Extend the PBF system to sectors other than health.

3.2.1 Separate the Functions among the Main System Stakeholders

In traditional district systems, government authorities often play, at the same time, the roles of regulator, provider, contract development agency and payment agency. Such a monopoly of power will not produce transparent results, particularly when authorities are poorly remunerated. Performance-based financing therefore proposes to separate the following functions:

1. Regulation, planning and quality assurance. Authorities define output, quality and equity targets with indicators. Based on these, they calculate the subsidies required to achieve the desired coverage for the package indicators. This determines the national PBF budget and the additional subsidies required for vulnerable regions, facilities and individuals.
2. Service provision. Autonomous facilities respond to subsidies offered by the regulator and CDV Agencies for national package services. Facilities also respond to increased demand from patients or consumers. Facility managers balance the revenues from third-party payer subsidies and cost sharing with the expenses required to provide quality and equitable services with motivated workers so that locally determined cost-sharing price mechanisms remain in place
3. Contracting and verification of services. Independent CDV Agencies develop contracts with facilities and verify the activities for which payments are made. CDV Agencies also coach facilities to use business plans and indices management tool for analyzing and planning facility revenues, expenditure, and performance bonuses. The Ministry may also recruit independent counter-verification and audit organizations that double-check the performance of the CDV Agencies, the community-based organization, and the local health authority quality reviews.
4. Payment function. To ensure the budget for provider subsidies is ring-fenced, it is better to separate contract development and verification (preparing monthly or three-monthly payments) from the actual payment into the bank accounts of providers, regulators, or community groups.

5. Strengthening the role of the consumers. Patients are empowered when they directly pay for services. In addition, in PBF systems, community groups verify patient satisfaction with services and whether subsidized activities have taken place and factor the results into performance payments to the facilities.

The institutional design found in most PBF systems is shown in the diagram on the front page.

3.2.2 Competition for Contracts

Competition for contracts, goods, and services is important for obtaining the best possible price-quality mix from suppliers for consumers, insurance organizations, and governments. Without competition, suppliers tend to become complacent and may abuse their market position if they are the only supplier, for example, in each health or school catchment area. Suppliers or service providers may be public, private, or private-for-profit. Before issuing contracts, mapping (health or educational) suppliers is important to increase choice and, in turn, competitive pressure. Competition is a PBF best practice and establishes new rules of the game (North, 1990, Meessen et al., 2006). It implies that obtaining a contract is not 'business as usual'. Obtaining a contract is not a right, but conditional on good performance (Soeters and Griffiths, 2003, Soeters et al., 2006).

PBF does not consider natural monopoly problems, such as hospitals in rural areas with no other providers, problematic. If managers are the bottleneck of poor performance, they may be replaced. In this case, those responsible for the ACVs can urge the authorities or the facility owners (whether government, religious, or private) to ensure managers are recruited only through a competitive selection process.

3.2.3 Public-Private Partnerships, non-discrimination and principal & secondary contracts

In PBF, a facility's public or private status is irrelevant when deciding whether to award a contract. The main criterion is how well the facility can deliver high-quality, equitable services. Local authorities and CDV agencies may 'map' existing facilities and select the best. Selection criteria may include the availability of qualified staff, the completeness of services provided, the condition of the infrastructure, service quality, and willingness to enter into a contract. It is also important to assess available resources and the ambitions of potential principal and secondary contract holders to increase the quantity and quality of services. Once a facility has won the principal contract, it should not consider any other facilities in its catchment area as 'competitors' or 'threats' but as an opportunity. In PBF systems, principal contract holders may subcontract these other facilities. Typically, the principal provider retains 20% of production, with the remaining 80% forwarded to secondary contract holders.

In rural underserved areas, the principal contract holder - supported by local authorities - may encourage new providers to open clinics or other providers such as schools to improve geographic coverage or to deliver services that the main contract holder does not provide. In urban areas, there may be too many facilities, sometimes informal, illegal, and with dubious quality standards. In such cases, only serious candidates are selected for a secondary contract and contribute to the national packages. Formalizing well-performing (private) facilities and subsidizing their services will put pressure on informal or illegal facilities to close voluntarily, as they go 'out of business'.

An accreditation system is highly recommended, in which the regulator accredits structures that meet a minimum quality standard. This accreditation can be reinforced with a logo that is recognizable to the public, so they know the government has confirmed the structure provides quality care. Once the

accreditation system in the public and private sectors is operational, it will make it easier for the regulator to close facilities that perform below acceptable standards.

3.2.4 Regulators' roles to define indicators, cost budgets and assure quality and competition

Regulators' first role is to specify which services or packages the government purchases from facilities, including output, quality, and equity. Yet they should interfere as little as possible with how facilities produce the desired results.

The second role of the regulator is to secure adequate funding to purchase health packages and to pay realistic subsidies to make high-quality services financially accessible.

The third role of the regulator is to assess the extent to which certain regions (provinces or districts) have facilities that are more vulnerable than others because of population poverty, distance from the capital, or unfavorable location. Such inequities must be compensated through additional bonuses on top of the basic subsidy for the indicators.

Moreover, governments must subsidize fee exemptions for the vulnerable.

3.2.5 Autonomous management of facilities

With reference to systems analysis and microeconomic theories, a facility is both an independent component of the system and an economic actor in the supply chain. Based on these theories, PBF argues that independent facility managers are best positioned to solve specific problems. Facility managers must therefore have the freedom to hire and fire, to set user-fee tariffs in dialogue with their communities, and to have direct access to their (commercial) bank accounts. Only they can decide how best to use cash revenues and buy the best possible price-quality inputs from independent distributors.

More activities or better quality will lead to more subsidies. Part of these additional revenues becomes profit that managers can then pay to staff as performance bonuses. It creates a strong positive incentive for staff to work better. The PBF indices management tool helps managers translate profits into performance bonuses for each staff member.

In contrast, when facilities perform poorly, revenues and performance bonuses will diminish, creating strong *negative* incentives or even facility closure. Under this logic, poor performance is not the problem of the CDV Agency or the local authority, but primarily the facility's. When problems are too serious to resolve, the CDV Agency may either postpone a new contract or even cancel it and identify another, more effective provider. Thus, competition encourages successful providers and eliminates the poorly performing ones.

In line with this logic, governments move away from centrally paying civil servants and gradually move towards a system in which facilities take over human resources management decisions.

3.2.6 The Importance of Balancing Facility Revenues and Expenses

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

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

Option 'c' may be illustrated in the following formula: $P \times Q = G + A + C$

Whereby:

P = Unit Price; Q = Produced Quantity of care;

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

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

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

$P \times Q$ equals the expenses incurred by the facilities;

$G + A + C$ equals the total income of the facility.

If revenues are too low relative to expenditures, find new revenue sources or reduce expenses. To achieve higher-quality activities, you need more revenue. Experience shows that the revenue base for well-performing primary providers and hospitals with adequate staffing levels in low-income countries should be at least USD 7 per person in the catchment area per year. For hospitals, the minimum required revenues might be as high as USD 20 per person in the hospital catchment area. The PBF subsidies may typically be between 5% (hospitals) and 30% (health centres) of total revenues. The other revenues must come from government contributions, but we believe that a health facility in low- or middle-income countries should generate around 40-60% of its revenues from direct fee-paying or insurance payments. Such a revenue mix should ensure a stable income that is not overly dependent on external, often unreliable, revenue.

3.2.7 CDV agencies negotiate contracts and coach HF to apply management instruments

Well-equipped and independent Contract Development & Verification (CDV) agencies develop and verify contracts for services from providers (and, in other sectors, from schools, etc.). The first instrument is the business plan (see module 13). Typically, a CDV agency may invite the managers of the principal and secondary contract holders to a 3-5-day workshop to coach them in developing their business plans. Module 15, 'indices management tool', presents instruments to ensure facility managers balance revenues and expenditures. This tool helps managers calculate income, plan key expenditures, and calculate individual staff performance bonuses based on SMART criteria.

3.2.8 Local NGOs defend the consumer interest & social marketing

Patients, consumers, school pupils, and their parents are crucial stakeholders in demand for services. Ultimately, their interests should be protected. To that end, PBF proposes identifying independent local community groups to conduct satisfaction surveys and verify how far facilities have delivered the services for which they claimed subsidies. Moreover, such community groups verify consumers' satisfaction with the services. The satisfaction results can be converted into a score that influences the providers' subsidies for output and quality.

Another important community PBF element is *social marketing* conducted by the providers to change community behavior towards healthier practices. For this purpose, community PBF indicators have been developed, including household visits conducted according to protocol and the detection and identification of dropouts from important activities such as immunizations, TB & Ebola treatment, family planning, etc.

3.2.9 Seek efficiency gains by paying cash and letting providers freely choose their inputs

PBF subsidies should be paid **in cash, not in kind**. This ensures that facilities are de facto autonomous in using cash to solve their specific problems. In contrast, government, aid agencies, and NGOs adhering to traditional input-based aid systems routinely distribute inputs such as drugs, equipment,

infrastructure rehabilitation, and salaries. This has proven inefficient, resulting in some products being oversupplied and unwanted, while others are in short supply and lead to stock-outs. Studies in PBF projects, such as those in the DRC, indicate that \$1 given in cash through PBF to a facility may have the same result as \$4 invested centrally in inputs such as medicines, equipment, and facilities.

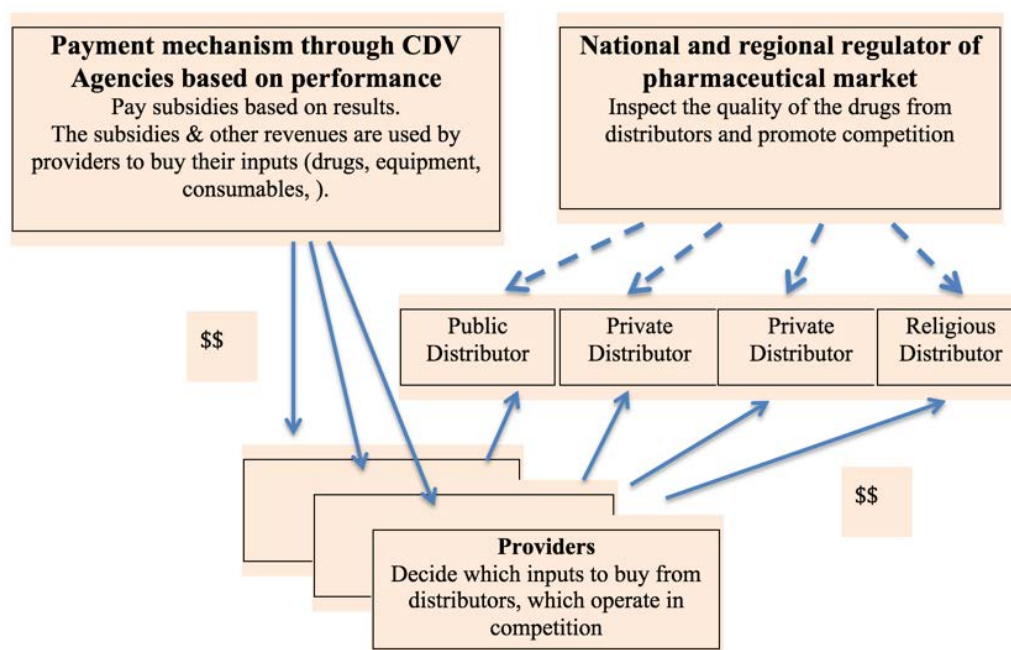
Therefore, in PBF, the government must ensure that facility managers **have free access to several competing distributors**. Unfortunately, in many countries, regulators are deeply involved in the distribution of essential drugs from which they may also obtain personal income. In Europe and the USA, cartel and competition laws prohibit such conflicts of interest because monopolies typically reduce welfare. However, this does not seem to stop organizations from Europe or the USA from promoting public essential drug monopolies in low-income countries.

In PBF, the government's role in distributing inputs should be to enforce anti-monopoly and cartel rules and promote competition by accrediting independent distributors that meet quality standards. The regulator may guide distributors to open new outlets in underserved areas and close those that do not respect minimum quality standards.

The case of the Democratic Republic of Congo:

Monopolization of essential drug distribution was imposed in the DRC through provincial distribution centers with the argument that it would assure good quality drugs. Several Cordaid studies conducted between 2006 and 2008 in South Kivu province did not support this argument. They showed that the monopolization of essential drugs by international NGOs and the government in two districts created serious drug stock-outs in health facilities. Patient satisfaction studies among 200 households confirmed the stock-outs, and interviews with health workers also confirmed them. In contrast, in two health districts that implemented PBF and allowed health facilities to purchase essential drugs from any distributor accredited by the provincial health authority, there were no drug shortages (Soeters et al., 2011).

National regulators set quality standards for drugs and equipment, while the peripheral-level regulator should monitor how well facilities meet these standards. The following illustration shows how the PBF decentralized drug distribution system works. In this approach, the state uses the private sector's comparative advantages to create a cost-effective, high-quality mechanism for distributing essential drugs and medical equipment. The government should also encourage private investors to start industries to produce drugs, mosquito nets, equipment, etc. instead of purchasing these inputs from abroad.



3.2.10 Economic multiplier effects to stimulate local economy and generate tax revenues

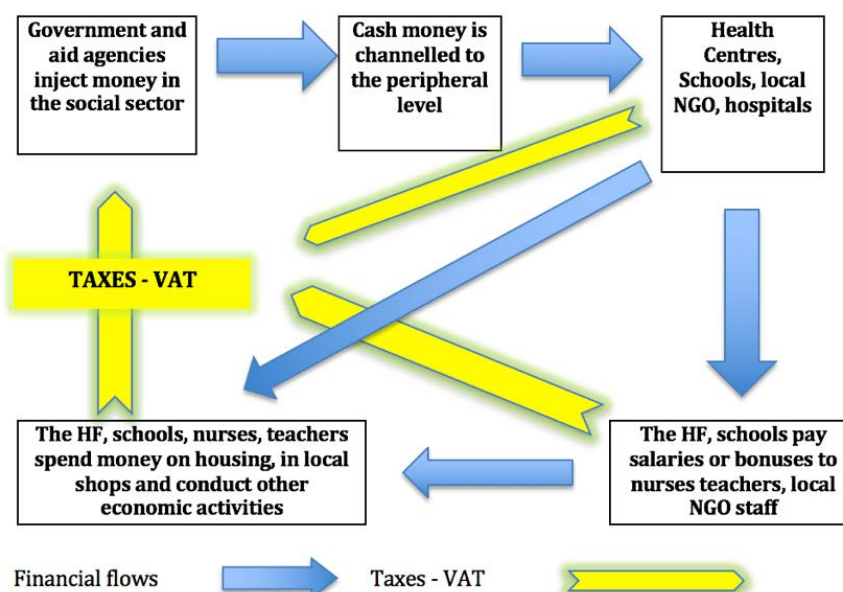
By redirecting cash to the lower echelons of the system, PBF will also help increase the funds available at those levels. PBF benefits the local economy, as money changes hands to procure inputs and spend locally, for instance, because of increased income for local staff.

Economic multiplier effects will develop as follows:

- Subsidies are in cash and not in kind and are used in the local, rural economy;
- Facilities have the freedom to use the cash without interference from central authorities;
- Local economic transactions include salary and performance bonus payments, infrastructure rehabilitation, and purchases of essential drugs and equipment.

The government can tax these economic activities and may reinvest the revenue in the local economy. Through this mechanism, invested money 'multiplies' itself.

See also <http://www.youtube.com/watch?v=H3nyc8XHrQc>



3.2.11 Extend performance contracting towards other sectors than health

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

Education and Rural Development in PBF

The first multisectoral PBF program, launched in South Kivu (DRC) in 2008, encompassed health, education, and rural development. Education sector output indicators included, among others, school enrolment for girls and boys and sexual education sessions, with quality indicators such as the availability of educational materials and furniture and the number of children per class.

Rural development indicators included the number of bridges rehabilitated, 1 km of road cleared, etc.

Other PBF education programs have since begun in the Central African Republic, Cameroon, the DRC, Burundi, and Malawi.

3.3 The PBF EQUITY STRATEGIES to attain Universal Health Coverage

In recent years, the PBF community has developed alternative strategies for low- and middle-income countries to achieve Universal Health Coverage (UHC) in the context of the Sustainable Development Goals 2015-2030. The equity agenda was boosted in response to disappointment with traditional equity mechanisms that did not meet expectations, such as several forms of voluntary health insurance, fee exemption schemes, and generalized free health care. It also responded to justified criticism of PBF's earlier designs up to 2010.

The *first principle* of the PBF equity strategy is that providers *must* deliver *acceptable quality*. To do so, providers must generate *sufficient revenue*, estimated in low- and middle-income countries at USD 7 per capita per year for health centers, USD 20 per capita per year for hospitals, and USD 100 per pupil per year for primary schools.

After quality, the *second principle* in the PBF equity strategy is that providers must use scarce (public) resources as efficiently as possible

The *third principle* is that providers are not responsible for financing free services for the poor. That responsibility lies with the government or other partners through an external financing mechanism. *How much* equity a society aims for expresses its political will to assist the vulnerable. More importantly, the society must also be willing to pay taxes for that purpose. This political will should then translate into a realistic tax collection system to raise the desired funds.

Another principle is that limited public funds for equity purposes should target the vulnerable as efficiently as possible (equity) and not be spread equally among large population groups, such as children under five, whose parents are not necessarily poor (equality).

Based on the above principles, we identify in PBF the following six equity instruments:

3.3.1 Subsidizing positive externalities and public goods

PBF subsidies for activities with *high positive externalities or public-good characteristics* are designed to be so high that the cost to patients becomes zero, thereby automatically including the vulnerable and the poor. These activities include family planning, immunization, tuberculosis, HIV/AIDS diagnostic and therapeutic services, and various social marketing activities conducted through household visits by

qualified staff following a protocol. Subsidies above cost price may also be proposed to incentivize providers to encourage patients to adopt desired behaviors, such as parents fully immunizing their children, or paying extra for TB patients or malnourished children for transport or supplementary food. These PBF demand-side incentives, operating through the supply side, are similar to *voucher systems or conditional cash transfers* (CCT). By bundling them on the supply side, administrative costs will be much lower.

3.3.2 Giving market signals to providers to reduce curative care tariffs

Small PBF subsidies for *other curative services* (without externalities) automatically reduce user fee tariffs through market mechanisms. Managers will trade off reducing user fees, which increases service utilization, against increasing public revenues. In the microeconomics module 5 of this manual, it is explained that provider subsidies shift the supply curve for services to the right, thereby reducing the equilibrium price.

3.3.3 Providing an equity bonus to vulnerable regions or districts

Regional or district bonuses of 10-40% on top of the basic subsidies may correct differences between poor and rich districts, between closed and remote areas, and between difficult-to-reach areas.

The selection criteria may include the following:

1. The density of the population per km²: Denser => lower subsidies;
2. Number of trained staff per 1000 population: More personnel => lower subsidies;
3. Poverty Score: More poverty => more subsidies;
4. Number of travel hours from the capital to the health district: More hours => more subsidies
5. District with minority population: More minorities, displaced persons, pygmies, etc. => higher equity bonus
6. Safety factors: Less security => more subsidies.

These criteria are usually evaluated centrally during program costing. Yet, districts will contribute information and "negotiate" their degree of vulnerability.

3.3.4 Providing extra subsidies to vulnerable health facilities

Provide health structures with equity bonuses of -20%, -10%, 0%, + 10%, or + 20%. This addresses disparities between advantaged and disadvantaged health facilities within the same district. For example, if the inter-district vulnerability is in the 30% category, intra-district health facility vulnerability options will be 10%, 20%, 30%, 40%, or 50%. The average bonus for all health facilities in the district must remain 30%.

The District Health Management team, together with the Regional Health Authorities and the CDV Agencies, can determine health facility bonuses during, for example, District Validation meetings. The process of scoring is qualitative. Those responsible for the structures can contribute information and "negotiate" their equity bonus category. Assess each health facility's vulnerability score once per year because the scores (and criteria) can change over time.

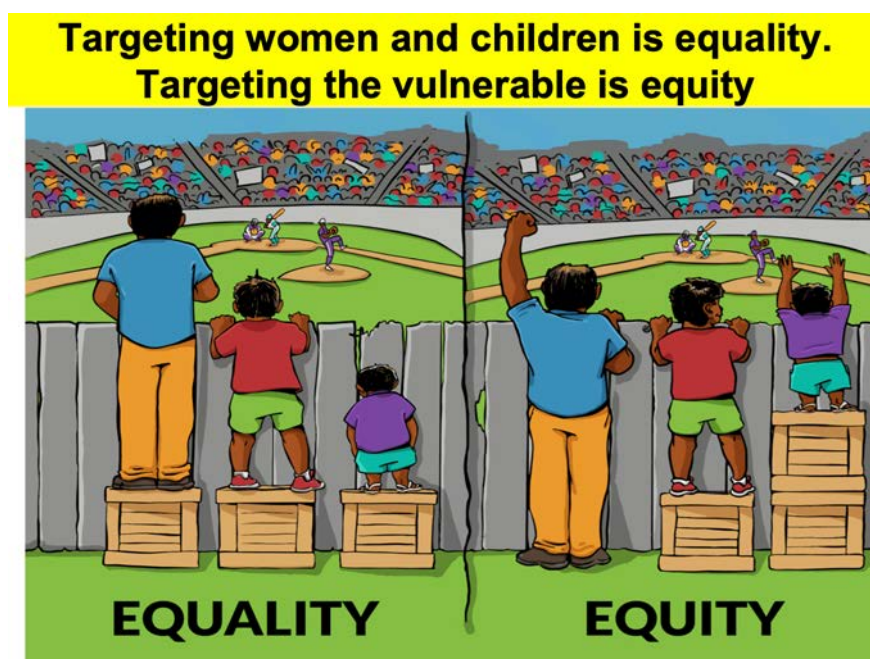
The criteria, justifications, and indicators of vulnerability may be as follows:

	<i>Intra district criteria</i>	Justification	Indicator
1	Number of qualified staff	A facility with fewer qualified staff => more bonus	Qualified personnel per 1000 inhabitants
2	Population density in the catchment area	A facility with a low population density has more problems reaching the population => more bonuses	Inhabitants / km ²
3	State of the infrastructure and equipment	A facility with an obsolete building or missing or old equipment must do investments => more bonus	Good / More or less good / bad condition
4	Distance, road condition and duration of travel to district	Long distance to HF with long travel time increases the cost of transport => more bonus	Travel time per car or motorcycle
5	Support of financial partners	A facility without other partners => more bonus	3 or more / 1-2 / 0 partner
6	Security risks	Structure with security risks => more bonus	No risks / sometimes / severe risks
7	District with large proportion of minorities	More minorities (displaced persons, pygmies, etc → higher bonus	Yes / Some / None,

The following table shows an example of facility-related bonuses:

Indicators	Basic Subsidy	Urban Centre	HC at 5-10 km	Isolated HC	HC isolated with poor community	HC isolated, poor population and bad infrastructure
Facility related bonus		0%	10%	20%	30%	40%
Delivery	\$ 5.00	\$ 5.00	\$ 5.50	\$ 6.00	\$ 6.50	\$ 7.00
External Consultancy	\$ 0,30	\$ 0,30	\$ 0.33	\$ 0.36	\$ 0.39	\$ 0.42
Ext Consultancy vulnerable	\$ 1.20	\$ 1.20	\$ 1.30	\$ 1.45	\$ 1.60	\$ 1.70
Family planning contact	\$ 1.50	\$ 1.50	\$ 1.65	\$ 1.80	\$ 1.95	\$ 2.10

3.3.5 Exempting the individual vulnerable



A fifth mechanism to assist the poor is to introduce a two-level *subsidy system for each curative indicator* or service. A lower subsidy will be paid to patients who can afford to pay user fees, and a higher fee will be paid to the provider in exchange for fee exemptions for needy patients unable to pay. For example, if we pay \$0.30 for an outpatient consultation for those who can afford it, we may pay \$1.20 for a financially vulnerable patient. For this to work, the government may allow each health facility to exempt up to, e.g., 5%, 15%, or 25% of all patients, depending on the country's inequality and poverty levels. And for these vulnerable patients, the health facility receives, for example, a four times higher subsidy in exchange. Each month, the CDV Agency verification officers check how many patients were exempted and reimburse the health facility through the monthly invoice.

Yet, *prompt payment of subsidies* is important because facilities must pre-finance support for the vulnerable. This equity strategy of targeting *financially* vulnerable people is different from targeting physically vulnerable groups like women or small children, who are not necessarily financially vulnerable. The latter can be considered as equality. In this strategy, the government spends public money on groups that do not necessarily need financial support, making the approach less efficient.

3.3.6 How to identify the vulnerable?

How do (health) facilities develop strategies to identify the vulnerable in their catchment areas? The strategies are different. In health : (1) in rural areas where one may work with village committees; (2) in faith-based facilities, the institution may already have a mechanism for identifying the vulnerable; (3) in urban facilities, staff may identify those vulnerable patients who may simply not be able to pay their bill.

The main methods used to identify the poor for inclusion into social programs are:

- *Proxy means testing*, which involves constructing a score for each household based on a small number of easily observable characteristics or assets. This approach can be very accurate, but also typically requires high levels of literacy and is administratively demanding, as it requires visits to all households in the health centre catchment area.
- *Community targeting of the poor* involves a village committee or community group that decides who in the community should be considered poor. This approach draws on local knowledge of individual circumstances, allows local definition of need, and shifts the cost of identifying beneficiaries from the program to the community. However, local personnel may also have motives other than accurately identifying program beneficiaries, which could maintain or exacerbate patterns of social exclusion.
- Allowing health facilities to identify « *circumstantially vulnerable patients* ». This means that patients will be exempted from payment, and the decision lies with the health facilities for road traffic accident patients with no means, vulnerable patients from outside the catchment area, seasonal workers, internally displaced people, etc.

3.3.7 Example of an operational manual for targeting the vulnerable from DR of Congo

In this paragraph, we propose a text (inspired by the DRC) that can serve as an example for a national PBF manual on identifying the vulnerable in society. This text needs to be adapted to each country's specific local conditions.

The DRC PBF program allows health facilities to exempt up to 10% of curative consultations with seven indicators, which the PBF program will reimburse. These are: « consultation of a vulnerable patient », « admission day of a vulnerable patient », « minor surgery of a vulnerable patient », « normal childbirth of a vulnerable patient », « difficult childbirth of a vulnerable patient », « cesarean section delivery of a vulnerable patient », « major surgery of a vulnerable patient ».

Under the following conditions, the health facility receives a 4-times higher reimbursement for vulnerable patients compared to those patients who contribute user fees:

1. The patient is very poor or became poor by circumstance;
2. The total number per month is limited to 10% of the total consultations during the past month;
3. There is a functional Committee for the Vulnerable that supervises the correct identification of the poorest patients;
4. The health facility offers the same quality of care to these vulnerable patients as to any other patient;

The providers may constitute a Committee for the Vulnerable with the following tasks:

- Ensure that exemptions are used only for the poorest of the poor;
- Raise awareness among the local community about this mechanism for assisting the vulnerable;
- Meet at least once a month to review and approve applications for entry into the “vulnerable patient” register. Minutes shall be recorded in a register and signed by the participants and dated;
- Solve any problems that may occur with this assistance mechanism.

3.3.8 Proxy means testing tool. Example from Kenya

This tool must be adapted to the local situation, and instructions may allow a maximum of 10% of all patients to be exempted from fee payment (see paragraph 3.3.5). The district- and provider-specific vulnerability is already considered based on other criteria (see paragraphs 3.3.3 and 3.3.4).

Means testing criteria: Level 1 (very poor) =1; Level 2 (poor) = 2; Level 3 (less poor) = 3		Score
<i>Score each indicator in the tool and finally add together the total points scored for all the indicators to determine the overall poverty grade.</i>		<i>Circle correct answer</i>
1. Type of house: - Mud house, tin roof = level 1 - Mud house, iron sheet (mabati) roof = level 2 - Brick house, plastered walls, cemented foundation = level 3		1 / 2 / 3
2. Access to health services (previous births / cost of facility) - Herbalists, TBAs = level 1 - Public hospital = level 2 - Private hospital or clinic = level 3		1 / 2 / 3
3. Water (for drinking water / cleaning water / water storage) obtained (or bought) from: - River or other untreated source = level 1 - Community tap = level 2 - Private water tap = level 3		1 / 2 / 3
4. Fuel for cooking - Firewood collected by household and insufficient = level 1 - Mixture of bought firewood and charcoal = level 2 - Charcoal or kerosene = level 3		1 / 2 / 3
5. Land ownership (nbr. of families sharing/ activities undertaken / livestock) - Rental or squatting = level 1 - More than 1/8 acre, less than 1 acre = level 2 - 1 acre or more = level 3		1 / 2 / 3

6. Sanitation (wall structure: polythene / sack, mud, wood, stone) - Bush = level 1 - Share pit latrine with other households = level 2 - Private pit latrine = level 3	1 / 2 / 3
7. Daily income of interviewee / spouse (job security / occupation / educational background) - Less than USD 1 = level 1 - Between USD 1 and USD 2 = level 2 - USD 2 or more = level 3	1 / 2 / 3
8. Average number of meals per day (type or frequency of quality food / food stock) - 1 meal or less = level 1 - More than 1 meal, less than 3 meals = level 2 - 3 meals or more = level 3	1 / 2 / 3
Overall Score Rating: Very poor 8-13; Poor 14-18; Less poor 19-24 Potential households for exemption 8-13 points YES / NO	Total Score ...

3.3.9 PBF response in the event of natural or humanitarian emergencies

During a natural or humanitarian crisis, the provider may be authorized to exempt affected or displaced persons from paying fees. The proportion of exempted patients may increase from the standard 10% or 25% to, for example, 50% or even 100%.

The PBF program then reimburses the costs by paying four times the subsidy for a vulnerable person compared to a fee-paying patient. With that money, local provider managers decide how best to use it. PBF emergency response has been shown to be far more efficient than the alternative of international organizations taking over the response, which is also unsustainable. For more details, see module 16.

As part of the PBF crisis response, the district validation committee can decide which health facilities will be exempted from cost recovery and to what extent. The National PBF Unit can review the district validation committee's decisions and is also responsible for defining the criteria used to determine (and declare) a health area as a crisis zone. Furthermore, the PBF Unit calculates the regional budget for the MPA (Minimum Package of Activities) and CPA (Complementary Package of Activities) quarterly in advance, ensuring the available PBF budget is not overspent. In the event of a severe and widespread crisis, the CTN-FBP must also plan for a budget increase to pay invoices during the crisis.

3.4 Terms of reference for the field visit

Participants are divided into groups of 4-5 persons. They can visit the following structures: a school, a district hospital, a government health center, a religious health center, a private clinic, and a health or education district. They discuss with representatives of the various stakeholders. After the tour, the group members discuss the impressions of the visit. Participants analyze the data they collected and compare it with standards, such as the optimal number of qualified staff per thousand inhabitants or the USD revenue per person per year target for the target area, to ensure quality care.

Teams may pose the following interview questions:

- Do (health) providers receive their inputs such as drugs or equipment in kind from outside? Which ones? Who is distributing them?
- Do the providers have autonomous management, such as buying their own inputs, hiring staff, and setting tariffs for cost recovery?
- What are the funding sources for the providers? Are they cash payments? What procedures must be followed to obtain the funding?
- How much revenue do providers generate per capita per year from cost sharing, subsidies, government budgets, and salaries paid by the civil service?
The minimum is USD 7 per capita per year for the target population of a health centre and around USD 20 for a hospital.
- Is there a CDV Agency?
- Is there a monopoly for the distribution of inputs such as essential drugs? If so, explain?
- Is there a separation of functions between regulation, the channelling of funds, contract development & verification, service delivery, and the strengthening of the consumer voice?
- Is there a need to apply PBF in other sectors than health (or education)? If so, explain?
- What mechanisms are used to determine patient satisfaction?
- Is there enough qualified staff to provide the full basic package, including household visits following a protocol, nutrition, and HIV /AIDS activities? *Standard: 1 qualified staff member per 1,000 target population.*
- Does the health facility use the indices management tool to pay staff based on various performance criteria, such as responsibility, additional or lost hours, individual performance evaluations, non-private practice agreements, etc.?

4. THEORIES UNDERLYING PBF and GOOD GOVERNANCE

Robert SOETERS, Peter Bob PEERENBOOM, Frank VAN DE LOOIJ

Main messages of this module

- Microeconomics, health economics, and systems analysis are the economic and conceptual pillars of PBF and connect well with decentralizing power to peripheral actors of demand (consumers) and supply (suppliers).
- *Systems analysis* theory is developed to solve complex problems, such as launching a rocket to the moon or achieving sustainable development goals. The problem is broken down into smaller components (or black boxes) that autonomous, specialized entities solve.
- The *public choice* theory describes the behavior of actors in general, and civil servants in particular, and proposes ways to influence that behavior to promote the public interest. Strategies must be found in which the private interest of the civil servant is in line with the public interest. Public choice proposes positive and negative incentives and that perverse incentives must be avoided. More work should result in greater rewards, and 30-40% of remuneration should be variable and paid as PBF performance bonuses.
- *Contract theory* is based on the principal-agent theory. Contract theory implies the need for communication between a principal and an agent to ensure a clear understanding of what the principal asks and the agent's ability to meet those needs. Contracts are always between *two* signatories so that it is clear who is responsible for what service. There are two options for improving the performance of public institutions: 1. Apply private sector management techniques in public structures; 2. Total privatization.
- In *classical contracts*, the future is predictable, and a contract can be imposed. In *relational contracts*, the situation is more diffuse and harder to foresee. In this type of contract, one must have a certain degree of confidence, and there must be flexibility between the principal and the agent. These latter contracts can be formalized in a *memorandum of understanding* and are based on a mutual interest in collaborating.
- In PBF, we often start with a relational contract approach when events are difficult to predict. After learning lessons during the pilot PBF phase, subsequent contracts can become more predictable; thus, over time, contracts can become *more classical than relational*.

Theories linked to PBF

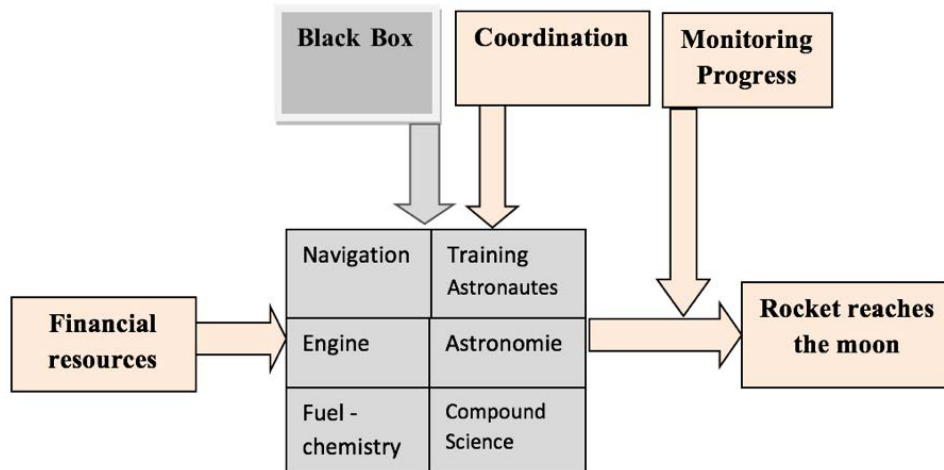
1. Systems Analysis
2. Public Choice
3. Contracting theories
4. Good Governance & Decentralization
5. Microeconomics and free market principles (see chapter 5)
6. Health economics & public health (see chapter 5)

4.1 Systems Analysis

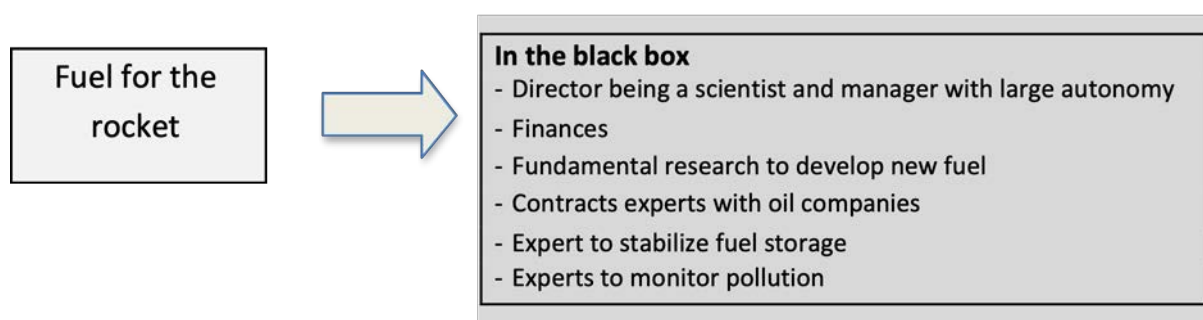
Systems Analysis theory has been developed to understand complex, interactive systems, such as most social and biological systems, as well as concrete physical systems, such as launching a rocket to the moon or constructing a modern airplane. Systems Analysis studies the relations between the different components of a system. The basic idea is that while each component must operate independently and

autonomously (in the “black box”), coordination and monitoring are required to ensure that the system's objectives are indeed achieved.

For example, it is clear that it is virtually impossible for a single person to understand all the details of *how to launch a rocket to the moon* (with all the details of how to construct the engine, what fuel to use, how to navigate, which software to use, how to select and train astronauts. Therefore, managers coordinating such a project need to consider each component independently (i.e., as a black box) and manage it through an autonomous, specialized team.



Consider the fuel component. The fuel needs to have certain characteristics: a certain power, quantity, and price - for the rocket to reach the moon. It should resist very low temperatures in space and relatively high temperatures before launch. For this purpose, autonomous research directed by an expert manager is required: experts in chemistry and physics; negotiations with an oil producer; etc. The coordinator of the entire moon rocket project cannot oversee all these details and processes. Only the fuel manager can understand its operational details. The coordinator of the overall moon project must monitor the fuel department's results, not how they are executed. Therefore, the overall coordinator compares the results against predefined objectives or criteria. For this purpose, the coordinator and the fuel component manager must establish performance contracts.



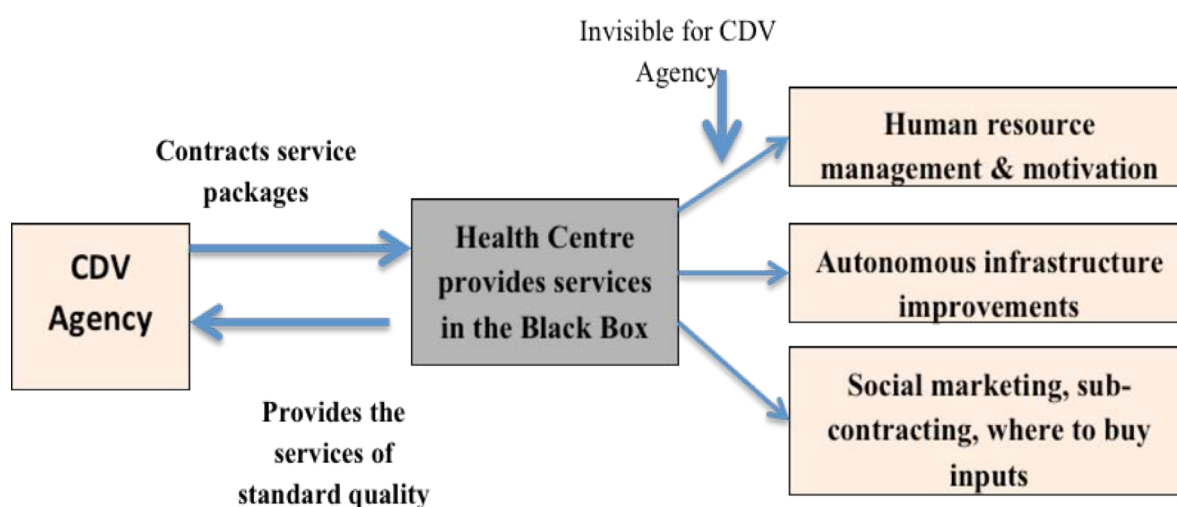
Performance-based financing is based on Systems Analysis theory. Neither decision-makers at the national and peripheral levels nor CDV Agency managers know, or should aim to know, all the details of each provider's management, logistics, and finances. These details differ for each provider and are impossible for a central planner or decision-maker to know. Any attempt to control and harmonize strategies at each facility from above in a hierarchical manner is bound to fail and cause more harm to society than if provider managers were given the freedom to act. In PBF, this is done through performance contracts (comparable to the director producing fuel for the moon rocket project). The

government authorities determine the desired results in terms of outputs, quality, and equity. The providers determine the strategies and make specific local choices on how to achieve those results. In systems analysis, the provider is considered an independent actor of supply, an actor in the ‘black box’. The manager, the facility committee, and the staff control the strategies; they know which inputs they need and where to obtain them. They may develop locally adapted social marketing approaches and make use of opportunities to collaborate with local private providers or other stakeholders in the catchment area.

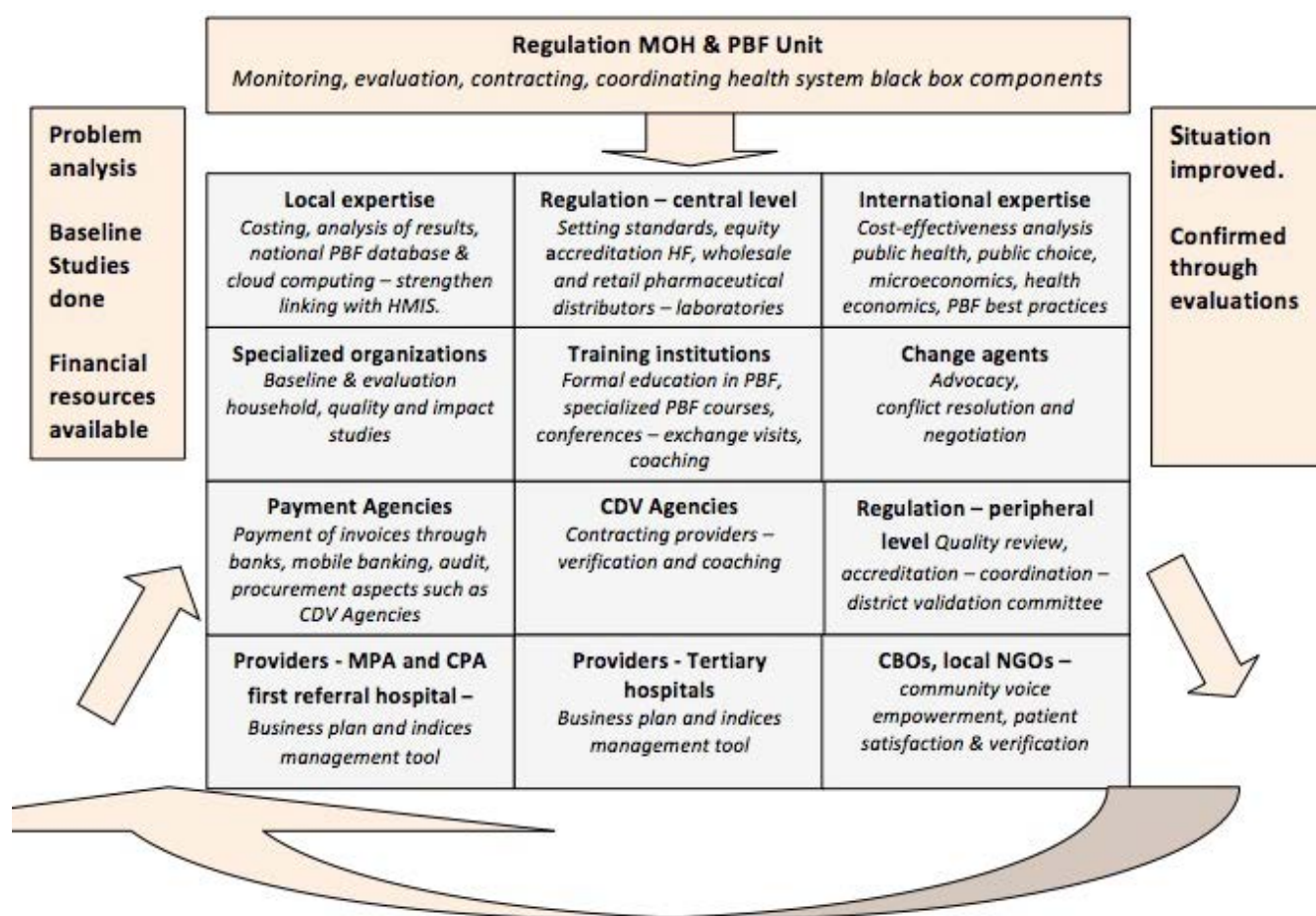
Yet, the ‘black box’ approach does *not* imply that internal procedures of providers should be fuzzy or ambiguous. In PBF, the regulator and the CDV Agency representatives may require facility managers to be transparent in their decision-making. Facility managers should be able to show the three-monthly business plans and the outcome of the monthly internal ‘indices’ management tool. The latter calculates the facility's income and expenditures, and how individual staff performance bonuses were determined. Allowing such autonomous management *with* transparency should be the foundation for facility managers to have decision rights, e.g., to recruit staff or purchase drugs and equipment from accredited distributors *without* continuously consulting higher authorities.

By contrast, in traditional health systems, authorities continuously demand all kinds of information from managers regarding each step of the decision-making process. As a result, such managers become “marionettes” without any power. In PBF, only the results count and not how those results were obtained.

The (health) facility is an autonomous black box or economic actor



PBF equally operates as a system with specific black boxes. The diagram below shows the 12 basic components or modules of the PBF system. The 13th component is the coordination, regulation, or ‘steering wheel’ of the system, which ensures that the 12 basic components are oriented toward improving the health or educational status of the population.



4.2 The motivation of stakeholders and Public Choice Theory

Civil servants are supposed to defend the public interest and maintain social justice, security, and social services. Yet if their private interests are not considered, civil servants may not act in the public interest and may even harm society. In some countries, police officers, health workers, teachers, or authorities are more of a problem than a solution – taking bribes, overprescribing to earn more money, or being constantly absent from duty. It leads to injustice, social unrest, harm to health facilities and schools, and even to failed states. Therefore, it is crucial to find the best way to explain civil servants' behavior.

There are three main theories explaining the behavior of civil servants:

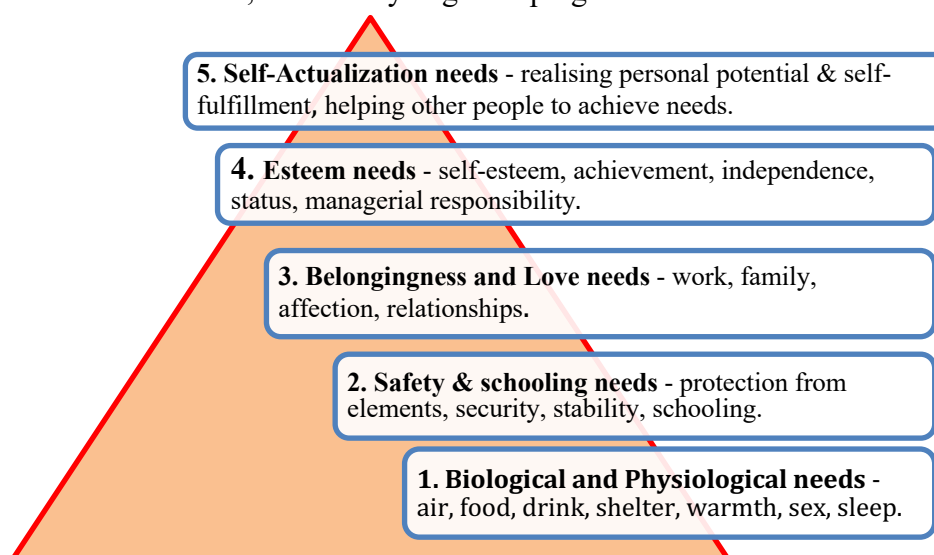
1. **Public interest behavior** theory assumes that civil servants will follow their job description and serve the interests of their patients, pupils, citizens, etc., irrespective of their remuneration or salary. The public-interest view of government sees government as composed of individuals who are motivated by a desire to serve the public by doing what is 'right'. It assumes that the state can identify the public interest and that its civil servants are competent to implement it. In certain countries, civil servants' salaries are high enough to meet basic needs, and it is reasonable to assume they carry out common social tasks without temptation to corruption or self-enrichment. Yet even when basic salaries are reasonable, civil servants may still abuse their power. Moreover, what can be expected from civil servants when their salary is below the subsistence level of USD 100 – 200, insufficient even to satisfy the most basic needs such as food, housing, and sending children to school?

2. **Medical ethics behavior theory.** According to this theory, health workers act in accordance with the Hippocratic Oath. Universities often require students to swear this oath upon graduation. It includes respecting scientific standards and applying all necessary measures for the benefit of the sick, while avoiding overtreatment. It assumes that health workers are sympathetic, respect patients' privacy, and prefer prevention to cure. Yet, while such promises are important, it is questionable whether they are realistic. Some professionals may indeed follow the Oath, but can a whole system be built on this assumption?
3. **Public choice theory.** It is based on the idea that civil servants, or other interest groups, act in their own self-interest, assuming each economic agent aims to maximize private interest. If both suppliers and consumers aim to maximize their own benefit under perfect competition, this will also maximize the public interest by making the most efficient use of limited resources. A similar argument applies to civil servants. Public choice theory rests on the assumption that most actors will act in their private interest. It implies that civil servants will not automatically protect the public interest. The idea is that the private interest (of the civil servant) and the public interest should at least overlap to a certain extent (congruence of goals). It assumes that civil servants are mostly self-interested agents and that public choice studies their interactions in the social system.

PBF's understanding of how civil servants behave is grounded in public choice theory.

It uses modern economic tools to study problems that are traditionally in the domain of political science. It deals with subjects in which *material* interests are assumed to predominate. It aims to explain and thereby influence the likely behavior of politicians and civil servants, such as health workers, teachers, and police officers.

Maslow's hierarchy of needs, which is closely related to public choice theory, further helps us understand individual behavior, as shown in the following diagram. Only when the lower-order needs of physical and emotional well-being are satisfied can one focus on higher-order needs and personal development. The diagram below shows that few civil servants in developing countries have achieved higher levels of self-actualization, where they begin helping others meet their needs.



4.2.1 How to motivate PBF actors in the context of public choice

In PBF, we assume that most civil servants are primarily motivated by their private interests; therefore, we must ensure a link between the public interest and their private interests. If an agent works well for the public service, he must also be well paid. The motivation thus comes mainly from the outside (*extrinsic*). For this purpose, PBF developed positive and negative incentives based on public choice theory and proposes to avoid any form of perverse incentives.

However, does this mean *intrinsic motivation* is unimportant? On the contrary, the PBF system must also create an atmosphere in which those who do well for their community feel at ease and will be appreciated. This seems best assured when the system creates an environment in which peers recognize someone who does well.

4.2.2 Positive public choice incentives to motivate workers

1. **First**, it is necessary to reach a **level of remuneration** (including salaries and performance bonuses) that can support a family in **meeting primary necessities** such as food, clothing, housing, and schooling for children. The PBF baseline studies should identify this essential level of remuneration. If the baseline remuneration is below the minimum, the PBF intervention should raise it. For example, in Burundi, the baseline study of the PBF intervention across both health and education found that total remuneration should be tripled relative to the existing government salary.
2. The **second** positive incentive to motivate stakeholders is that the remuneration should not be entirely 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 preferred proportion of salaries versus bonuses is around 60% fixed salary and some 40% in performance bonuses. Yet this may vary depending on how far salaries are above or below the cost of living. For example, in DRC, salaries are so low that bonuses must be more than 40% of total remuneration, whereas in Ghana and Zambia, salaries are already rather high, so the proportion for performance bonuses may be lower than 40%.
3. The **third** positive incentive is an administrative and political atmosphere of transparency and support for checks and balances. It is also important to align objectives between principals and agents, or administrations and providers, once each actor understands that everyone is aiming for the same objectives within a shared vision. Facilities may aim to create an atmosphere among their workers of shared goals and a sense of being part of a ‘family’.

4.2.3 Negative public choice incentives

1. **Reducing staff incentives.** When facilities pay performance bonuses, they may withhold them if staff members do not follow their job descriptions or fail to complete predetermined tasks. Even small deductions from performance bonuses can serve as a strong “stick” to prevent undesirable behavior.
2. **Non-renewal of facility contracts.** When facility performance is reasonable, contracts will be renewed without issue. When there are minor problems, the CDV Agency may delay approval of the business plan (and the contract) until the facility prepares a new, more convincing one. When the health facility's performance is so poor that it is unlikely to achieve targets, the contract may be terminated, and a new facility or management team may be invited to propose a business plan for the target area.

3. **Administrative measures.** When workers behave unethically, management should issue instructions to correct the behavior. More severe events may lead to suspension or even dismissal. In the private sector, this is usually effective. When it concerns government workers, administrative procedures tend to be complex and often highly bureaucratic, so taking administrative measures can be cumbersome. Yet, if they work, existing administrative human resources procedures in the public sector may remain important.

4.2.4 Avoid perverse incentives

Too-high (perverse) incentives above cost price, for example for cesarean sections, will create supplier-induced demand or provider moral hazard. Hospitals will respond by maximizing profits and performing unnecessary interventions. One should also avoid perverse incentives by reimbursing above cost for curative care activities, for example, in free health care schemes. One may propose provider subsidies for free health care services for vulnerable patients at 60-80% of cost. This would avoid moral hazard and be just enough for providers to accept targeted free health care exemptions.

4.3 New public management and contract theory

New public management is a theoretical framework that introduces market-based managerial approaches to the public sector to improve the efficiency of public services (Craig and Porter 2006). Contract theory is one important component of the New Public Management approach of the 1980s and 1990s (Dunleavy and Hood 1994).

In the new public management theory, there are only two realistic options for improving the performance of government (health) structures:

- a. Apply the same management principles from the private sector also in public structures or
- b. Completely privatize the public sector.

Privatization in health markets in Africa is rarely implemented by design. Yet it often occurs in urban areas, where private-sector investors respond to demand for health services created by populations in fast-expanding cities. The public sector is absent from responding to this demand. In cities such as Douala and Brazzaville, mapping health facilities in preparation for PBF interventions found that over 80% of facilities were private. Most were licensed by the government, but some operated without a license. This is not planned privatization but rather *de facto* privatization.

Contract theory is based on principal-agent theory, which reflects the purchaser-provider split, where the contract is the tool that binds the relationship. Essentially, contracts require communication between an agent and a principal to ensure a clear understanding of the principal's needs and the agent's ability to meet them competently. To avoid misunderstandings between the agent and the principal, contracts should be signed between two entities – the contract must be *bilateral*.

Contract theory helps focus on results and overcome constraints that prevent governments from using their resources effectively. It aims at making use of the comparative advantages of private and public providers. It introduces competition (through bidding) to increase the effectiveness and efficiency of services (Batley and Larbi 2004; Loevinsohn and Harding 2005a). It may also aim to increase equity in consumer access to services. Moreover, the regulator must aim to create, as much as possible, the conditions of perfect competition. Promoting private sector investment in health services will increase the number of supply actors. Informing patients about health services will reduce the risk of supplier-induced demand, and informing the community about the quality scores of health facilities will reduce

poor service. Setting standards, conducting quality evaluations, and accreditation further improve the conditions for perfect competition in the health services market.

To prevent unfair advantages in the transaction, the principal needs to make extra efforts, such as collecting all relevant information before contract negotiations and strictly monitoring the processes. These activities incur transaction costs. This is also true in PBF, where specialized contract development and verification agencies must be established. To enforce compliance, contracts need to specify payment terms tied to desired outputs and stipulate sanctions for poor results (Duran, Sheiman et al. 2005).

Strict contract monitoring is essential to enforce desired outputs and provide warnings when problems arise or when gaming is suspected (e.g., faking numbers, misreporting). As services or products become more complex, contracts must be more detailed and monitoring more intensive, which adds cost (Forder, Robinson et al. 2005).

Contracting may also have weaknesses. When judging efficiency, transaction costs (which are sometimes hidden and can be expensive) must be considered (Guinness 2011). Transaction costs in developing PBF systems can reach up to 30%, but with economies of scale from a national rollout, they can fall to around 20%.

The contractual approach may not improve efficiency in settings where only a few contractors compete. Because management capacity in low-income countries may be limited, some researchers argue that contracting practices are risky (Eldridge and Palmer 2009). Even so, most researchers maintain that contracting under the performance-based financing (PBF) approach is more flexible and practical and helps diminish systemic challenges (Macqa and Chiema 2011). Setting detailed rules helps avoid conflicts and supports successful contracting (Kadai, Sall et al., 2006).

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

A valid contract must fulfill the following conditions: (a) the existence of free and informed consent by both parties; (b) partners having a legal status; (c) the absence in the contract of anything that can incite illegal behavior; (d) the contract objectives and targets must be clear and verifiable.

The elements of a contractual arrangement are: (a) a voluntary alliance between independent partners, with mutual rights and responsibilities; and the partners expect benefits from their relation; (b) the benefits of the contract are not altruistic; both parties aim to benefit from the arrangement.

When all economic actors in the process function with a high level of competency, the resulting arrangement is likely to be mutually satisfying.

4.3.1 Classical contracts

A **classical contract** is characterized by a clear contract objective; the contract is limited in time; the partners know exactly the “what, when and how” of the contract; “the future is foreseeable”; the contract is opposable in the legal sense and usually developed by a call for tenders and accompanied by detailed specifications or terms of reference. Examples of classical contracts include building a home or contracting for laundry or security services at a hospital. In PBF, certain contractual relationships can be explained by classical contract theory, such as the services a health center provides and that the CDV Agency verifies. The services have SMART indicators; the subsidies are clear, as are the sanctions for

cheating. Fraud or unacceptable, poor-quality services may be punished by withholding payment or even canceling the contract.

4.3.2 Relational contracts

Health or educational services are often complex, and predicting the future can be difficult (Perrot 2006, 2012). Unexpected events can occur - such as epidemics, unstable revenues, wars, bad harvests – which can influence the purchasing power of patients. Thus, the partners have **limited rationality**, yet they share an interest in entering a contractual relationship. These less rigid contracts, based more on trust than certainty, are called **relational contracts**.

Contracts between a government and an aid agency or an international NGO are often more open about expected results and the realities that may change. Partners cannot objectively set the contract duration; it must be determined through partnership and interdependence. It requires mutual trust and flexibility in the event of unexpected events. It is difficult to go to court, especially because the contract is established within a partnership framework.

4.3.3 From relational to classical contracts

In PBF, we apply a relational contract approach when events are difficult to foresee, such as during the pilot phase of a new PBF program. A government may request a large NGO with PBF experience to assist with PBF development. This phase requires testing new ideas and making design changes as lessons are learned. It requires action research to develop the best possible strategies to achieve social aims, which in turn requires mutual trust. The contractual relationship may be set out in a memorandum of understanding, which explains that the objectives may change during the contract period. After such an initial phase, in which PBF pilot lessons are learned, the next steps may become more predictable; and thus, with time, contracts may become more classical than relational.

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4.5 Micro-economics and free market principles

Most countries around the world have adopted the free-market economy as the best approach to allocating scarce resources. In principle, a free-market economy is associated with societies that accept democracy, seek partnerships with the private sector, promote free patient choice of facilities, and encourage competition among providers for patients or pupils in schools. Yet, in some countries, decision-makers argue that free-market principles should not be applied because the market fails to achieve social objectives so massive that systems should be based on central command and control. Is this indeed better? In this book, we present arguments for why we still believe free-market principles should be used, but that market failures should be taken seriously and addressed. We argue that market failures can also be corrected by applying market-economy techniques.

4.6 Health Economics and Public Health

Health economics

Health economics is the discipline through which to understand health care markets, with their rules of supply, demand, and equilibrium, to identify market failures, and to introduce mechanisms to correct those failures by applying market-oriented techniques (see chapter 5).

Public health

Public health is another important discipline for PBF, as it helps determine cost-effective interventions, as specified in minimum health packages at the primary level and hospital packages. In this book, we do not go into detail on public health because our course participants are assumed to already have sufficient public health knowledge.

4.7 Decentralization

Decentralization is the transfer of responsibility from the state to local authorities or public institutions. In PBF, **decentralization** matters because it lets local decision-makers and stakeholders influence services more effectively and efficiently, enhancing empowerment.

The levels of decentralization are:

- a) **Deconcentration.** This is the first step of moving away from a centralized command-and-control decision-making system. It provides some powers to delegated local authorities to implement national policies. However, they do not have the power to change national procedures or instructions. It is described as a form of decentralization whereby local authorities function as the 'marionettes' of national decision makers.
- b) **Administrative geographic decentralisation** allows the transfer of responsibilities and decision-making powers to peripheral authorities. This may include decisions on changes in the package or with whom to contract services. This is particularly important in large countries such as DR of Congo, Nigeria or Indonesia where provinces and districts greatly differ.
- c) **Autonomous facility management** aims at giving legal autonomy to facilities. This may also apply to government-owned facilities, where the government retains ownership but management has

autonomy over staff recruitment (hiring and firing), resource use, and the establishment of user-fee tariffs. This form of decentralization is often applied in performance-based financing.

- d) The most advanced form of decentralization is **full privatization** with the transfer of public assets to the private sector. In privatized systems (for example, in the Netherlands), the government acts as a market regulator, assures financing for services through general taxes, and regulates the health insurance system. This is probably the most desirable form of decentralization, but in many countries, it may not be politically feasible.

4.8 Good Governance

Worldwide, “good governance” is widely debated, and people argue over what the term entails. The World Bank has adopted a definition of good governance that underscores the importance of: (a) sound public sector management (efficiency and effectiveness); (b) accountability; (c) exchange and free flow of information (transparency); and (d) a legal framework that enhances development, justice, and respect for human rights and liberties.

Governance involves authority (the right to command obedience) and power (the ability to exercise that authority). *Good* governance implies that no single individual or group should exercise all authority and power, but that a proper division and balance of power should be established.

Examples of such a division of power are:

- In the **political domain**: the *legislator/regulator* (the National Assembly), the *executive* (the Government), the *judicial system*, and the *free press*.
- In **financial management**: the *manager*, the *accountant*, and the *cashier*.
- In PBF, these concepts of good governance have been translated into separation of functions, enhanced transparency, a stronger voice for consumers, and accountability for results among the various actors. PBF separates the following functions: (1) the regulator; (2) the contracting, development, and verification agency; (3) health or education service providers; (4) the payment agency; and (5) the consumer.

To ensure stability, the division of power must be equilateral among the actors. These actors should have checks and balances, and their responsibilities should be clearly defined.

In other chapters of this book, we discuss several individual governance structures in greater detail. The governance and regulation function is described in Module 6. Module 7 covers contracting and verification in more detail. For customer satisfaction surveys and strengthening the voice of the population, see Module 8. Other modules describe the providers' roles.

5. MICRO-ECONOMICS and HEALTH ECONOMICS

Pacifique MUSHAGULUSA, Didier NTIRORANYA, Harmelle ENAME, Silvain MUNYANGA

5.1 MICRO-ECONOMICS

Main messages of this module

- Monopolies are usually undesirable and harmful to society. They lead to inefficient use of scarce public resources, poor-quality services, and excessively high commodity prices. **Government intervention** is necessary to correct abuses by a monopolist or a cartel, with the aim of improving market efficiency and price-quality ratios.
- Society distributes scarce resources best when economic actors of demand (consumers, patients) and supply (health facilities, schools) have decision rights rather than central planners.
- A PBF expert should be guided by *positive economics* to predict the future based on tested facts and advise accordingly. When reviewing political, *normative economic* decisions, the expert must assess the consequences using positive economic analysis.
- A PBF expert should always ask the question: “Is there another way of doing things more efficiently?” and, to that end, apply *opportunity cost analysis*.
- All health systems, including PBF, share the goal of improving financial access for the vulnerable. However, to achieve this goal, it is *unwise for a government or local authority to set nominal user fees* in health facilities without a well-developed mechanism to compensate for lost revenue from cost sharing. Setting price ceilings, such as in generalized free health care policies, usually has more negative than positive effects. “The invisible hand of Adam Smith will slap”.
- In PBF, autonomous providers should be free to set prices. Yet, the regulator may influence the market price through subsidies, taxes, and public information.

An economist can influence market prices using subsidies and taxes. *Examples:*

1. Subsidies for curative care in a health facility => This moves the supply curve to the right. This automatically lowers the equilibrium price and increases quantity demanded.
2. Taxes on, for example, alcohol or cigarettes => This shifts the supply curve leftward. This will automatically increase the equilibrium price, thereby reducing demand.

5.1.1 Some concepts and definitions in economics

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

Microeconomics = the study of economic exchanges of individual decision-making units. These include individual consumers (demand) and companies that produce goods or services (supply).

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

Fundamental concepts in economics:

- **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 institution, such as a health center or hospital, which constitutes a center of economic decision (*to buy or sell or not to buy or sell*).
- **Economic Act:** actions undertaken by economic agents
- **Economic system:** concerns resource allocation and decision-making procedures.

Although economic science can contribute theoretically tested, factual knowledge about a particular issue (**positive economics** = *what is or what was*), the final decision on policy questions often rests on social values and ethical opinions, on which people may differ (**normative economics** = *what should be*). Ideally, such political normative decisions are made through a democratic process supported by evidence accessible to the electorate. Economists use tested economic theories and models to foresee the likely future consequences, including the cost and efficiency, of those normative decisions.

In economics, we typically identify the following economic resources:

(a) Capital; (b) Human resources; (c) Organization; and (d) Innovation/entrepreneurship. The last resource was often overlooked in the past.

5.1.2 The economist toolbox

An economist has a range of useful tools – the economic toolbox:

- **Historical analysis.** This is often done using statistics to infer causality. *‘It is necessary to study the present, in the light of the past, to forecast the future.’*
- **Economic modeling.** These are simplified versions of some aspect of the economy. Economic models are often expressed in equations, by graphs, or in words. They are based on abstraction, which ignores details so you can focus on the most important elements of the problem.
- **Economic theory.** For a theory, there is scientific evidence. It deliberately simplifies relationships to explain how they work. This is important to deal with possibilities *that have not actually occurred*. For example, to learn how to reduce unemployment, an economic theory investigates the results of a new policy proposal. Scientific organizations such as the National Statistics Bureau (in the Netherlands) or Schools of Health Economics often do this work. Economic theories are the scientific underpinning of PBF.
- **Hypothesis.** This is an untested theory for which there is not (yet) scientific evidence that it is correct, unlike tested economic theories. An example of a 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 a hypothesis must then be tested by intervention–control pre-post studies (see chapter 11).

5.1.3 Scarcity, central planning and the market economy

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.

Broadly speaking, there exist two distribution systems of goods and services:

1. The **free market system**. This is an economic organization in which individual producers and consumers make resource allocation decisions in their own best interests, without central direction.
2. The **central plan economy**. Here, central decision-makers tell people what to produce, how to produce it, and what to consume. The former Soviet Union used this system until 1991. However,

this system collapsed spectacularly, and former socialist countries have worked hard to “marketize” their economies. In addition, China, which is still, in name, a “communist” country, shifted towards a market system. (Elements of) central planning can still be found in North Korea, Cuba, and populist regime countries such as Venezuela.

Why is central planning so difficult? Production processes across industries and consumer preferences are interdependent; the whole economy can be disrupted if production planning is not resolved. Because these production processes are interdependent and require processing a phenomenal amount of data, *centralized planning is almost impossible*.

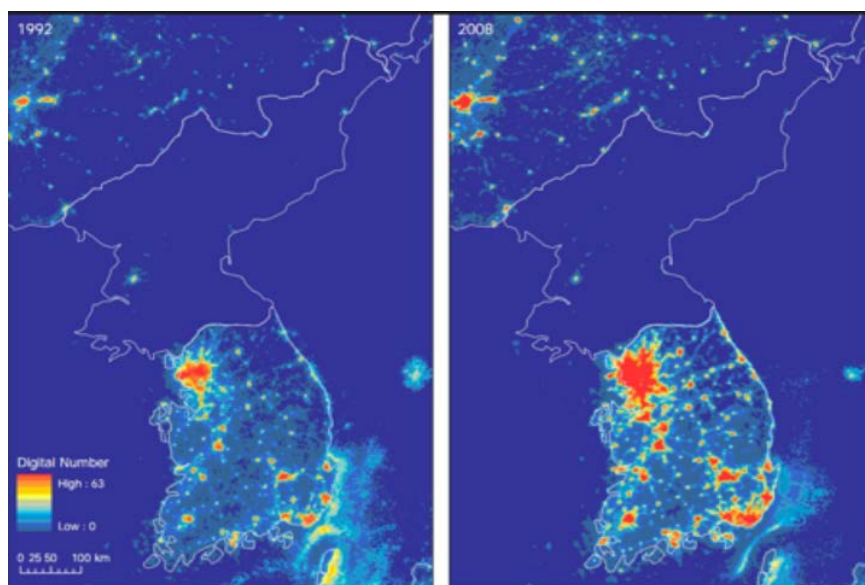


Illustration: The two Koreas: Central Planning (North) and market economy (South) – 1992 et 2008.

The market economy (with freedom for economic actors to set prices at will) solves 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 or protect the environment, and they cannot address all societal goals. It may produce too much or too little of socially desired goods, and actors with superior knowledge may misuse the market to pursue unrealistic profit-making.

One may either defend or attack the capitalist system, but socialists such as Karl Marx also agreed that the market is remarkably efficient in producing and distributing goods. The free economic market system is the superior way to distribute scarce resources, but we should also remember that markets can fail under certain circumstances. 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 behavior such as immunization or accessing family planning), and government regulation (such as for quality assurance in the health market).

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

The power of the market Milton Friedman. <https://youtu.be/R5Gppi-O3a8>

Sub 1: Choices in production: It is the market system that 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 two decisive factors: (a) preferences of the consumers; and (b) relative difficulty to produce the goods (production cost). Price varies so that the quantity produced equals what is needed.

Sub 2: Distribution of resources: Under non-interventionism, the price system allocates energy and other raw materials among industries according to each industry's needs. In a free market, factors of production are allocated to firms that can use them productively. Firms that are unable to make productive use of a factor will be moved aside from the market by the price of this factor (they may go bankrupt).

Sub 3: Distribution of the products to the consumers: The price system fulfils this task by assigning high prices to products in high demand and by leaving consumers free to act according to their own interests, tastes, preferences, as well as their relative incomes.

5.1.4 Opportunity cost

The opportunity cost of any decision is the value of the next-best alternative that the decision forces the decision-maker to forgo (e.g., working at 16 years old or studying to enhance knowledge and earn more later). The real cost of a decision is not the market price of a house or a new computer, or the expenses related to schooling. Instead, it is the value of what you must give up, such as meals at a restaurant, a new office, or a holiday. This opportunity cost refers to all alternatives the individual, firm, or organization must forgo to obtain the desired property. To make logical choices, decision-makers must consider opportunity cost.

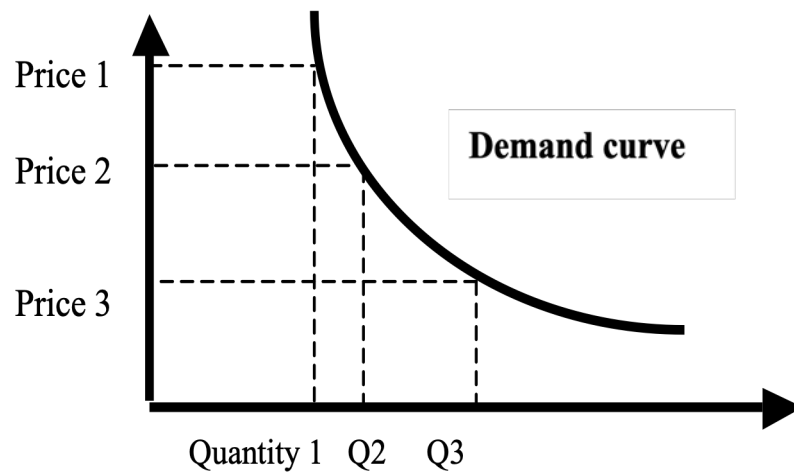
When the market functions poorly (such as when central decision-makers impose market decisions), the opportunity cost is high. This is common in developing countries, where central administrators purchase, pay for, and distribute inputs, such as drugs, on behalf of health facility managers. The opportunity cost is then high because if the same money had been given to health facility managers under a performance contract, allowing them to decide on investments in infrastructure improvements, equipment, and the recruitment of additional staff members, it would have been more cost-effective.

5.1.5 Demand for goods in microeconomics

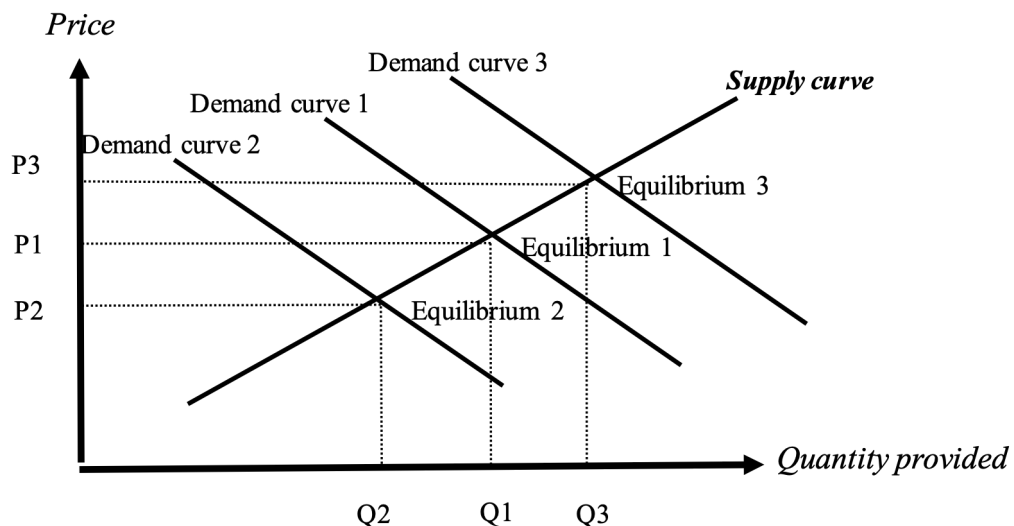
The quantity of goods demanded in an economy depends on various factors:

- 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 of demand states as follows: « *all other things being equal, quantities demanded of a good vary in inverse function of its price* ». The demand curve is descending from the left to the right; its slope is therefore negative since when price reduces, the quantity demanded increases.



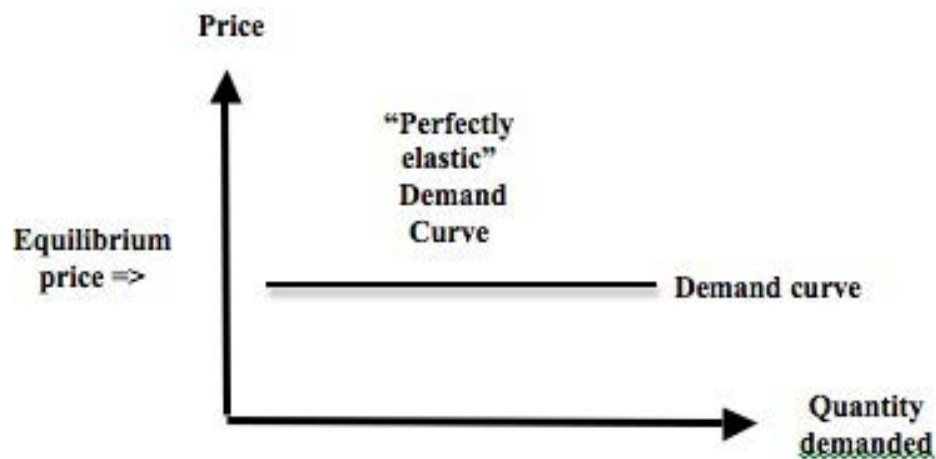
Displacement of the demand curve. A change *in the price* of a given good causes a movement along the demand curve. In contrast, a change in other factors (such as income, population growth, consumer tastes, etc.) that influences demand for this good shift the entire demand curve.



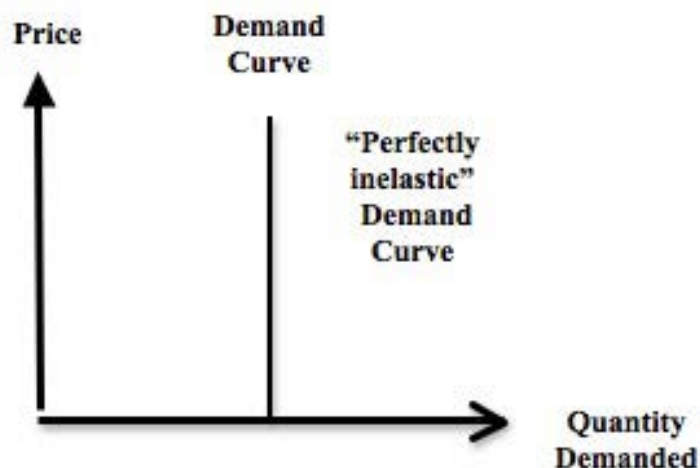
As a result, any factor (population growth, a product that is popular) that causes the displacement of the demand curve towards the right without changing the supply curve causes an increase in the equilibrium price and quantity. Any factor (reduction in household incomes, increased unemployment, political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

5.1.6 Elasticity of demand

The elasticity of demand is very important for (health) facility user fee tariffs. If demand is highly elastic, a given percentage change in price leads to a larger percentage change in quantity demanded. In a perfectly competitive situation, demand may be almost horizontal, also called a “perfectly elastic demand curve.” For example, in a market with many banana sellers and buyers where the price is USD 1 per kg, if a seller raises the price to USD 1.05, demand will drop to zero.



In contrast, when the price is inelastic, a higher tariff will *not* reduce demand much, and the facility can earn large profits (an almost vertical demand curve, or “perfectly inelastic demand curve”). This may be the case when a patient arrives in the hospital with a life-threatening injury. In that case, the hospital might ask for what it wants, and the patient or family will accept the price. To prevent such negative outcomes, the government must insist that prices be advertised in advance, not during the event. The government may also stimulate competition by offering other providers to enter the market - and thereby force prices down.



Elasticity of demand in comparison with the price is the proportion of the increase in attendance (e.g. the number of consultations) divided by the proportion of price reduction. If elasticity is > 1 , the proportion of attendance increases by more than the proportion of the price reduction.

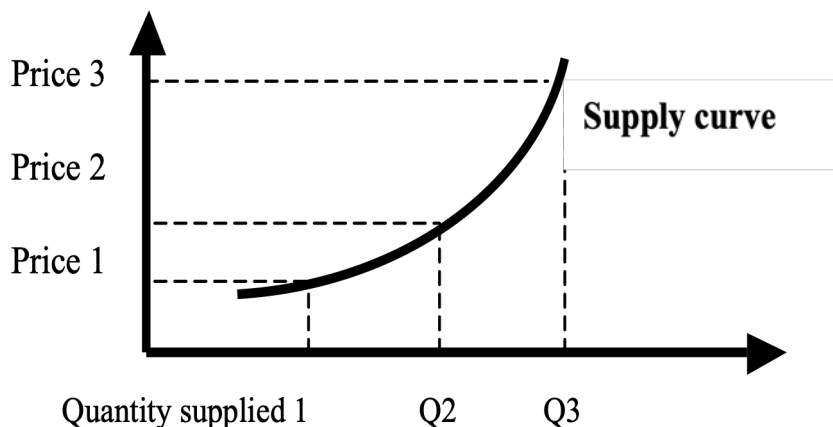
5.1.7 Supply of goods in microeconomics

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

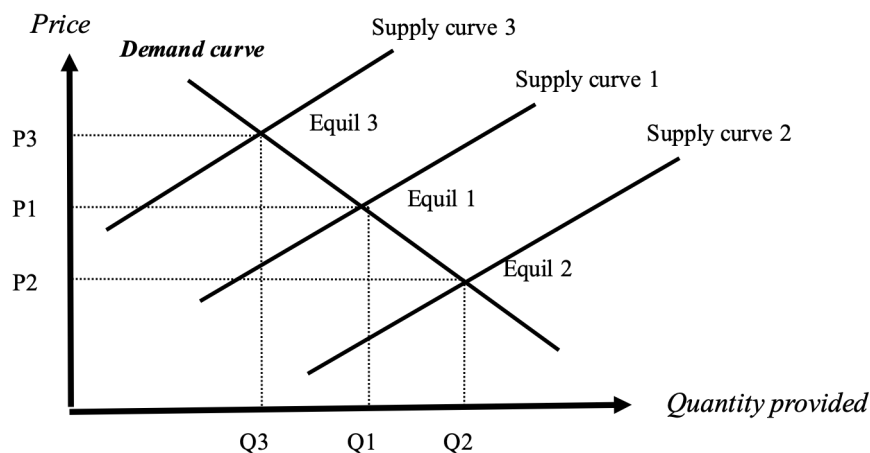
- The *price* of the concerned good
- Size of the industry
- Technologic progress
- Price of production factors
- Price of related products

The Law of Supply

The higher the price of a good, the greater the quantity offered on the market. Therefore, the law of supply states as follows: «*all 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.



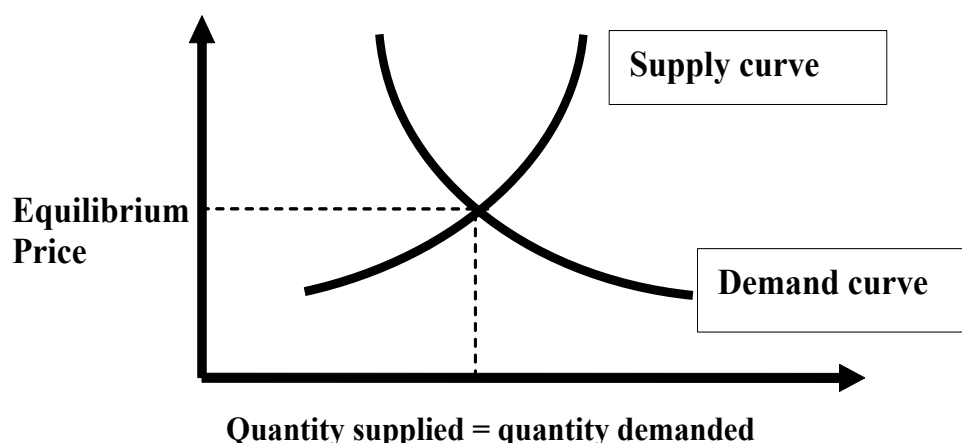
Displacement of the supply curve: A variation in the price of a given good causes a displacement of fixed supply along the supply curve. On the contrary, a variation in one of the other factors (price of production factors, size of industry, progress of technology, etc.), which influences the supply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



As a result, any factor (such as technological progress or increased competition among suppliers) that shifts the supply curve to the right without changing demand lowers the price and increases the equilibrium quantity. Any factor (such as an increase in the price of production factors) that shifts the supply curve leftward without changing the demand curve increases the price and reduces the equilibrium quantity.

5.1.8 Equilibrium in microeconomics

Equilibrium Price: To analyze how the free market determines price, we must compare consumers' desires (demand) with producers' desires (supply) and examine how they interact. In a free market, the intersection of the supply and demand curves determines price and quantity. Equilibrium is reached when no inherent forces produce change. Changes away from an equilibrium position will occur only because of “outside events” that disturb the status quo.



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

5.1.9 Perfect competition

Perfect competition occurs in an industry when it consists of many small firms producing homogeneous products, when there is no impediment to entry or exit, and when full information is available.

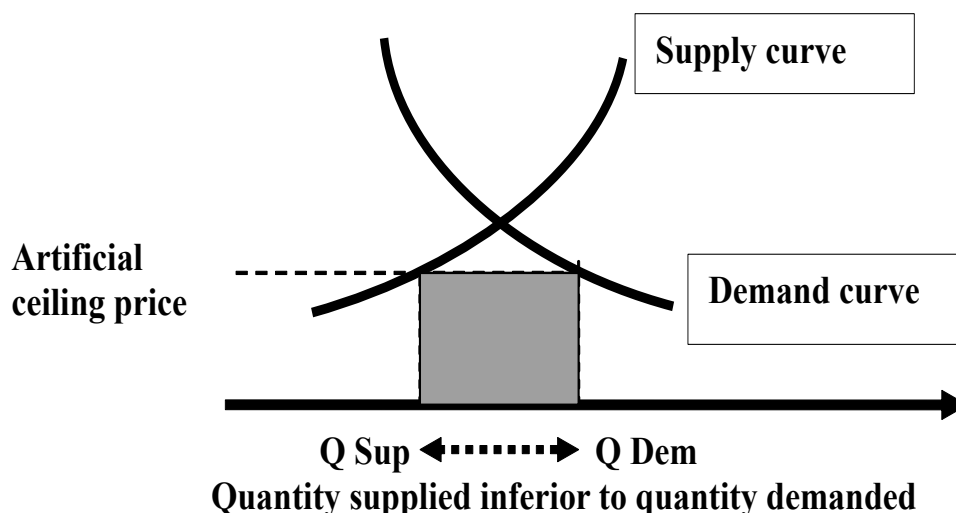
The conditions of perfect competition are:

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

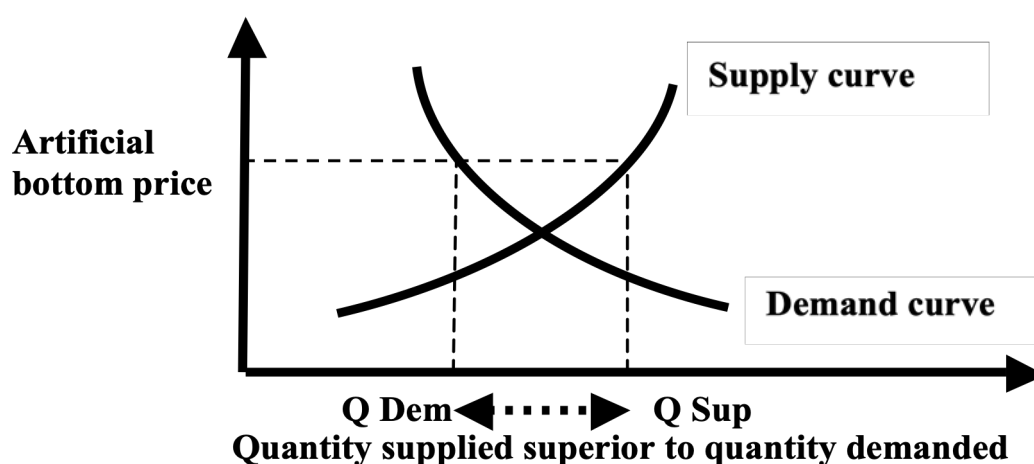
These requirements are not easy to find in practice. The closest examples are African open-air markets selling locally produced vegetables, fruits, or staple foods. Why do we study perfect competition? The answer is that under perfect competition, market mechanisms perform best, enabling firms and consumers to allocate society's scarce resources with maximum efficiency. Government regulators must create as closely as possible, perfect competition conditions by encouraging investment, controlling quality, informing the public, and supporting vulnerable regions, providers, and individuals.

5.1.10 Ceiling and bottom prices and the Invisible Hand of Adam Smith

When a product is *in short supply*, prices tend to rise. Sometimes, angry consumers pressure politicians ‘to regulate’ the problem by establishing a **ceiling price**. This also applies to nominal pricing, or zero-level prices (or free health care), for services.



When a product is *abundant*, for example because of favorable weather, the harvest improves and prices tend to fall. In such cases, producers are discontented and sometimes successfully seek to promote laws that prevent prices from falling below a minimum by setting a *floor or bottom price*.



The above-described 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:

- When a state wishes to protect tenants by setting a ceiling price for rents, the accommodation becomes rare because it is less profitable. Investors will not construct. House owners may not maintain houses or may sell their properties. As a result, tenants have even more difficulty finding accommodation. The state created even larger *shortages*.
- When government fixes a minimum wage (bottom price) to protect the marginal workers, marginal jobs disappear because employers find them too expensive;
- When the government sets bottom prices below market levels for agricultural products such as wheat or milk, *surpluses* pile up in warehouses.

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

In summary, this leads to a situation where *Adam Smith's invisible hand starts slapping*. This produces a chain of consequences, which are:

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

What are the influencing factors of the price for the supply and demand of curative care (OPD consultancies, hospitalizations and deliveries)? *The invisible hand of Adam Smith.*

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

‘The market’ automatically finds the new optimum price for patients and facilities, considering all the complex factors that influence supply and demand. These factors also include how each facility is organized, its managers’ capacities, and personnel motivation.

According to economic theory, central planners cannot know and master all these supply and demand factors. Unfortunately, this is what decision makers often do: They aim to fix ceilings for user fee tariffs for ethical or populist political reasons, and the famous ‘invisible hand’ of Adam Smith will then confront them, mostly at enormous cost to society,

A typical example is **Burundi in 2006-2009**, when the government, for electoral reasons and under pressure from international NGOs and some donor agencies, introduced a poorly designed free health care policy. It immediately reduced revenue for government health facilities, which were not compensated. It created labor unrest, led qualified staff to abandon facilities, and, for the population, meant poor-quality care, long waiting times, and a lack of respect from staff. In 2008, a study found that women in provinces with only a free health care policy paid more for deliveries because the “*invisible hand of Adam Smith*” in health facilities had imposed indirect tariffs on transport and food purchases. Patients also began going to private health facilities that did *not* provide free health care. By 2010, the government then introduced PBF, and several of these negative effects disappeared because PBF subsidies reimbursed health facilities for lost revenues, for example, from free health care for children.

5.1.11 How to use market instruments to enhance social aims

According to market-economy logic, rather than imposing unrealistic prices, governments should use market mechanisms to achieve social objectives.

Examples of market-oriented solutions:

- Services with high *positive externalities* (certain health services, such as immunization or family planning) or *public-goods* characteristics (information on safe sex and hygienic practices) should be subsidized.

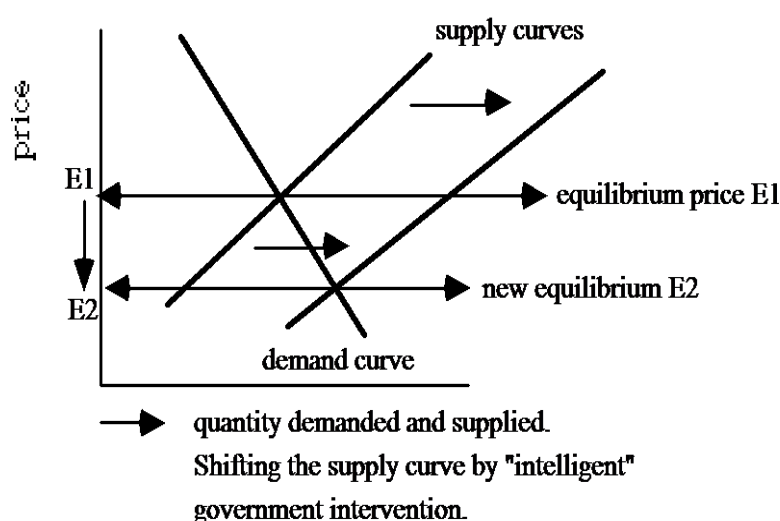
- *Imperfect information* must be countered by information campaigns and, sometimes, regulation to prevent providers offering below-standard care or employing unskilled health workers from entering the market.
- Firms or government departments *seeking to monopolize market share* should be punished, and competitors should be encouraged to enter the market.
- *Moral hazard* implies that insurance fund members, knowing they do not have to pay for services, abuse the system and use it excessively. This can be corrected by co-payments.
- *Adverse selection*, where insurers select only healthy young customers, should be regulated to prevent insurers from denying entry to patients. The best solution is mandatory insurance.

Key notion in PBF => How to influence the user fee tariff of a health facility?

All health systems, including PBF reforms, share the goal of improving financial access for the vulnerable. However, to achieve this goal, it is unwise for a government or local authority to set nominal user fees in health facilities without a well-developed mechanism to compensate for lost revenue from cost sharing. Fixing the price tends to set it below equilibrium (a ceiling price), which the law of supply and demand shows has more negative side effects than benefits to the desired social goals (see above).

An economist can influence market prices using subsidies and taxes. Examples:

1. Subsidies for curative care in a health facility => This moves the supply curve to the right. This will automatically reduce the equilibrium price and increase demand. The subsidy level can be adapted to specific regional, district, or health facility circumstances, but the final direct fee level set by the facility for its patients should be left to the market. An additional subsidy per curative activity (e.g., a delivery or an OPD consultation) may be agreed upon for the vulnerable.
2. Taxes on, for example, alcohol or cigarettes => This shifts the supply curve leftward. This will automatically increase the equilibrium price, thereby reducing demand.



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.

Monopolies are justified only in a few situations, such as *patents*, which allow a company to protect investments made in discovering and testing new drugs.

Monopolies are undesirable and harmful to society. They lead to inefficient use of scarce public resources, poor-quality services, and excessively high commodity prices. Sources of such monopolies include barriers to entry, such as legal restrictions (the drug distribution system in the DRC), control of scarce resources (such as China's control of rare minerals), and technical superiority (SpaceX for rocket launches).

A **cartel** is a situation in which a few organizations in an industry agree on higher prices – they dominate the market. Usually, the law also prohibits this because it reduces society's overall well-being. This is common, for example, in the telecom industry or among large building societies.

Government intervention is necessary to correct abuses by a monopolist or a cartel, with the aim of improving market efficiency and price-quality ratios. Competition lowers prices and raises quality, as suppliers aim to attract customers to make a profit and survive.

A **natural monopoly** refers to an industry or supplier with the advantage of mass production; thus, a single firm can respond to total market demand at a lower cost than several firms or suppliers supplying smaller quantities.

How to deal with natural monopolies: Railways and district hospitals

It is not efficient to construct two railways next to each other, and therefore this is called a natural monopoly – a problem that, for example, does not exist for the airline industry.

Similarly, one may consider a district hospital a natural monopoly because it would be wasteful to build two district hospitals for a population of 100,000 inhabitants next to each other. Therefore, it is not logical to build new railways or hospitals for reasons of natural monopoly.

However, to stimulate competition, it is possible to have several companies operate different train services on the same railway tracks or to change hospital management. Furthermore, the government may also encourage the private sector to open new hospitals that compete with government-managed hospitals but probably regulate their location so that hospitals in one area are not next to each other.

5.2 HEALTH ECONOMICS & PROVIDER PAYMENT SYSTEMS

Main messages of the module

- PBF experts must seek economies of *scale* (to find the right number of the same activity, where marginal cost is near zero) and economies of *scope* (to spread fixed costs across more activities). In practice, this means that primary-level health facilities target around 10,000 people and provide between 25 and 35 main activities to ensure the full package. Avoid vertical program approaches, which cover only part of the minimum or complementary health packages and a limited set of indicators.
- PBF experts should also look for good allocative (making choices among different activities), technical (making choices among different strategies for the same activity), and administrative (avoiding high overhead costs) efficiencies.
- The problem with disease, in the economic sense, is that an individual cannot predict when it will occur. Hence the necessity for social safety nets to prevent death and morbidity when patients do not have money. Yet, most societies lack the resources to set a zero price for all health services, and free health care creates enormous inefficiencies. Therefore, PBF proposes targeting vulnerable geographic areas and vulnerable individuals for public assistance in the event of disease, while also leaving sufficient space for market transactions to ensure the revenues required for quality services. Such market transactions also aim to promote efficiency and contain costs.
- PBF aims to bring together, through contractual arrangements, different provider payment mechanisms, such as fixed salaries, fixed operational budgets, and insurance and user-fee contributions. The remaining variable PBF payments may constitute only 10-30% of total revenues, but are crucial for advancing social aims, improving efficiency, and promoting equity. The PBF subsidies are like the oil in the health system's engine.
- Health insurance systems and direct fee-paying may also provide revenue to health facilities. The obligatory insurance system is more feasible than the voluntary community-based health insurance system ("mutuelle"). Topping up tax-based revenues with contributions from technical and financial partners is highly welcome. By adopting the PBF reform approach, external donor contributions will be more efficient than traditional aid agency systems, which may hamper deeper health reforms, particularly when they replace government contributions and are not directed directly to health providers and communities.

5.2.1 What is health economics?

Health economics is a relatively young discipline. In the 1960s and 1970s, and still during the 1978 Alma-Ata conference on Primary Health Care, there was little attention to scarcity. The paradigm was that "*the sky was the limit*" because health should not be priced.

Medical science also offered less than it does today. It gradually became clear that health costs were rising, forcing decision-makers to review how to use limited resources rationally and efficiently. Rapid technological advances and failure to provide even basic health care in developing countries made these issues undeniable, and this is where health economics came in.

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

Health economics objectives: health economics aims to provide tested theories that lead to best practices for delivering quality, financially accessible health services to all socio-economic groups in society while making the most efficient use of scarce resources.

The macroeconomic perspective: health economics examines the importance of health to a nation's overall economic performance. It answers questions such as what the optimal levels of household and government health care expenditure are as a proportion of the total economy. Health economics principles may also be used to enhance economic growth through multiplier effects and to study how to stabilize each country's demographic situation.

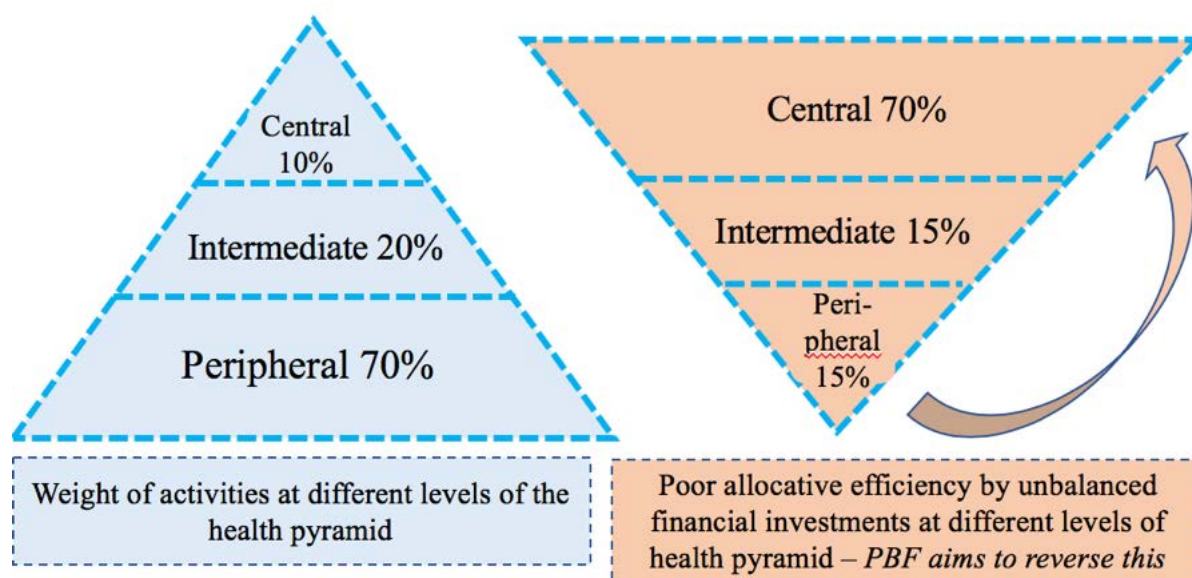
From a microeconomic perspective, health economics enables more efficient use of limited resources. For example: should investment be in primary, secondary, or tertiary care services, and in what proportion? Should investment be in curative or preventive health interventions?

5.2.2 Allocative, technical and administrative efficiency

We identify three types of efficiency:

- a) *Allocative efficiency.* Which health interventions obtain the most health gains: immunization or cardiac surgery? Intuitively, one may already sense that an effective immunization program for children can save more lives for the same amount of money than investing in cardiac surgery. The efficiency ratio may be expressed as the cost per DALY (disability-adjusted life year). Therefore, the cost for one child protected during one year against dying from tetanus, for example, may be \$20, while one elderly person living one year longer due to heart surgery may be \$10,000.

Moreover, allocatively efficient decisions play a large role in health markets, such as investments in primary- or tertiary-level activities. In many countries, governments prioritize tertiary care over primary care. While it is clear that investment at the bottom of the health pyramid is desired, the reality in most low- and middle-income countries is that public money is invested in academic hospitals and that funding for inputs such as medicine, infrastructure rehabilitation, equipment, and means of transport is decided by central ministry of health administrators rather than health providers. This is what we call the inverted financial pyramid, which PBF aims to reverse.



Allocative efficiency also addresses how to allocate resources among *curative care, public health interventions, and preventive care*.

Should public money be invested in *government facilities or private-sector ones*?

Irrational decisions lead to poor allocative efficiency and, therefore, poor returns on (public) investments. The opportunity cost is very high.

- b) *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? Should health activities be delivered through central input financing or through performance financing? A shift from input financing to PBF may make the health activity more technically efficient.
- c) *Administrative efficiency*. This addresses the administrative overhead costs of delivering health services compared with investments in direct service delivery and community health programs. What are the costs of the central Ministry of Health, the regional and district health authorities? What is the cost of setting up the CDV agency, and how can its costs be reduced through economies of scale and scope?

Different types of costs:

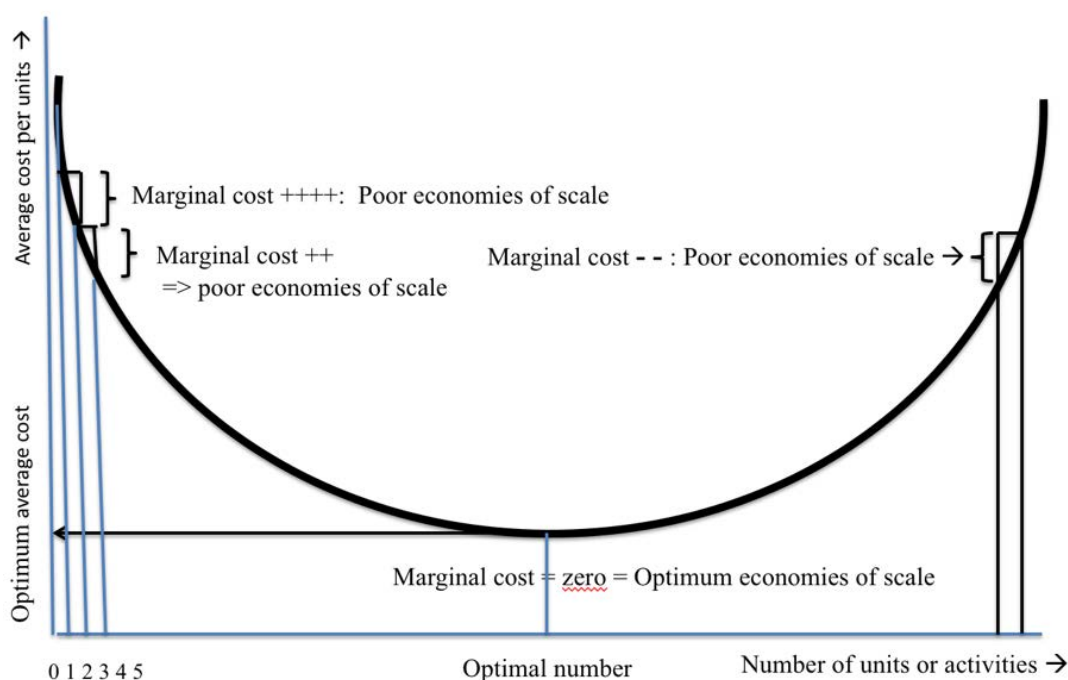
- *Average Cost* = average of monetary values of units.
- *Marginal Cost* = monetary value of an additional unit.

5.2.3 Marginal cost, economies of scale, and economies of scope

When a health center receives only one patient per month, average cost is very high because a single patient must bear all fixed costs (building, staff, transportation, etc.). When the center receives two patients per month, the average cost decreases because the fixed costs are shared between them. The difference between the average cost of one patient and that of two patients represents the *marginal cost*, which is very high in this example (see the following figure). With three patients, the average cost decreases further, and the marginal cost, which remains very high, decreases slightly.

Thus, once 1,000 patients per month are reached, *the marginal cost can be close to zero, and the average cost is at its lowest level*. In this case, we say there are *significant economies of scale* and that the most cost-effective level is reached.

At the other extreme, if there are 1,500 patients per month, the health center becomes very complex (long distances between villages, complex administration, etc.), and the average cost increases. The marginal cost also increases.



Economies of scale are the savings that are obtained through increases in the quantity produced of one good or service. In health systems, we seek economies of scale by rationalizing the number of inhabitants served by a single principal contract holder. Similarly, we seek economies of scale by determining the optimal number of inhabitants a single contract development and verification agency can serve.

Economies of scope are savings obtained through the simultaneous production of multiple goods, also popularly called *economies of the supermarket*. For example, in a supermarket, a client intends to buy bread but also buys shoes on impulse because, while looking for bread, the client sees shoes at a reasonable price.

In health systems, economies of scope are achieved when the same health facility offers the full range of health activities (*horizontal approach*) rather than only a few (*vertical approach*). Thirty years ago, health economists already argued, for the same reasons of economies of scope, that horizontal primary health care systems, which provide all main health services, are preferred to vertical primary health care systems, in which one health facility, for example, provides only reproductive health or HIV/AIDS services.

5.2.4 Demand for health care

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

We may distinguish between three types of needs in the health sector:

- *Patient or consumer felt needs*, which are usually expressed as well. Treating pneumonia is a felt need for the individual and is usually also confirmed by the health provider.
- *Professionally determined needs* are defined by experts or by government but are not necessarily also felt by individual patients or consumers. Poor personal hygiene and sanitation, polluted water, or unsafe sex can be professionally determined problems but are not necessarily also felt by the individuals involved.
- A *non-satisfied* need is felt and expressed by consumers (and professionals) but not satisfied. This may also be referred to as unmet demand for a given health service. Unsatisfied demand may be caused by financial problems, which stop a patient from seeking curative care, or by the non-existence of the services (HIV/AIDS, family planning services, delivery care).

Can we plan for health expenditure? Illness is usually unexpected and therefore cannot be planned for, unlike buying a computer or a car. Patients do not know in advance whether they will become sick and, if so, what it will cost. These considerations underlie social justice and, therefore, the risk-sharing principle of health insurance. It is a very powerful ethical and social issue.

Are pregnancies, deliveries, and childcare also unexpected health risks? One may ask how far the costs linked to pregnancy, deliveries, and childcare are also unexpected. From an economic perspective, the parents could plan for these events and associated costs. From an ethical point of view, one may argue that a couple deciding to have a child could at least partially plan financially for that child. Such dilemmas are hotly debated in Rwanda, where one questions the extent to which the government is responsible for all children born. This has led to the argument that the government may assist a couple's first two or three children but not necessarily the fourth. Such notions are increasingly built into health

systems, and the PBF approach may provide the tools to implement the outcomes of economic and ethical debates on demographic issues.

5.2.5 Health service supply

Health services are produced by capital, human resources, organization, entrepreneurship, and innovation. However, the "entrepreneurship and innovation" factor was often misunderstood, as if it were automatically available. In fact, entrepreneurship is key to development. Therefore, more recently, innovation and individual initiatives have also been considered important factors of production.

Countries often have many untapped and overlooked human resources. In addition to official (government) health services, several other private health providers, both formal and informal, may exist, such as pharmacies and traditional healers. These health services can be either homogeneous (public or private health centers) or interchangeable (pharmacies vs. traditional healers).

Examples of substitutions:

- Pneumonia treated with antibiotics in a public or private health facility (= homogeneous) or medicinal plants in the traditional practitioner (= substitute)
- Treatment of malaria in a health centre can be substituted by the individual purchasing a 'half cure' in a pharmacy (= substitute)
- Treatment of a fracture in a hospital (plaster) substituted by banana leaves.

While substitutions make perfect economic sense, society (the regulator) must determine the extent to which such substitutions are allowed if, for example, they lead to worse health outcomes. These are normative decisions.

5.3 Health market failures

There are four large categories of market failures in health economics: (1) Asymmetry of information; (2) Positive and negative externalities; (3) Underprovision of public goods; and (4) Failures related to insurance markets.

5.3.1 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 and one has more information, this constitutes a market failure. This is called asymmetry of information.

Asymmetry of information is more common in health transactions than, for example, in the buying and selling of food or bicycles. Yet, in health care markets, there are also situations of perfect knowledge and therefore the potential for perfect competition, such as an individual with a headache or a simple respiratory infection searching for paracetamol or an antibiotic. In this case, *information is symmetric* because the patient understands the problem, knows what he or she is looking for, and the doctor agrees and prescribes the requested drugs.

However, when a patient has chest pain, the problem may be more complex. Is it a simple muscle pain or a potentially fatal heart problem? Here, doctors have superior knowledge of how to determine whether the problem is serious and what treatment to propose.

In this case, information is *asymmetric*. The doctor knows better what the problem is and how to solve it. In this scenario, the doctor may also identify demand for care on behalf of the consumer, a

phenomenon known as “*supplier-induced demand*”. It is a market failure because the doctor can easily misuse his superior knowledge by proposing unnecessary diagnostic or therapeutic interventions.

Imperfect information should be countered with information campaigns, quality reviews (see module 6), and regulation to curb firms or providers that exploit this market failure to maximize profit.

5.3.2 Positive and negative externalities

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

Positive Externalities in Health: e.g., tuberculosis treatment or vaccination. The individual patient may want to consume less care than society desires. A tuberculosis patient may not be willing to make great efforts to be treated out of fear or depression. While this can be understood at the individual level, it is dangerous to society because it can further spread infectious diseases. Equally, a mother may not be willing or too busy to vaccinate her child, which will reduce the ‘herd immunity’ against polio or measles.

Positive Externalities in Education. These include better health and lower child mortality, a lower birth rate, and increased productivity. Well-educated mothers positively affect their children's development. Education increases civic engagement and contributes to a stable, democratic society. A better-educated workforce also stimulates economic innovation.

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

In general, services with positive externalities should be subsidized, while services with negative externalities should be taxed. However, public subsidies do not mean that the government must also provide those services. The private sector is often better equipped to provide quality services to the population, particularly in urban settings and the education sector.

5.3.3 Underprovision of public goods

A public good is a commodity or service that benefits everybody, but it is impossible to exclude people from benefiting. This is also a market failure because, if left to the free market, there will be an undersupply of those public goods, as nobody in the market is willing to pay for them. 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.

5.3.4 Health insurance market failures

Health insurance markets are particularly prone to market failures.

Moral hazard is the tendency of *overconsumption and* overproduction of health services when the person using those services is not the one who directly pays (*patient moral hazard*). This occurs when a third party pays the bill, such as an insurance company. Moral hazard may also affect the **service provider**, who knows the patient is insured and may increase services for financial gain (*provider moral hazard*).

Moral hazard may be corrected by co-payments (fixed amount or proportion of total bill paid by the insured) and deductibles (own risk). This increases consumers' out-of-pocket spending, which decreases their incentive to consume unnecessarily. Thus, the insured have a financial incentive to avoid making a claim.

Adverse selection refers to the tendency for only those who will benefit from insurance to purchase it. Unhealthy people are more likely to purchase health insurance because they anticipate large medical bills. On the other hand, people who consider themselves reasonably healthy may decide that medical insurance is an unnecessary expense if they see a doctor once a year and paying the direct fee is more cost-effective than making monthly insurance payments. However, expenditures by risk-prone patients raise average premiums, so even less risk-prone patients leave the insurance pool. This makes an insurance system increasingly expensive and may even lead to its bankruptcy. This is common in voluntary health insurance systems in developing countries; such schemes often have low adherence rates, which drives up administrative costs.

Anti-selection, or cream skimming, occurs when insurance companies select only clients with a lower chance of falling ill and therefore lower costs and health expenditures. This market failure occurs when an insurer knows more about consumers' expected costs than the consumers themselves and enrolls a healthier-than-usual population. They will therefore prefer healthy, young people and block entry for those patients who have high risks (diabetes, HIV patients, and elderly patients).

5.4 Provider payment systems

A country can choose from several provider payment systems, and this paragraph analyses their comparative advantages and disadvantages. What would be the optimum mix among those systems in each country?

5.4.1 Tax-based national health service & free health care

This financing system, based on free health care, was introduced in the 1950s and 1960s, particularly in former Soviet republics and in Great Britain's National Health Service. It has been closely associated with the WHO and the Primary Health Care system of the Alma-Ata Conference of 1978.

Many African countries adopted it after independence, mostly oriented toward serving the public through government health facilities and did not consider partnerships with the private sector beneficial. This often developed into public monopolies in which the Ministry of Health hierarchy provided, regulated, and channeled funds from the national level to peripheral levels. It was associated with centralized decision-making on managing health facilities, distributing inputs such as drugs and equipment, and constructing infrastructure. Theoretically, this centralized system was funded by general taxes. In practice, this money was rarely available in Africa or other Asian countries and was sometimes replaced by foreign aid with inefficient parallel systems.

Countries like Lesotho, Zambia, DRC and Burundi became dependent on foreign aid for 20-50% of their health expenditure. This created sustainability problems and constrained the endogenous development of their health systems. Large countries such as Nigeria only marginally benefited from external aid, yet they did not develop an effective tax system to centrally finance a free government health care system, which existed only in theory. This resulted in the current system, which is government-oriented, and health services perform poorly in terms of output, quality, and equity. As a result, health services in countries such as Nigeria and Cameroon are mostly provided through a patchwork of unregulated, informal private health services.

Due to the absence of a robust financing system, on-paper free health care is characterized by prices below the market equilibrium, which creates the previously described black-market effects, such as poor quality, theft of public resources, and an unmotivated workforce. The centrally planned input distribution system further creates drug shortages.

The national system of free health care therefore has a poor reputation in most low- and middle-income countries for access to health services, quality of care, and sustainability.

5.4.2 Compulsory Health Insurance

Under compulsory health insurance, both employers and employees pay a premium for health services. Independent health insurance companies may then negotiate reimbursement rates with healthcare providers for a defined set of health services on behalf of their insured patients. The advantage of compulsory health insurance is that it prevents adverse selection (by patients) and cream skimming (by insurers). Insurance companies cannot refuse patients, and patients must be insured. This system has been common in continental Europe for many decades and has been applied in Rwanda for 15-20 years.

Governments must heavily subsidize compulsory insurance systems so that premium payments are financially accessible to patients. In many countries, for example, the government pays for the chronically ill (in the Netherlands) or for hospital services (in Rwanda). Otherwise, patient insurance premiums would become too expensive, especially for the poor.

Smaller insurance systems have very high administrative costs for premium collection, administration, and verification of results. These costs decrease with economies of scale and as a country's per capita income increases. Therefore, in most low-income countries, the administrative costs of insurance systems tend to be very high –over 50% of total costs. As a result, after the fixed administrative costs are paid, little remains for reimbursements to health facilities. Furthermore, if the compulsory insurance system is poorly designed, without adequate deductibles (own risk) or co-payments (a proportion of the cost incurred), it may create serious moral hazard at both the provider and patient levels, making the system too expensive.

Compulsory health insurance: The case of Rwanda. Rwanda offers an encouraging example that obligatory insurance systems may also play a role when combined with Performance-based financing in Africa. A combination of an obligatory health insurance system and PBF has gradually developed in Mali over the past few years.

5.4.3 Voluntary community-based health insurance or 'mutuelle'

Voluntary community-based health insurance (or 'mutuelle') is based on voluntary contributions of the insured. This system tends to positively affect risk sharing among members. However, especially the rich in each community in low-income countries tend to adhere. For the poor, even nominal premiums are too high, and several studies show that people with per capita incomes below USD 1 per day rarely adhere to voluntary health insurance. For them, other expenses, such as food or school, matter more in the daily struggle of life.

Voluntary health insurance in low-income countries is often neither fair nor equitable. When the state invests public money in the 'mutuelle' system, this may, in fact, be anti-poor (or regressive) because the affluent socio-economic groups, who adhere proportionately more, also benefit more from these public investments. Like compulsory insurance, voluntary health insurance, or 'mutuelle', also incurs high administrative costs.

Another problem in low-income countries is that much of the economy is informal, making it difficult to collect insurance payments as easily as in a formal employer-employee relationship. In summary, the opportunity cost of voluntary insurance may be high compared with PBF systems and compulsory insurance, which are more efficient, probably better, and protect the poor.

5.4.4 Direct user fee payments

From an economic point of view, direct payment by patients to a provider is more efficient because it constitutes a direct market transaction between the provider and the patient. The patient pays out of pocket and can choose another health facility if they are not satisfied.

However, direct payments may also create problems when the rates are too high for patients. This financial access problem is a real concern that the Bamako Initiative did not fully resolve. Rates may be applied either by service (for each drug, lab service, consultation, etc) or by a flat rate (under which a fixed amount is paid regardless of how many drugs, supplies, or consultations are consumed). Flat-rate pricing shares risk among patients, and patients know in advance how much they will pay. The disadvantage of flat fees is that patients tend to demand the same number of services and drugs as they pay for in the flat fee, even when they do not need those drugs or services.

Most experts would therefore agree that, to avoid catastrophic health expenses among households, it is good to reduce patients' out-of-pocket health expenditure to no more than 8-12% of their total revenues. However, setting ceiling prices or free health care should also be avoided. Health facilities should maintain the ability to negotiate fee levels with their communities. The best approach to reducing user fees is to subsidize services that must be free (tuberculosis, immunization) and exempt vulnerable patients through PBF equity measures.

5.4.5 Voucher systems or conditional cash transfers

Voucher systems and conditional cash transfers (CCTs) are among the RBF demand-side mechanisms and conceptually align well with PBF. After obtaining a voucher, patients have the right to spend a certain amount of money at a health facility. Conditional cash transfers directly allocate cash to a family if, for example, they send their children to school, vaccinate their children correctly, and complete other check-ups.

There are several similarities between vouchers and PBF, such as: (1) the purchase of performance indicators; (2) there are mechanisms to evaluate quality; (3) contracting mechanisms are used; (4) the structures are autonomous; (5) there are management tools and verification mechanisms with the community; (6) direct transfers of funds to health facilities.

Yet there are also differences. First, the health package indicators purchased through PBF are comprehensive, whereas vouchers mostly focus on reproductive health. Vouchers generally target children, pregnant women, deliveries, or family planning, while PBF targets any vulnerable groups or persons such as the elderly, handicapped, displaced persons, etc. The voucher system's targeting mechanisms are costly because they require setting up demand-side community groups and printing vouchers, while PBF targets vulnerable groups through health facilities with relatively lower administrative costs. The more comprehensive PBF approach creates economies of scope.

5.4.6 The cost of quality care or education

There is evidence from PBF studies that health centres can only provide the full package of services of good quality when they generate around USD 7 per year per person in their catchment area. For hospitals, this is probably as high as USD 20 per capita per year. Quality primary school education costs around USD 100 per pupil per year.

Therefore, if a health center serves 10,000 people, it would need to generate USD 70,000 per year (or USD 5,500-6,000 per month) to operate. This revenue must be in cash (or via bank transfers) because using in-kind inputs (such as drugs or equipment) is so inefficient that required resources would be 3-5 times higher. Most pre-PBF studies in low- and middle-income countries show that service providers' cash revenues are less than USD 3, making it impossible to provide quality services. Thus, designers of new PBF programs should answer how to achieve the annual target revenue of at least USD 7 per person.

A health facility's operations are more sustainable when at least 40% of its total revenue comes from direct revenues from cost recovery and health insurance. Approximately 40% to 60% of the remaining revenue can come from sources outside the facility (government or external funding).

The government can also support providers through a fixed operating budget. Assuming this fixed support budget accounts for 20–40% of revenue and cost recovery accounts for about 40%, PBF subsidies represent about 20–30% of total revenue. The average contribution level of PBF subsidies is higher for primary-level health facilities (approximately 20–40%) than for hospitals (approximately 5–20%).

5.4.7 Which provider payment system is the best?

The “ideal” provider payment system depends on several factors, such as the availability of state resources and the willingness of citizens to pay taxes, the purchasing power of the population, the historical development of the financing system, and normative political choices. PBF should adapt and integrate into each country, while also advancing best practices and moving toward the “purest” form of reform to ensure success.

That said, PBF aims to integrate the various provider payment systems by developing contracts with providers, regulators, and purchasing agencies. The market's role in allocating scarce resources should never be ruled out, while the regulator, for its part, should seek to correct market failures.

The best health financing system is likely a mix of the various systems described above: part of the funding comes from the state via taxation, while another part comes from entities responsible for negotiating and purchasing the best possible outcomes from health facilities at a decentralized level through performance-based contracts.

Revenue can also come from health insurance schemes and direct patient payments to health facilities. A mandatory insurance system may be more realistic than a voluntary "mutual health organization" model. It is highly desirable to supplement state and technical/financial partner contributions by adopting the PBF reform approach, which will be more efficient than traditional "input-based" health systems.

5.5 Exercises

Exercise on Microeconomics

Match each concept on the left to the most appropriate concept on the right.

When all other factors are equal	-	Only price influences demand and supply
Often leads to a black market	-	Demand curve
Neither benefit nor deficit	-	Free market economics
Market instrument to influence price	-	Applied to protect interests of suppliers
Floor price	-	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

Match each concept on the left to the most appropriate concept on the right.

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

5.6 Summary of important concepts in microeconomics

1. Opportunity Costs.
2. Meaning of the word economics: OIKOS - NOMOS.
3. Positive economy and normative economy.
4. Microeconomics and macroeconomics.
5. Economic actors of demand and supply as decision centres.
6. The market (liberal) economy versus the centrally planned economy.

7. Demand curve: all other factors being equal, a price increase decreases demand.
8. Supply curve: all other factors being equal, an increase in price increases supply.
9. A change in price causes a movement along the demand or the supply curve. A change in other factors shifts the demand or supply curve to the right or left.
10. Where the demand curve and the supply curve cross, the equilibrium price is established automatically, and the satisfaction of consumers and supply agents is maximized.
11. If the government creates a price below the equilibrium price (ceiling) or above the equilibrium price (floor), there will be a shortage or a surplus, and society will be struck by the invisible hand of Adam Smith (black market practices, poor quality, surplus of products).
12. Market failures in the health sector include public goods (health promotion), externalities (TB, vaccination, HIV), information asymmetry (prescriber abuse), and moral hazard in insurance systems. The government must correct these failures by corrective measures (subsidies, quality assurance, taxes).
13. The criteria for perfect competition are numerous sellers and customers, homogeneous products, free entry and exit from the market, and perfect information between suppliers and consumers.

5.7 Summary of important concepts in health economics

1. The healthcare market has relatively many failures that need to be corrected. Notably, the information asymmetry between a doctor and a patient needs to be addressed by informing patients, conducting peer reviews of files, and imposing penalties for abuse.
2. The level of equity in each society depends largely on the population's willingness to pay taxes and on their perception of how the government uses tax revenue in ways that visibly impact the population.
3. Allocative Efficiency: how to distribute money among different activities => at the primary, secondary and tertiary levels => among curative, prevention and promotion => among the private and public providers.
4. Technical Efficiency: The best strategy for carrying out one activity (outreach or fixed health centre based strategy for vaccination).
5. Administrative Efficiency: The "overhead" costs of putting the system into place
6. Diseases are unexpected events that necessitate health insurance schemes.
7. Entrepreneurship and innovation among supply-side actors are important economic resources for improving the efficiency and effectiveness of social systems.
8. A social provider (public or private) must always seek to make a profit to invest and improve quality. Failure to generate profits, or to say that profits are bad due to the non-profit status of a health facility, should be countered by the threat of bankruptcy. "Non-profit" status only means profits must be reinvested in the system instead of paid to shareholders.
9. Providers should not forget to include fixed costs and the depreciation of infrastructure and major equipment in their expenditures.
10. Marginal cost relates to economies of scale (the optimal level of a specific activity, such as outpatient consultations, or the number of people a CDV Agency serves). Good economies of scale (where marginal cost = zero) mean average cost is at its lowest point.
11. Economies of scope are comparable to those of a supermarket, where consumers in a store or patients in a health facility have access to several products. Good economies of scope mean average cost is at its lowest point.

12. Compulsory health insurance is potentially a good system, but in low- and middle-income countries it should be combined with PBF reforms to ensure quality, strict verification mechanisms, and cost control.
13. Voluntary (mutual) health insurance has high administrative costs, often low contribution rates, and benefits, above all, the wealthy => Health insurance systems must develop co-payments to combat moral hazard. For the informal sector, the PBF approach by better replace it.
14. General free health care systems, such as those in the former Soviet Union and Great Britain, have a poor reputation.

6. NATIONAL POLICIES, REGULATION & QUALITY ASSURANCE

Jean Paul NYARUSHATSI, Bwanga ENANJOUM, Dr. Philémon MBESSAN

Main messages of the module

- A core role of government is to *stimulate economic growth and employment* by ensuring the market functions well. The free-market approach achieves these goals by distributing limited (public) resources in the most efficient manner. Regulators must therefore: (a) oppose monopolies and economic cartels; (b) correct market failures by using subsidies and taxes; (c) inform suppliers and consumers; and (d) invest public resources into the local economy.
- Well-remunerated health authorities should also concentrate on their core role of ensuring that the market operates well, determining which packages to finance, setting quality standards, accrediting providers and pharmaceutical distributors, and enforcing the agreed standards.
- Authorities *should not mix* their core *regulatory* roles with other activities, such as providing health services or purchasing inputs for health facilities. They should behave like a “neutral referee in a soccer game”.
- To enhance PBF reforms, governments must *appoint national PBF Units* in each Ministry. These units should operate at the level of the Minister's Cabinet or the Secretary General.
- An internal Contract Unit – closely linked to the PBF Unit - may negotiate contracts with the directorates of the ministry to improve their performance and to cement the reforms. The Minister of Health or the Secretary General may sign the contracts.
- The *national steering committee* must ensure an adequate PBF budget of USD 4-7 per person per year by transforming existing input budgets into performance-based ones. The committee must also ensure that the PBF program's administrative costs remain below 30% and actively promote the PBF reform agenda.
- The PBF approach promotes *quality improvement* from several angles: 1. *Providers* must generate enough resources to achieve the quality standards set by the government; they must have the autonomy to use these resources efficiently and develop performance contracts with staff; 2. *Regulators* must conduct quality reviews of providers and accredit them; 3. *CDV agencies* negotiate contracts with providers that improve quality and allocate investment units (or quality improvement bonuses) for the improvement of infrastructure, equipment, or availability of qualified staff
- How to review quality? Regulators systematically review provider quality by using *questionnaires with composite indicators*. They may also use vignettes, conduct patient exit interviews, or direct observations. CDV agencies conduct patient-perceived quality surveys. Based on the different quality scores and a nationally determined formula, the payment agency remunerates the provider. The carrot + carrot approach may, in most cases, be preferred to the carrot X stick approach when providers depend largely on PBF subsidies for their revenue.
- In many countries where PBF is practiced, *peer group review* has become the preferred method for evaluating quality in hospitals and ministry departments. Peer group evaluations are not hierarchical but rather exercises among equals, or “peers,” in which a team from one entity evaluates another. The aim of such inter-collegial visits is to advise rather than impose unilateral instructions.
- During all quality reviews, the actors should fully respect patient *confidentiality*.

6.1 Definitions

Regulation: Rules designed to control the conduct of those to whom it applies. Regulations are official rules and must be followed;

Norms: The collection of criteria which define – in a SMART manner – the desired quality levels that need to be achieved in each service or activity, while avoiding any dangers;

Procedures: The processes, which aim at achieving the norms;

A health system: Comprises all organizations, institutions and resources devoted to producing actions whose primary intent is to improve health;

Quality assurance: The set of activities that allow us to define the norms and procedures to measure and improve the quality of care, as assessed by professionals.

Accreditation: The action or process of officially recognizing an organization fulfilling minimum quality standards to perform a particular activity.

6.2 The socio-economic aims of the state

Film: <https://www.youtube.com/watch?v=3EGjXPXLokg>

Each government must base its socioeconomic policies on normative aims and values that should result from a democratic political process. Most countries have identified (elements of) the following socio-economic aims:

- *Assure economic growth and full employment to guarantee economic potential and prevent suffering*
- *Assure that markets function well and prevent monopolies and cartels*
- *Assure safety, justice, and property rights in both assets and intellectual property.*
- *Promote public goods and positive externalities*
- *Protect the public and the environment against health hazards, pollution, and other negative externalities*
- *Ensure price stability to prevent inflation. This encourages business transactions and citizens' willingness to save money for investments and pensions.*
- *Promote the equitable distribution of resources. This aims at a more just society by taxing the wealthy to support the poor or vulnerable.*

To achieve these aims, most countries have adopted a *free-market economy* as the preferred way to allocate limited resources. Once accepted, it implies that the government must defend the public interest and enact laws against monopolistic behavior and the formation of cartels in both the public and private sectors. These laws are equally important in low- and middle-income countries for promoting economic development and protecting consumers. Governments should also correct the problems (or market failures) that the same free market creates.

6.3 The health goals of the Ministry of Health

Each country has its own national health policies, but they are often based on the following goals and values:

1. Improve the population's **health status** by providing **quality, accessible** health services. This objective also reflects human rights principles that guarantee access to health services.
However, for budget control reasons, it is important to define exactly which packages at the primary and hospital levels the community has the right to, and how to target the vulnerable, while the wealthier part of the population will still have to pay. So, this human rights principle does not mean generalized free health care.
2. Ensure **adequate funding** of the health system by the government, the population and partners. Total health expenditure is expected to reach at least US\$86 per capita per year, but with a more efficient PBF health system, this may be lower.
3. Ensure that the **share of health expenditures relative to household income and government revenues** is reasonable. The proportion is generally around 10-15% when averaging direct cost sharing, insurance premiums, and government health expenditures. In low- and middle-income countries, out-of-pocket health expenditure plays a very important role. Government health expenditures are usually low and should reach 15% of total government expenditures and thereby reduce OOPHE.
4. **Create economic multiplier effects** by investing cash directly in the local economy, thereby creating employment and economic growth.
5. **Promote competition between providers** to assure efficient use of limited public resources and seek collaboration with the private sector.
6. **Assure free choice for patients amongst public and private service providers** so that democratic values and the free expression of opinions are respected;
7. **Ensure geographical, cultural and financial equity.**
8. **Assure the rational and efficient use of public and private resources** by ensuring that they contribute to health services in proportion to their means and that services are directed towards needs determined by professionals and felt by the population;
9. **Enforce labor laws for the public and private** sectors, including those concerning minimum salary scales by academic level, years of employment, etc.

6.4 How to prevent conflicts of interest and to move to rational health policies

In many countries, governments struggle to implement the above core regulatory roles of promoting social objectives based on democratically agreed-upon values and norms.

The following issues may cause these problems:

- Senior civil servants and decision-makers may not focus on their regulatory and stewardship roles to defend the public interest because of conflicts of interest, such as their direct involvement in input management, fund management, and direct provision.
- Civil servants, politicians, and decision-makers may have limited knowledge of how the market economy operates and wrongly assume that it is their core role to enter a central command-and-control relationship with providers.

- Low salaries paid without a link to performance may impair civil servants' performance. They are often employed for life and lack intrinsic motivation to defend the public interest.
- Regulatory instruments, such as SMART job descriptions, may be inadequate or lacking.

If governments aim to implement effective health reforms and change to achieve social aims such as the Sustainable Development Goals and Universal Health Coverage, they must address these problems and conflicts of interest.

How can we address the following problems and make government more effective?

- Ensure that decision makers and senior civil servants address social aims and become defenders of the public interest => The solutions are in the *public choice theory on how to motivate regulators*
- Ensure the efficient distribution of public funds and break the vicious cycle of poor government performance leading to poor health and even economic catastrophe => *Apply PBF best practices such as competing for contracts, public-private partnerships, decentralization, and separating functions to promote transparency and good governance.*
- Break the vicious cycle of citizen scepticism about the state and restore belief in its ability to develop effective strategies => *Show convincing results through well-designed PBF pilot programs.*
- Ensure that *at least 70% of national funding* is channeled directly to the “front line,” such as health facilities, schools, and community activities.

6.5 Role of the National PBF Steering Committee

The National PBF Steering Committee oversees and guides the PBF reform approach and may meet once per quarter or more often if necessary. These Steering Committees may include members from the general directorates and from other Ministries, such as Finance and Planning. Often, the Minister of Health selects its members, but they should be chosen for their knowledge and skills in PBF, economics, public health, good governance, and conflict resolution. They should also be convinced that PBF promotes health system reforms, and that they should be change agents.

They may have the following tasks:

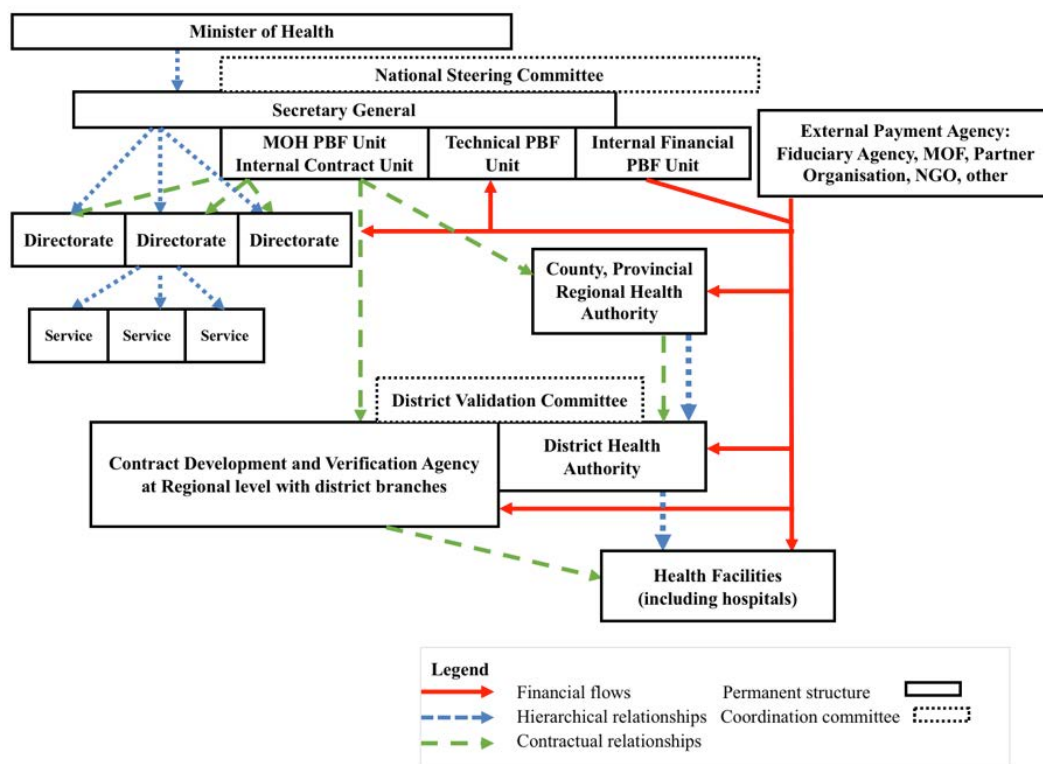
- Ensure the general coordination of all actors;
- Validate budgets and ensure that at least 70% of the budget goes to providers and the community, and that overhead costs of contracting, verification, and regulation are kept ideally at around 20%;
- Ensure good allocative efficiency: Primary level package - Hospital package- tertiary level; private/public; curative - preventive - promotional level;
- Conflict management;
- Support to the Technical PBF Unit in its advocacy for PBF.

6.6 National PBF Unit and Internal Contract Unit

The PBF Unit may be attached to the Minister's Office or to the Secretary General of the Ministry. This is because the PBF is a reform approach that affects the activities of all directorates and all levels in the hierarchy. The permanent members of the PBF Unit may be civil servants or recruited technical assistants, but their selection must be competitive. They should receive competitive remuneration to prevent private-interest behavior. Remuneration consists of a fixed part (civil servants' salaries, PBF Unit salaries, or payments made by an external agency) and a variable part linked to the PBF Unit's overall performance and each employee's performance. The variable component may exceed the fixed salary if the civil servant's salary is low.

The *MOH PBF contract unit* may be directly linked to the Secretary General or Minister's Office and contracts with the MOH departments, Regional Health authorities and Regional CDV Agencies.

The PBF Unit may be put in the following institutional framework:



6.6.1 The tasks of the PBF Unit

1. *Strengthen the sustainability* of PBF by ensuring that at least USD 4.00 in public funds per person per year are mobilized. The Unit identifies financial gaps, preferably one or two years in advance, to take timely remedial action.
2. *Promote PBF* among relevant stakeholders from the national level and partner organizations.
3. *Revise primary- and hospital-level output and quality indicators* and their subsidies. Cost the program accordingly, e.g., once every 2-3 years.
4. *Revise the output, quality, and equity indicators* of all *regulatory* authorities at the central, regional, and district levels, as well as the regional *CDV Agencies*.
5. Conduct *quarterly evaluations* of the performance of the Directorates of the Ministry of Health, the Regional Directorates of Health and the Regional CDV Agencies. This may be done by a team from the MOH and may take several days. Based on these evaluations using the SMART criteria, the payment agency will pay those actors.
6. Conduct the *counter-verification* of: (a) the verification done by the CDV Agencies in the health facilities; (2) the evaluation done by the Regional Health Directorates of the District Management Team and the Wholesale Pharmacies. The counter-verification will be done partly at random and, for the remaining part, based on a reasoned choice (suspicion of cheating, results that are too good or too bad). This counter-verification may also be done by the Inspectorate General of the Ministry or an external organization
7. Maintain the *PBF portal* and analyze data from health facilities, regulatory authorities, and CDV Agencies. Provide feedback on the actors' performance and offer recommendations.

8. *Confirm the invoices submitted to the PBF portal and transmit them within 7 days to the Payment Agent: (a) the output (monthly) and quality (quarterly) invoices submitted by the district validation committees; (b) the quarterly invoices from the regulators at different levels of the health system (DHMT, Regional Delegations, central level).*
9. *Organize national PBF seminars at least once a year with all main PBF stakeholders to identify strengths and weaknesses and develop recommendations;*
10. *Revise and make available the PBF instruments, particularly the questionnaires for the business plans at the different levels, the quality reviews, the indices management tool, and the TORs for the various actors in PBF and the contracts.*
11. *Assist with the meetings of the PBF National Steering Committee. The PBF Unit prepares the invitations, agenda, and activity reports. After the meetings, the PBF Unit disseminates the reports and the recommendations to its members.*

6.6.2 Composition of the PBF Unit

- The coordinator is responsible for advocacy, external contacts, ensuring sustainability, and coordinating the team;
- The deputy coordinator plays the role of coordinator in case of absence, organizes the evaluations of the regional health directorates and regional CDV Agencies, and organizes the counter verification visits;
- The PBF portal manager is the portal's administrator and ensures its maintenance;
- The PBF portal data monitoring & validation officer analyses the data at the health facility, district, regional and national levels;
- The PBF Communication Officer / Trainer advocates for PBF and organizes training sessions;
- Partner organizations may add PBF experts to strengthen the team.

The Internal Contracting Unit includes:

- Contracting experts for developing contracts with the Directorates and Programs of the MOH.

6.6.3 PBF Unit administrative and payment procedures

To fulfil its missions, the National Technical PBF Unit must manage its resources autonomously. It should maintain a bank account with signatories including the co-ordinator, the deputy co-ordinator, and the accounting manager. Two joint signatures may be required to disburse funds.

The National PBF Unit may be paid quarterly based on its output activities, with an additional quality bonus. The PBF Unit can begin operations with an advance to fund the activities. Each quarter, an evaluation committee determines the activities carried out and the quality score. This committee may also have members from different directorates.

PBF Unit quarterly payments can be based on the following components:

1. Payments for the 17 output indicators as shown in the following table.
2. The quality bonus, which is calculated by multiplying 15% of the total outputs achieved by the quality score (= total outputs realized x 15% x quality score).

Output indicators of PBF Unit	Subsidy per act
1. Signature performance contracts Regional Authorities & CDV Agencies, Directorates MOH	F 50,000
2. CDV Agency Evaluation by Quarter	F 1,500,000
3. Regional Health Authorities Evaluation by Quarter	F 1,500,000
4. Counter-evaluation DHMT -1 per visit region per Regional Health authority evaluation	F 250,000
5. Counter verification Health Facility - 2 x per region per CDV evaluation	F 200,000
6. Quarterly PBF evaluation meeting organized by the PBF Unit	F 500,000
7. Organisation of peer group evaluation of central and general hospitals	F 500,000
8. Semi-annual financial, internal control supervision of CDV Agencies	F 500,000
9. PBF portal functional and revised - every month	F 500,000
10. Validated and confirmed invoices paid on time - each month	F 1,000,000
11. Review and analysis of indicators and subsidies - annually	F 5,000,000
12. Costing achieved and budget mobilized – annually	F 5,000,000
13. Updated PBF and Administrative Procedures Manual - annually	F 5,000,000
14. Adapted legal texts – semester -	F 3,000,000
15. National Seminar 3 days 100 people - annually	F 25,000,000
16. International PBF Course 14 days – per participant	F 1,200,000
17. Action research – per research project	F 5,000,000
Quality Bonus - maximum 15%	15%

The validation criteria for the quantity indicators of the PBF Unit are the following:

Output Indicators	Validation Criteria
Signing of Performance Contracts	- List and signed contracts of quarter available and archived; The evaluation team ensures that copies of contracts for all CDV Agencies, Regional Health Directorates exist and are signed by the PBF Unit Coordinator and the directors of the CDV and RHD and that copies of these contracts are also found in the CDV and RHD respectively
CDV Evaluation	- The evaluation grid of the CDV Agency is co-signed by the CDV Agency manager and the members of the evaluation team. The CDV payment invoice is signed by the CDV manager, the leader Evaluation teams and approved by the Coordinator of the PBF Unit. The report of CDV Agency and a copy of the contract are attached.
Regional Health Directorates Evaluation	- The evaluation grid of the Regional Health Directorates is co-signed by the Regional Delegate, and all members of the evaluation team. The RHD payment invoice is co-signed by the CDV manager, the evaluation team leader and approved by the PBF Unit Coordinator; The RHD evaluation report and the copy of the contract are attached.
Counter verification health district	- District Counter Verification Grid is co-signed by the in-charge of the district, and all members of the counter-verification team, copies of the counter-evaluation analysis reports and feedback to the PRSPs are available.
Counter verification Health Facility	- The Health Facility counter- verification grid is co-signed by the HF in-charge, and all the members of the counter- verification team. Copies of the analysis reports of the counter- verification and the feedback given to the CDV Agency are available.
Quarterly evaluation meeting PBF organized by PBF Unit	- Report of the meeting and attendance list of available members.
Peer Evaluation Reviews of Central and General Hospitals	- The original copy of the Peer Evaluation Hospital Review grid is completed, contains recommendations, and is signed by the hospital director and all members of the evaluation team with their names and qualifications. (NB A copy of the evaluation grid must always remain in the hospital. In case of verification and differences are observed between the 2 grids the evaluation will be cancelled) - The peer evaluation of the hospital is carried out by evaluators from at least two other hospitals. Each peer assessment team is composed of: (i) specialist in the services to be evaluated, (ii) nursing officer, (iii) administrative and financial manager. The quarterly evaluation is preceded by the follow-up of the implementation of the previous recommendations. The team is led by an official of the Ministry of Health. Check the list of signatories of the evaluation grid; - The report includes the follow-up of the previous recommendations
Quarterly financial, internal audit of CDV Agency	- Report of the Quarterly Audit available within the timeframes planned with the mission orders signed by the supervised CDV Agency.
Validated invoices paid in time	- Count all payments made to HF, CDV Agencies, Health Districts, Regional Health authorities and MOH directorates within the timeframes described in the PBF manual.

6.6.4 Quality indicators of the National PBF Unit

The quality assessment of the national PBF Unit will focus on the implementation status of the business plan, based on the quality indicators defined in the table below, and on the application of the indices management tool. The score obtained by CTN will serve as the basis for calculating its global quality bonus and performance bonus.

The quality indicators for the PBF Unit	Points
Good disbursement of the PBF budget <i>- The PBF system spends between 90% and 110% of planned spending in costing</i>	15
Ensure availability of the PBF budget <i>- USD 4.00 - 7.00 (or the amount indicated in the costing) per person per year for PBF in the program area.</i> <i>- Availability of up-to-date information on budgetary monitoring (budget still available, trend of evolution and estimates of any problem with funding);</i>	10
Promptitude of the regional / provincial structures <i>- Promptitude (45 days maximum after the end of the term) and completeness (100%) of the evaluation of Regional Health authorities and CDV Agencies</i>	10
Promptitude of the central structures <i>- Promptitude (maximum 45 days after the end of the quarter) and completeness (100%) of the peer review of the PBF Unit and the directorates of the MOH</i>	10
Prompt confirmation of the PBF invoices entered in the PBF website <i>- The confirmation of all invoices received from the actors (HF, DHMT, RHD, PBF Unit, CDV Agencies) are made within 7 days of receipt of invoices (by portal if applicable);</i>	15
The status of the implementation of the recommendations of the steering committee is up to date <i>- The evaluator reviews the recommendations and checks with the relevant officials if their status is correct</i>	5
Presence of latrines in sufficient number and in good condition <i>- At least one latrine accessible to visitors and well maintained with doors closing</i> <i>- No flies, no cobwebs, no dust, no smell</i> <i>- Walls in good condition and clean,</i> <i>- Well covered with tiles without water flowing inside</i> <i>- Pots without corrosion, cleaned - no visible faecal matter</i> <i>- Two barrels of at least 100 liters of reserve water per toilet if there is no running water</i>	5
Cleanliness of the courtyard <i>- Absence of papers and other garbage in the courtyard;</i> <i>- Maintenance of the yard (cut grass - well maintained garden, no animal excreta, no stagnant water puddles)</i> <i>- Availability of non-full garbage cans in the yard and accessible to visitors</i>	5
Hygienic conditions in offices <i>- Waste bins available in each office</i> <i>- Clean dust-free windows, window curtains clean and no spider webs in the rooms</i> <i>- Clean floor</i> <i>- Dust free cabinets and shelves, without spider webs</i> <i>- All documents tidy on desks and in shelves and cabinets</i>	5
Financial and accounting documents available and well shelved <i>- Accounting documents held well, tidy and accessible in less than 5 minutes, (retained for at least 5 years);</i> <i>- Statutory reports (financial monitoring, internal audit, external audit, procurement, monitoring and evaluation) are produced within the prescribed deadlines;</i>	5
The system of monthly calculation of performance bonuses exists and is known by the personnel <i>- Criteria for the calculation of the performance bonus established with all the personnel and calculated in the indices management tool;</i> <i>- The calculation of the performance bonuses is conducted in a transparent and participatory manner;</i> <i>- Ask 2 to 3 people at random.</i>	15
TOTAL	100

After the PBF Unit evaluates performance, it issues an invoice, which is paid within 15 days. This invoice includes the payment of the output activities and the bonus.

6.6.5 PBF Unit indices management tool

The PBF Unit will also use the indices management tool. Criteria for payment of individual performance bonuses will be established by the PBF Unit. Criteria may include promptness in executing tasks, lost/additional working hours, individual evaluation scores, and the overall quality score obtained by the PBF Unit.

Revenues	Amount	%
Bank resources at beginning of month / trimester		
Advance received		
Quarterly payment received		
Government contribution		
TOTAL		

Expenses	Amount	%
Payroll		
Operating expenses		
Investments		
Depreciation of equipment		
Increase in bank reserve (for salaries and operating expenses)		
Sub Total Expenses		
Performance bonus (Total revenue - total other expenses)		
TOTAL		

The following criteria are used to evaluate the PBF Unit's application of the indices management tool. All PBF Unit revenues are integrated into the index tool in the form of a common basket.

CRITERIA	Norm	Total points
Quarterly Technical Report available. - Analyses revenues for the quarter, plans expenditures and analyses recommendations of the peer group evaluations. - Meeting conducted. Check attendance list + signature	25 points if present, 0 if absent	25
- Personnel evaluation form and order of transfer of the bonuses available (the total amount of the premium must correspond to that noted on the summary of income / expenditure)	25 points if completed and signed with phone number, 0 otherwise	25
Participation of staff at indices management tool process. - Interview at least two people per department shows that they have participated and that they know the receipts, expenses, the envelope of the premiums and the criteria of distribution, that the bonuses marked in front of his name are received.	50	50
TOTAL		100

6.7 Other directorates and programs in the Central Ministry

The ministry's directorates and programs will have performance contracts to implement their specific activities. The contracts will be negotiated and signed with an internal contract unit at the level of the office of the Secretary General or the Cabinet of the Minister. The PBF Unit can play this role or support this internal contract unit.

6.7.1 Role and activities of the Directorates of the Ministry of Public Health

The different directorates and programs of the Ministry of Health have their own specific activities but are also involved in the following common PBF-related activities such as:

- Participation in the implementation of PBF activities in the field
- Definition and updating of the minimum and hospital health packages and quantity indicators
- Definition and updating of the quality indicators
- Mobilization of government resources for PBF
- Coordination of the PBF and HMIS data collection and cloud computing platform PBF and DHIS2

6.7.2 Output indicators for the Directorates negotiated by the MOH contract unit

The internal contract unit of the Ministry of Health – sometimes assisted by the PBF Unit - develops, negotiates and signs contracts with the directorates of the Ministry. Each directorate carries out different activities, making it difficult to develop new contracts and payment criteria for each.

There are therefore eight contract subjects: 1. Advocate for change in favor of PBF; 2. Conduct special visits with a clear TOR; 3. Conduct training sessions in accordance with a TOR; 4. Organize a meeting following a TOR; 5. Conduct PBF evaluations of regional stakeholders; 6. Conduct action research; 7. Receive quality improvement bonuses for renovation, equipment, and transport requirements; 8. Indices management tool correctly applied.

Each contract subject has its own evaluation criteria and standard specific payments, as shown in the following table.

	The eight general output performance indicators for the Directorate or Programme from the Ministry (of Health)	Unit price
1.	Change subject identified with TOR and implemented: the change subject may concern the national standards, legal documents or SMART implementation instruments. These changes: - Are related to the mission of the Directorate and have the general purpose of strengthening the PBF approach. - The following specific topics * are identified: - o A - o B - The report of the change subject contains the problem identified, the proposed solutions, the results of the activities conducted and the justification for the payment of the invoice. - The Internal Contract Unit, supported by the national technical PBF Unit, has received the business plan of the Directorate or Programme, negotiated and accepted the ToRs for the specific change subject and has agreed with the criteria for payment. <i>* NB: The topics may concern changes in strategic documents, legal texts, output or quality indicators, business plan templates, indices tool, stakeholder evaluation grids.</i>	\$ 1500 per change subject achieved
2.	Special visit realized according to a SMART Terms of Reference, with a report produced which contains recommendations. - The objectives of the visit and the problems to solve of the visit are the following: - o A - o B - The Director of the Directorate or Programme approved the Terms of Reference and the number of days required for the assignment; - The Directorate or Programme is aware of the maximum number of days allocated (by the Contract Unit) for special visits per quarter; - The expert of the Directorate or Programme, who carries out the assignment must: 1. Have the required qualifications; 2. Be able to execute the TOR; 3. Produce a mission report within a reasonable time	\$ 120 / day / person

	- The report of the mission must contain: 1. The problems to be solved; 2. The purpose of the mission; 3. A short description of the visit; 4. Contain constructive solutions to solve the identified problems; - During the quarterly evaluation of the Directorate, the evaluator checks the quality of the report and approves the payment; - The budget for transport and upkeep for the mission is planned by management of the Directorate, and all these expenses are included in the lump sum payment per day. The management of the Directorate ensures that the experts have a means of transport and that they will be paid; - Visits must take place outside the capital and cover all regions. This means that for some missions there will be a "loss" and for others a "profit". <i>NB: It is the responsibility of the Management to recruit or contract experts capable of carrying out the mission, to avoid disappointment and the non-payment of the mission following the verification of this activity. the quarterly assessment.</i>	
3.	Training with SMART Training Plan completed, with report written - The objectives and problems to be solved of the training are identified; - o A - o B - The Director of the Directorate approved the Training Plan and the number of days proposed to complete the training plan; - The Directorate or Programme negotiates with the Internal Contract Unit the number of trainings and person - days per quarter after explanation of their relevance; - The Directorate or Programme knows the number of training days allocated per quarter, which can be included in the performance contract after having presented the priorities; - The number of days must not exceed 1 day per module, and the number of participants should not exceed 30. - There is a Training Plan with: 1. An agenda; 2. The methodology; 3. The course modules in electronic format and / or hard copy; 4. PowerPoint presentations corresponding to the modules; 5. A daily course evaluation questionnaire by the participants; 6. A post-test questionnaire - The trainers who carry out the training must: 1. Have the required qualifications; 2. Be able to prepare and execute the training; 3. Produce the report of the training within a reasonable time. - The training must be done in a place with a stable electricity source for the overhead projector. It must be ensured that training sites are equitably distributed in the regions. - The report of the training must contain: 1. The problems to be solved; 2. The purpose of the training; 3. A short description of the course; 4. Contain the course evaluation by the participants and the post-test result. <i>NB: It is the responsibility of the Directorate to ensure the recruitment or contracting of experts capable of training, to avoid disappointment and non-payment of the mission following the verification of this activity during the quarterly assessment.</i>	\$ 100 per participant trained and per day
4.	Advocacy or technical meeting with TOR SMART conducted, with report written - The objectives and problems to be solved of the meeting are identified; - o A - o B - The Directorate or Programme negotiates with the Internal Contract Unit the number of meetings, days and persons to be invited for the meeting per quarter, with an explanation of its relevance; - There is a meeting plan with: 1. An agenda; 2. The methodology. - The facilitation team who conducts the meeting must: 1. Have the required qualifications; 2. Be able to prepare and conduct the meeting; 3. Produce a meeting report within a given time frame. - The meeting report must contain: 1. The problems to be solved; 2. The purpose of the meeting; 3. A short description of the proceedings of the meeting. <i>NB: It is the responsibility of the Directorate to ensure the recruitment or contracting of officials or experts capable of facilitating the meeting to avoid the non-payment of the meeting after the verification of this activity during the quarterly evaluation.</i>	\$ 80 per participant per day
5.	Assessment visits of regional actors (RDH, CDV) organized by the national PBF Unit - Attend a 4-day regional assessment; - Report on the visit with special emphasis on quality aspects of services; - Give important contributions during the evaluation visit;	\$ 100 per participant per day

6.	Action-research conducted with a well-defined problem, a report written with SMART recommendations - The Directorate or Programme has in its Business Plan an action research topic submitted to Internal Contract Unit; Identified topic: - The subject must be related to the PBF - The proposal explains the problem to be solved and the methodology of the research - The report of the study shows the results of the action-research. - The report contains at least two constructive recommendations that contribute to the resolution of the identified problem.	\$ 6000 per study completed
7.	Quality Improvement Bonus (QIB) proposed and implemented - The Directorate or Programme proposes in its business plan an activity that needs to be supported by a QIB; - The Business Plan describes the problem to be solved and the proposed solution; - After completion of the activity, the evaluation team verifies the activity; - Specific proposed BAQ. <i>NB: This indicator may include means of transport, printing of training materials, purchase of equipment, computers, furniture.</i>	\$ 3000 per QIB achieved
8.	The Indices Management Tool is applied. - For the management of all resources of the Directorate or Programme - The tool includes the distribution of the performance bonuses to staff - Staff is aware about the indices management tool and knows how much they receive and based on which criteria	\$ 600 / quarter

	Total 1	
	Quality Bonus (Total 1 x 15% x score of the quality evaluation = 50% score technical quality + 50% quality Score for the correct use of the indices management tool)	
	TOTAL (= Total 1 + quality bonus)	

6.7.3 Quality criteria for the Directorates of the Ministry of Health

The Contract Unit of the MOH and the PBF Unit assist the various directorates in developing their business plans and performance contracts. The General Secretariat will update the technical directorates' evaluation grids quarterly, in collaboration with the PBF Unit and the concerned directorates, based on the activities to be carried out. The table below presents the quality evaluation indicators for the directorates and programs to be adapted for each directorate.

	Performance criteria for the quarterly peer group evaluation of the departments in the Central Ministry of Health	Points	Score
1	Related to Planning and Monitoring - Each Service Unit and Sub Directorate has developed its Work Plan or Business Plan - Each Service Unit Business Plan is integrated into the Sub Directorate BP. - Each Sub Directorate BP is integrated in the Directorate BP - Each Service Unit, Sub Directorate and the Directorate has presented in the BP its general and specific duties - The analysis and recommendations in the PB show that Service Units, Sub Directorates and the Directorate apply the PBF best practices such as the promotion of competition, strengthen HF autonomy, decentralization of resources and the involvement of the private sector - Each Service Unit, Sub Directorate and Directorate has identified in its PB at least two main problems and proposed solutions - Each Service Unit, Sub Directorate and Directorate produced a monitoring report related to the previous BP - At least 75% of the proposed solutions in the BP are achieved.	15	....

2	Related to the coordination of the Directorate - Key managers from the Service Units and Sub-Directorate were invited to quarterly meeting; - The reports of the last two quarterly meetings are available with the list of participants; - The report of the last quarter coordination meeting identified four main problems and solutions were proposed; - There is evidence that at least 3 of 4 priority problems were solved during the current quarter	5	....
3	Relating to the archiving of information and documents: (1) Business Plans of Service Units Sub Directorates and Directorate and performance contract with Directorate; (2) Business Plan for the Directorate and performance contract with the Minister; (3) Records of all staff, administrative letters; (4) Accounting documents. - Neatly arranged into folders and documents within 5 minutes to the evaluation team	5	....
4	Related to Health Facilities - Directorate produced standards and contributed to improving the quality of health facilities - It conducted visits to health facilities for field testing the standards	10	....
5	Related to the regulatory authorities at regional and district level - The Directorate has helped to define the mission and performance indicators for the regional and district level regulators - It carried out visits to field test the standards	5	....
6	Relating to the supply of inputs - The Directorate has helped to implement a decentralized procurement system of inputs	10	....
7	Relating to the management of financial resources - The Directorate has contributed to the decentralization of financial resources in cash (cash - bank account) to the health facilities to buy inputs - The Directorate has contributed to increase the resources for the PBF approach - The Directorate has contributed to strengthen the administrative and financial capacity of health facilities including the use of the indices management tool	15	....
8	Related to Human Resources - The Directorate has contributed to strategies that assist health facilities to recruit qualified staff with their own financial resources - The Directorate has contributed to the equitable distribution of qualified personnel for the peripheral health facilities	10	....
9	Relating to legal and institutional reforms - The Directorate participated in the identification of activities and reforms that require new legislation for the implementation of the PBF best practices	5	....
10	Presence of latrines in sufficient number and in good condition - At least one latrine accessible to visitors and well maintained: - With doors closing - No flies, no cobwebs, no dust, no smell - With walls in good condition and clean, - Well covered with tiles without water flowing inside - Pots without corrosion - Cleaned - no visible faecal matter - Two barrels of at least 100 litres of reserve water per toilet	5	
11	Cleanliness of the courtyard - Absence of papers and other garbage in the courtyard; - Maintenance of the yard (cut grass - well maintained garden, if necessary, no animal excreta, no stagnant water puddles) - Availability of non-full garbage cans in the yard and accessible to visitors	5	
12	Hygienic conditions in offices - Waste bins available in each office - Clean dust-free windows and window curtains clean - Clean floor, Without spider web, dust free cabinets and shelves, without spider webs - All documents tidy on desks and in shelves and cabinets - The toilets of the offices must fulfil at least the same conditions of cleanliness as those described above	5	

13	Financial and accounting documents available and well shelved - <i>Accounting documents held well, tidy and accessible in less than 5 minutes, (retained for at least 5 years);</i>	5	
	TOTAL	100	

A team of representatives from different Ministry departments carries out the quarterly evaluation of directorate and program performance at the central level. After preparing the invoices, the Secretary-General validates the evaluation results and sends them to the financial department for payment. Each directorate must have its own bank account. After the General Secretariat validates them, the Payment Agency has 15 days to process the invoice for payment.

6.7.4 Indices tool for the directorates and programs

Health directorates and programs will also use the indices management tool for transparent, participatory management and the allocation of performance bonuses. The criteria for the payment of individual performance bonuses will be established by each directorate and program. Some criteria may include promptness in task performance, lost/worked hours, individual evaluation, and the quality score obtained by the department.

Revenues	Amount received	%
Government budget		
PBF Quarterly Payment		
Resources from other partners		
TOTAL REVENUE		

Expenses	Amount spent	%
Payroll		
Operating expenses including missions		
Investments, including depreciation of equipment		
Increase in bank reserve (for salary and operating expenses)		
Sub Total Expenses		
Performance bonus (total revenue - total other expenses)		
TOTAL EXPENSES		

6.7.5 Evaluation criteria for the use of the indices management tool of the MOH Directorates

Directorate

Period: From to

Analysis of income and expenses	Points max	Score
1. Revenues are shown in the indices management tool <i>The evaluation team checks:</i> - That the different revenues are presented in the Monthly Indices Management report. The revenue categories can be: i. PBF Subsidies; ii. Government subsidies (including salaries paid to staff); iii. Revenues from other donors; - Check if the total revenues are correctly calculated.	10 points, if correct	...
2. Expenditures are shown in the indices management tool <i>The evaluation team checks:</i> - The different expenditure categories of the structures are present in the Monthly Indices Management report. - The categories of expenses can be: i. The fixed salary of the contract staff of the Directorate / Program; ii. Operating costs (fuel, mission expenses, office supplies); iii. Investments; iv. The increase of the bank reserve; v. Other expenses - Whether the expenditure subtotal is correctly calculated. - Whether the calculation of the performance bonus for the staff of the Directorate or Program are correctly calculated.	10 points, if correct	.....

3. The Monthly Indices Management report is available <i>The evaluation team checks:</i> - Recommendations and follow-up of the recommendations of the previous meeting - The attendance list of the staff at the meeting + signatures	20 points, if rapport correct	.....
Distribution of performance bonuses to staff	Points max	Score
4. Calculation of staff performance bonuses based on at least four of the following criteria: <i>The evaluation team verifies the existence of the following criteria:</i> - The responsibility bonus - Seniority bonus - Additional hours per month - The individual performance of the staff. - The penalty based on administrative problems.	10 points, if correct	....
5. The distribution of bonuses was done in a participatory manner <i>The evaluation team checks:</i> - The existence of minutes of the meeting	25	....
6. Management members did receive the bonuses - Ask two randomly selected staff whether they received their performance bonus - Verify the supporting document to show that the bonuses were paid	25	....
TOTAL	100	
PERCENTAGE	... %	

6.8 The PBF PAYMENT AGENCY

The payment agencies pay all actors' invoices. This may be an internal financial payment unit within the Ministry of Health or a fully independent agency such as the Ministry of Finance, an independent fiduciary organization, an NGO, or a management unit of a partner such as the World Bank or UNICEF. A mix of internal and external payment mechanisms can also be designed, with multiple financing sources negotiated with different partners on who pays what. Burundi has developed an excellent experience with 13 financing sources, but only one data collection point. The Ministry of Health website processes invoices from the internal contract unit, regional and district authorities, and CDV Agencies and then forwards the results to the financing sources for payment based on contractual agreements.

The district validation committees first validate the invoices from the *health care providers*, which are then forwarded to the PBF portal. After that, the National PBF Unit confirms the data. After confirmation, the invoices are sent to the Payment Agency, which in turn transfers the money directly into the accounts of the various stakeholders. The Payment Agency is also responsible for payments to other PBF actors, such as regulators at all levels, regional CDV Agencies, and consultants.

The Payment Agency acts like a bank and pays the bills of different PBF actors within a time limit of, for example, 7 days. The payment agency checks whether the budget is available by budget line (provider subsidies separate from administrative costs) and ensures payment administration, including maintaining project financial records and preparing quarterly and annual financial statements.

Composition of the PBF Payment Agency

The Payment Agency team may be constituted of the following staff:

- A Coordinator;
- An administrative and financial officer;
- A procurement officer;
- Accountants.

Checklist for the evaluation of the Payment Agency

The Payment Agency's evaluation will be done by the Pairs by another Directorate of the Ministry. The performance evaluation indicators of the Payment Agency are as follows:

Composite Indicators	Points
Payments of invoices from the actors (HF, RHD, DHMT, National PBF Unit, CDV Agency) are made within a period of 7 days following the receipt of the invoices (via the Portal)	50
Availability of updated information on budget monitoring (still available budget, trend and an estimate of period of unavailability of funds)	20
Quarterly reports are produced within 45 days after the end of the quarter	10
The rate of planned procurement is > 90%;	10
Monthly financial statements are produced within a period of 10 days after the end of the month	10
TOTAL	100

The Payment Agency should also be paid for the performance of its activities, such as each bank transfer made within a 7-day period.

6.9 Regional Health Directorates (RHD)

The roles of the RHDs are:

1. Develop a quarterly business plan for the region;
2. Negotiate and validate business plans and sign quarterly performance contracts with the Health District Authorities;
3. Evaluate the District Health Management Teams on a quarterly basis and determine their performance against which their performance bonuses of 15% will be paid;
4. Verify the Investment Units for District Health Management Teams infrastructure;
5. Attend the third month of the quarterly district validation committee meetings;
6. Organize and attend the quarterly peer group quality reviews of the regional hospitals
7. Enter the scores of the hospital peer group reviews and the District Health Management Teams evaluations in the PBF portal website;
8. Counter-verify the quality reviews conducted by the District Health Management Teams;
9. Organize quarterly coordination meetings for PBF activities.
10. Ensure periodic reporting and proper documentation and archiving;
11. Apply the indices management tool for participatory and transparent resource management at the level of the Regional Health Directorate;
12. Conduct inspections and accreditation once per semester of all pharmaceutical wholesalers.

6.9.1 Develop a regional Business Plan

To carry out its activities, the National PBF Unit of the Ministry of Public Health and the RHD sign a quarterly performance contract. The BP accompanying the contract is a quarterly work plan that outlines the strategies needed to achieve the objectives set for analyzing problems over time. The PBF Unit must finalize these two documents and send them for analysis by the 30th of the first month of the quarter. The business plan will be signed no later than the 30th of the second month of the quarter. The PBF Unit will evaluate RHD activities quarterly in collaboration with the representatives of the Directorates of the ministry of Health.

6.9.2 Negotiate and sign performance contracts with the District Health Management Teams.

The RHD and the DHMT negotiate and sign contracts for a period of three months after validating the DHMT's business plans. The DHMT must send these two documents to the RHD for analysis no later than the 5th of the second month of the quarter. The signature must be made no later than the 15th of the second month of the quarter. The RHD will ensure that DHMTs have bank accounts to receive transfers. After the DHMT signs their first PBF contract, or if the account number changes, the RHD transfers DHMT bank account details to the PBF Unit or another payment agency, accompanied by a copy of the contract.

6.9.3 Evaluation of the District Health Management Teams

The RHD evaluates 100% of districts under PBF each quarter by the 5th of the second month of the following quarter. This assessment determines the DHMT's output and quality results. At the end of this evaluation, the evaluation team leader and the district in-charge prepare and countersign a payment invoice for the DHMT.

6.9.4 Check the quality improvement bonuses for health district infrastructure

Award quality improvement bonuses to the health district and health facilities based on the proposals in their Business Plan. The audit will be conducted during the quarterly DHMT assessments no later than the 25th of the first month of the next quarter. The RHD civil engineer will conduct the verification and ensure compliance with Ministry of Public Health standards and Business Plan specifications. Payment will be made after the completion or acquisition of the work, in whole or in part, as defined in the business plan.

6.9.5 Participate in the last district validation committee meetings of each trimester

Quarterly validation for the last month of the quarter concerns: (1) Quantitative output for the last month of the quarter; (2) Quality reviews conducted during the quarter at the primary level by the DHMT and at the hospital level by the peer group evaluation; (3) Results of patient satisfaction surveys conducted by local NGOs.

6.9.6 Organize and attend quarterly peer group reviews of hospitals in the region

Historically, specialist doctors at national reference hospitals often conducted hospital quality evaluations. This was not realistic because specialists are scarce and do not have enough time to visit many hospitals regularly. Furthermore, hospital managers may not perceive such hierarchical inspections as constructive.

That is why, in 2003, Rwanda first introduced peer group review, and it has since become the standard in many PBF countries. Peer group quality evaluations are not hierarchical but rather an exercise among equals, or "peers," in which a team from one hospital visits another hospital. The spirit of the inter-collegial visits is to advise rather than impose unilateral instructions.

At least two other hospitals conduct peer group evaluations, each represented by, for example, three people: the managing doctor, administrator, and nursing manager. The RHD or, in smaller countries, the PBF unit may select peers from both hospitals. The local health authority and the CDV agency may also invite a representative. The visits should be disciplined so that participants arrive on time and do not waste each other's time. The exercise may begin with a review of the previous evaluation's recommendations. Doctors may review the technical medical aspects; administrators, the financial and

administrative performance; and nursing directors, the nursing aspects. The atmosphere of the visit should be frank, sincere, and transparent, without a “seeking errors” attitude, but rather focused on finding strategies to improve services together.

The results must be treated with *confidentiality* to avoid hospitals hiding information, but also to protect the individual confidentiality of patients such as people living with HIV. By the end of the visit, organize a joint meeting to discuss findings and recommendations.

6.9.7 Introduce peer group hospital quality review data and DHMT scores into the portal

The PBF regional data manager should enter the data from the peer quality review and the DHMT evaluations into the PBF portal. This data entry will be made no later than the 20th of the first month of the following quarter. The data are validated during the District Validation Meetings.

6.9.8 Counter-verifications of the quality reviews of the health facilities and accreditation

To obtain accreditation, the health facility must score above 80% in two consecutive quarters in the quality review conducted by the DHMT or in the peer group evaluation of hospitals. The RHD conducts a counter-verification to check whether the DHMT’s quality reviews follow standards. The person conducting this counter-verification must be a technical staff member at least at the level of a registered nurse, with experience in district health care. In each district, randomly or purposively select two health facilities. Counter-verification uses the same evaluation grid as the DHMT.

6.9.9 Organize quarterly regional coordination meetings of PBF activities.

By the 15th of the second month following the end of each quarter, the RHD shall hold a coordination meeting. This includes the district in-charges and hospital representatives in the region, as well as the manager or deputy manager of the CDV agency. The RHD may invite any other actor deemed useful. At the end of the meeting, prepare a report detailing the main problems identified and proposed solutions, along with the attendance list.

6.9.10 Provide periodic reporting and ensure proper documentation and archiving

The Regional Health Information and Planning Department should prepare and submit various health program reports to the MOH according to the respective deadlines.

All work tools, including business plans, RHD performance contracts with the PBF Unit, indices management tools, quarterly quality peer reviews of hospitals, district quarterly evaluation reports, bi-annual inspection reports of pharmaceutical wholesalers, hospitals' peer review questionnaires and health facility counter-evaluations, as well as copies of the health facility evaluation grids by the DHMTs, individual RHD staff records, administrative letters and other financial documents must be properly archived and filed in the filing cabinets. Keep documents for at least 5 years. All documents must also be properly classified in the various offices. Key documents in soft form must also be in hard copies and archived.

6.9.11 Ensure management of human and financial resources of the RHD

To properly manage human, material, and financial resources, the RHD must apply the indices management tool. It is a transparent and participatory management tool that allows analysis of revenues, identification and planning of the structure’s expenses, and distribution of profits, which can be transferred as a performance bonus to personnel.

6.9.12 Inspect pharmaceutical wholesalers

The RHD can inspect 50% of wholesalers per quarter. The number of wholesalers inspected this quarter will then be recorded in the RHD contract. First, map all regional wholesalers (approved and non-approved). During the inspections, the RHD team, which includes a pharmacist, uses the evaluation grid in the following paragraph. This grid considers the Ministry's standards for infrastructure, documents authorizing practice, authorization to import drugs, evidence of effective quality control of medicines, storage conditions, and drug sources in stock. The RHD has an inspection plan and collaborates with a quality control laboratory.

Wholesalers with a score of 80% or more will be accredited and will be allowed to sell essential medicines to health facilities; Wholesalers with scores between 50% and 80% with the potential to improve will receive recommendations for improvement. A new inspection will take place within 3 months. Wholesalers with scores below 50% and/or without the potential to improve will be closed. The RHD, with local authorities, must have a plan for closing these structures. At the end of the pharmacy review, the RHD will draw up a list of validated wholesalers authorized to distribute drugs to all Health Facilities, with a copy to districts and CDV Agencies.

6.10 Questionnaire for the inspection of pharmacies

ACCREDITATION QUESTIONNAIRE FOR (WHOLESALE) PHARMACIES			
A	ADMINISTRATION – STOCK AND PRICES	Points	Score
1	Valid wholesale license from Ministry of Public Health - A valid license should be available for viewing; - Inspector validates document on authenticity.	2	....
2	Good Distribution Practices Certificate from the Ministry of Public Health available - A valid license should be available for viewing; - Inspector validates document on authenticity.	2	....
3	Medicines and medical equipment are obtained from reputable sources - Verify documents from suppliers	4	....
4	Government approved list with generic essential drugs available with price list To be obtained from personnel.	5	....
5	Inventories of drugs are conducted each quarter - Monitor stock situation and identify discrepancies with inventory records	2	....
	TOTAL Points – Maximum 12 points	... / 15	 %
B	TRACER DRUGS with <i>SECURITY STOCK</i> = Average Monthly Consumption (AMC) / 2	Available YES > AMC / 2	Available NO < AMC / 2
	1. Amoxicillin caps /tabs 500 mg	0.5	0
	2. Amoxicillin syrup 250 mg/ 5ml	0.5	0
	3. Artesunate comp 50 mg – amodiaquine 135 mg ou AL	0.5	0
	4. Cotrimoxazole tabs 480 mg	0.5	0
	5. Diazepam 10 mg / 2ml – injectable	0.5	0
	6. Fer – acide folique 200 mg + 25 mg	0.5	0
	7. Mebendazole tabs 100 mg	0.5	0
	8. Methergine/syntocinone amp 10 Unités	0.5	0
	9. Metronidazole tabs 250 mg	0.5	0
	10. Paracetamol tabs 500 mg	0.5	0
	11. Artésunate injectable/Quinine tabs and quinine injectable	0.5	0
	12. SRO / oral sachet	0.5	0
	13. Sterile gloves	0.5	0
	14. Sterile Compresses	0.5	0
	15. Glucosé Solution 5%	0.5	0
	16. Ampicilline injectable 1g ou 500mg	0.5	0
	17. Azithromycine	0.5	0

18. Benzathin / Benzylpencilline	0.5	0
19. Betamethasone / Dexamethasone	0.5	0
20. Calcium Gluconate	0.5	0
21. Cefixime	0.5	0
22. Chlhexidine	0.5	0
23. Gentamicine	0.5	0
24. Hydralazine / Methyldopa / Nifedipine	0.5	0
25. Magnesium Sulfate	0.5	0
26. Misoprostol	0.5	0
27. Ocytocine	0.5	0
28. Quinine injectable	0.5	0
29. VAT.	0.5	0
30. Zinc	0.5	0
Reanimation Kit – <i>bought by health facility</i>		0
Delivery Kit – <i>bought by health facility</i>		0
Caesarean Section Kit – <i>bought by health facility</i>		0
Emergency Kit – <i>bought by health facility</i>		0
TOTAL - Maximum 15 points	... / 15	 %
OBSERVATIONS COMPONANT		

C	HYGIENE, STORAGE, TEMPERATURE, HUMIDITY	Points	Score
1	Electricity supply available 24/24, 7/7 - <i>Verify whether there is electricity in all store rooms</i> - <i>Verify that there is a back-up power supply (generator or other source of electricity)</i> - <i>Verify that alternative power supply is in good working order.</i>	10	....
2	Hygiene and Sanitation within building and surrounding area - <i>Floors and shelves should be clean and free of dirt and cobwebs.</i> - <i>Premises are safe, clean, properly maintained</i> - <i>Premises has toilets with running water</i>	3	....
3	Storage area is sufficient compared to the volume of stock - <i>Verify that the area is tidy with adequate aeration;</i> - <i>Area is not saturated and congested.</i>	3	....
4	Products are arranged in alphabetical order with stock cards - <i>Stock cards are available for each product;</i> - <i>Products arranged in alphabetical order</i>	3	....
5	Products well stored and not placed under direct sunlight. - <i>Verify that there are no commodities stored in direct contact with walls or floors</i> - <i>Records are updated up to date of supervision.</i> - <i>Verify that stockrooms are designed to shield products from direct sunlight.</i>	2	....
6	Management of damaged and / or expired goods - <i>Damaged and / or expired goods are segregated from useable stock</i> - <i>Goods are destroyed in safe manner so that they cannot re-enter the supply chain.</i> - <i>Verify documentation of destroyed goods</i>	5	....
7	Products stored with consideration given to expiry dates - <i>Inspector randomly check products</i> - <i>First enter, first out principle applied (FIFO)</i>	2	....
8	Store temperature and humidity monitored with mechanisms to manage fluctuations - <i>Verify temperature and humidity charts</i> - <i>Verify that entries are up to date up to supervision</i> - <i>Check presence and working condition of dehumidifiers, fans and air-conditioning units</i>	2	....
9	Fridge for storage of refrigerated commodities with equipment for transportation - <i>Verify presence of fridge, stock and temperature records</i> - <i>Temperature readings should be 2 degrees to 8 degrees centigrade</i> - <i>Verify that there are water-filled ice packs or cooler bags/boxes</i>	5	....
	TOTAL Points - 16 points maximum	35	 %
OBSERVATIONS COMPONANT			

	SECURITY	Points	Score
1	Access to storage area restricted to authorized personnel only - <i>Records with specified times maintained to show access of personnel and visitors.</i> - <i>Verify logbook</i>	3	....
2	Adequate security is provided in storage facilities and transit areas. - <i>There are security posts and fencing,</i> - <i>Lone-travelling discouraged</i>	2	....
3	Security of controlled drugs - <i>Controlled drugs are stored in a cabinet that is locked</i> - <i>Access restricted only to authorized persons only</i> - <i>Verify presence of cabinet who has and access to keys</i> - <i>Verify register with up-to-date entries for the receipt and supply for each controlled drug</i> - <i>Count and verify the physical quantity against the balance in the register or database</i>	5	....
	TOTAL Points - 16 points maximum	 / 10	 %

	QUALITY CONTROL ASSESSMENTS	Points	Score
1	Random quality control assessments conducted – physical inspection - <i>Inspector conducts visual inspection physical characteristics identity, expiry, uniformity</i>	5	
2	Random quality control assessments conducted – laboratory tests - <i>Inspector takes random samples for quality control in regional or national laboratories</i> - <i>Inspector takes samples each quarter or takes random samples e.g. with new consignments</i>	20	
	TOTAL Points - 16 points maximum	 / 25	 %

OBSERVATIONS COMPONANT

	TOTAL QUALITY ASSURANCE REVIEW PHARMACIES	Points	Score
49	TOTAL POINTS	 100	 %

Verify in how far all questions were correctly answered

Priority problems identified

.....

.....

Urgent actions proposed

.....

.....

Name and signature of inspection team

.....

Name and signature of in-charge of pharmacy

.....

6.11 The management instruments for the regional health departments

1. The Business Plan:

This is a quarterly work plan that outlines the strategies needed to achieve the objectives set for the Regional Health Department.

2. The contract:

Is a document that links the RHD to the Ministry of Health. The RHD and the PBF Unit sign it. It includes both parties' obligations, the definition of performance indicators and their price, payment terms, and provisions for fraud and conflict management.

3. Indices management tool:

It is a transparent, participatory management tool that enables revenue analysis, identification and planning of RHD expenses, and performance bonuses for staff.

4. DHMT quality evaluation grid:

The RHD uses this grid to evaluate DHMT performance.

5. Pharmaceutical Inspection Grid:

The grid includes several parts that evaluate procurement document inspection, medicine availability, storage conditions & hygiene, stable electricity supply, the cold chain, safety, and drug quality tests.

6. Evaluation questionnaire for health facilities at hospital level:

This hospital quality review questionnaire uses a list of SMART composite quality indicators. A composite indicator may include several items that must all be met to earn a point. Indicators can be worth 1, 2, 3, 4, or 5 points, depending on their importance. This tool proposes corrective measures for the problems identified at the end.

8. The portal

It is an electronic platform that allows the RHD to collect, use, and track data and indicators.

6.12 The evaluation and payment for the quantity and quality of Regional Health Departments

The quarterly payment of the PRSPs will be made as follows: (1) A fixed part based on the output indicators verified by the PBF unit and MOH; and (2) A variable part of 15% additional after the quality evaluation and indices management tool. The following tables provide the output indicators and the RHD quality review questionnaire. The PBF Unit sets the prices for the output indicators and the equity bonuses for the RHDs.

6.12.1 Monitoring & evaluation of the Regional Health Department by PBF Unit

The PBF Unit, together with the Ministry's technical directorates, will evaluate the RHD no later than the 25th of the second month of the following quarter. The evaluation will examine the status of the Business Plan's implementation. At the end of this first evaluation, the PBF Unit will assign the quality score to the RHD using the RHD quality questionnaire and another note for the evaluation of the quarterly management indices tool.

6.12.2 Quantity indicators

N	Output indicators	Number declared	Number verified	Unit subsidy	Total
1	Evaluation district health management team (DHMT) – 1 / quarter			F 120,000	
2	Participation in District Validation Committee – once per quarter			F 110,000	
3	Attend peer group quality review of a hospital - variable			F 300,000	
4	Inspection of a pharmaceutical wholesaler in the region – 1 / semester			F 110,000	
5	Counter-evaluation of a Health facility 1 / quarter			F 110,000	
6.	Special visit in region with TOR and recommendations			F 100,000	

The criteria for validating the quantity indicators of the RHD are included in the following table:

Output indicators DRSP	Validation Criteria
1. Evaluation of a district health management team	- The assessment is made by a team led by qualified staff (a doctor or a nurse with at least 5 years of experience with district health systems); - The DHMT evaluation questionnaire is completed and signed by the RHD representative who conducted the evaluation and the district in-charge. <i>(NB: A copy of the evaluation grid must always remain at the Health District and the RHD. In case differences are observed between the 2 copies, the payment will be cancelled);</i> - The RHC team leader and the district in-charge sign the invoice for the evaluated district, and the RHD validates it. This invoice is accompanied by the following supporting documents; (i) a copy of the summary page of the HF quality reviews done by the health districts and signed by the District representative who conducted the assessment and the In-charge of the HF, (ii) a copy of the summary page of the evaluation of the retail pharmacies signed by the pharmacist or the pharmacy technician who performed the inspection and the In-charge of the pharmacist inspected; (iii) a copy of the district quarterly report containing the analyses and recommendations made to the HF after their quality evaluation visits; and (iv) copies of the reports of the DHMT quarterly meetings; The RHD report submitted to the MOH includes recommendations for the District Health Management Team to improve qualitative and quantitative performance.
2. Participation in a district validation committee meeting	- The representative of the RHD, who attends the district validation committee meeting, is the person who also conducted the peer group evaluation of the district hospital(s) or the superior to whom he/she provided feedback on the evaluation; - The hospital quality evaluation results were presented at the district validation meeting and uploaded to the national PBF portal. - The RHD has a copy of the district validation meeting report and the attendance list signed by the persons attending the meeting.
3. Peer group quality evaluation of a hospital	- The copy of the peer group evaluation questionnaire is completed, includes recommendations for the hospital, and is signed by the hospital director and all members of the evaluation team, with their names and qualifications. <i>(NB: A copy of the evaluation grid must always remain in the hospital and in the RHD. If verification reveals differences between the 2 copies, the payment will be canceled.</i> - The peer group hospital evaluation is carried out by evaluators from at least two other hospitals. The evaluators' team consists of at least: (i) a doctor / if possible, director; (ii) a chief nursing / general supervisor; and (iii) an administrative officer. A RHD official leads the team. <i>Check the list of signatories of the evaluation grid</i> - The report of the RHD submitted to the MOH / PBF Unit includes the analysis and recommendations to the Hospital
4. Inspection of pharmaceutical wholesalers in the region	- A team led by a pharmacist carries out the inspection. - The copy of the inspection questionnaire is completed and signed by the Pharmacist of the RHD who conducted the evaluation and the manager of the wholesaler inspected. <i>(NB: A copy of the inspection grid must always remain with the wholesaler before departure);</i> - The list of essential medicines supplied by the wholesaler and the prices are annexed to the inspection grid. - The report of the RHD submitted to the MOH includes recommendations to the wholesaler for the improvement of quality; - The list of approved wholesalers is appended to the RHD report.

5. Counter-evaluation of a health facility, previously evaluated by DHMT	- The counter-evaluation team is led by a technical staff member with at least a registered nurse qualification and 5 years' experience in Health Districts. - The quality counter-evaluation questionnaire is completed and signed by the RHD representative, who conducted the evaluation, and the in-charge of the health centre or hospital (<i>NB: A copy of the Counter-Evaluation grid must always remain in the HF before departure. In case differences of more than 10% are observed between the 2 copies, the contract will be canceled</i>); - The evaluation results and recommendations of the counter-evaluation by the RHD of the HF are available in writing and made available to the district (<i>discordances discovered?</i>); - The RHD report to the MOH includes an analysis of the counter-evaluation results and recommendations to the health district.
6. Special visit Regional Team with TOR, report written & recommendations	- Attached to the invoice is the Terms of Reference, which justify a special visit; - The report of the special visit contains at least 2 recommendations - And to what extent at least half of the recommendations have been implemented.

6.12.3 Criteria for the quality performance of the regional departments

The quality bonus payment may be calculated as follows: the payments for the output activities multiplied by 15% and the quality score based on the criteria in the following table.

	Criteria for the quarterly assessments of the Regional Delegations of Public Health by the National PBF Unit	Points	Score
1	Map of region available - Map displayed showing roads, natural barriers, health districts, regional and district hospitals, private hospitals, wholesale pharmaceutical suppliers, and location of key collaborating institutions - Distances between region and districts indicated (in km and average hours of travel). - Map accessible for visitors and in good condition.	5	....
2	Reports in key documents available and accessible (1) Quarterly RHD Business Plan and contract; (2) Quarterly hospital quality peer review checklists; (3) Quarterly district evaluation reports done by RHD; (4) Biannual inspection reports of wholesale pharmaceutical suppliers; (5) Individual files of RHD staff, administrative letters. - Documents neatly arranged in folders and accessible in 5 minutes	5	....
3	RHD Business Plan of last quarter is available and used. - Business Plan of last quarter is available and accessible within 5 minutes; - Region has identified in the last quarter's BP at least 4 key problems and proposed solutions; - Evidence that 3 of the 4 proposed solutions are implemented.	5	....
4	Peer quality reviews of hospitals performed. - At least 90% of quality peer reviews are completed by the end of the quarter; - The RHD conducted the peer review of at least one hospital during the quarter. - The quality questionnaire with scores and recommendations are available; - Evaluation team discusses two successive hospital review checklists with RHD and checks whether recommendations of previous review were implemented.	10	....
5	RHD evaluated the health districts, and PBF Unit validated the results - The RHD evaluated 100% of districts before the 25th of the first month of the following quarter; - The RHD conducted at least one district evaluation themselves during the quarter. - National PBF Unit each quarter counter verifies at least two districts the evaluations done by the RDPH and then validates the outputs and quality score. One district will be randomly selected district, and another district may be targeted in case of suspicion of cheating. The difference between RDPH score and that of the National PBF Unit should not be greater than 10%. - National PBF Unit validated the quarterly district evaluations done by the RDPH;	10	....
6	Quarterly meetings of district validation committee assisted. - RHD assists 100% of the last quarter district validation meetings where output, quality and patient surveys by local NGOs are discussed; - The representative of the Delegation to the validation committee of the district is the person who also conducted the peer group evaluation of a hospital in the district or his / her superior to which he / she gave the feedback of the evaluation - Copy of attendance sheet and report is available	10	....

7	Accreditation and counter verification of health facilities carried out by DHMT and RHD - Health facilities will be accredited if the quality review score is above 80% during two successive visits by the district health management team (DHMT). - Health facilities lose their accreditation if during two successive quality reviews by the DHMT the scores are below 80%; - The selection of the health facilities for counter-verification by the RHD visits is done randomly but should include at least 1 health facility per district. In districts where there are suspicions of fraud more health facilities will be selected for inspection;	15	....
8	Accreditation of pharmaceutical wholesalers carried out. - RHD has a pharmacist, an inspection checklist and a quality control facility able to test at least 75% of essential drugs; - A mapping is available of all (licensed and non-licensed) wholesalers in the region; - RHD conduct twice per year an accreditation inspection of all wholesalers; - Wholesalers with a score of 80% or more are accredited and will be authorised to sell essential drugs to PBF health facilities; - Wholesalers with scores between 50% and 80% and the potential to improve were given recommendations. Within 2 months a new inspection took place; - All wholesalers with scores below 50% and /or without potential to improve were closed; - The RHD has a plan with the local authorities for the closure of illegal wholesalers. (Inspection report and closure request addressed to the appropriate local administrative authorities)	15	....
9	Presence of latrines in sufficient number and in good condition in the RHD - At least one latrine accessible to visitors and well maintained: - With doors closing - No flies, no cobwebs, no dust, no smell - With walls in good condition and clean, - Well covered with tiles without water flowing inside - Pots without corrosion - Cleaned - no visible faecal matter - Two barrels of at least 100 litres of reserve water per toilet	5	
10	Cleanliness of the courtyard in the RHD - Absence of papers and other garbage in the courtyard; - Maintenance of the yard (cut grass - well maintained garden, if necessary, no animal excreta, no stagnant water puddles) - Availability of non-full garbage cans in the yard and accessible to visitors	5	
11	Hygienic conditions in the RHD offices - Waste bins available in each office - Clean dust-free windows, - Window curtains clean - Clean floor - Without spider web - Dust free cabinets and shelves, without spider webs - All documents tidy on desks and in shelves and cabinets - The office toilets must fulfil the same conditions of cleanliness as those described above	5	
12	Financial and accounting documents available and well shelved - Accounting documents held well, tidy and accessible in less than 5 minutes, (retained for at least 5 years);	5	
13	Established system of monthly calculation of performance bonuses exists and is known by staff - Criteria for the calculation of the performance premium established with staff informed about the indices management tool; - Calculation of performance bonuses in a transparent and participatory way; - Interview 3 to 5 people at random.	5	
	TOTAL	100	....

6.12.4 Invoice template and payment terms

The RHD will be paid quarterly. An invoice will include the total quantitative production, the regional equity bonus, and the quality bonus amount. The PBF Unit will enter

Output indicators for RHDs	Quantity Declared	Quantity Validated	Unit cost	Total cost
1. Evaluation of a district team (DMT)			F 120,000	
2. Participation in a District Validation Committee			F 110,000	
3. Evaluation of the quality of a hospital by the Peers			F 300,000	
4. Inspection of a pharmaceutical wholesaler in the region			F 110,000	
5. Counter-evaluation of a HF			F 110,000	
6. Special visit with TOR and recommendations			F 100,000	
Total 1				
Equity Bonus (_____ % x Total 1)				
Total 2 (Total 1 plus equity bonus)				
Quality bonus (= Total 2 15% x quality score _____ %)				
Total Invoice (= Total 2 + Quality Bonus)				

6.13 Modalities of the RHD indices management tool and integration in the evaluation grid

The RHD will also use the indices management tool. Each RHD develops its own indices tool. The RHD income statement and expenses are in the table below. The criteria below are used to evaluate the RHD's application of the indices management tool. The RHD will establish the criteria for paying individual performance bonuses. The following criteria may be used, such as promptness in executing tasks, lost/worked hours, individual evaluation, and the quality assessment score obtained by the RHD.

The elements of the DRS Income, Expenses and Viability Indicators sheet are shown in the table below.

Revenues	Amount received	%
State budget		
PBF Subsidies		
Own Resources		
Income from other partners		
TOTAL Revenues		

Expenses	Amount spent	%
Fixed salaries		
Operating expenses including for missions		
Investments, including depreciation of equipment		
Increase in bank reserve (for salary + operating expenses)		
Sub Total Expenses		
Performance bonus (Total revenue - total other expenses)		
TOTAL		

The following elements are used to evaluate the RHD's use of the indices management tool.

CRITERIA REVIEW INDICES MANAGEMENT TOOL	Norm	Total points
Quarterly indices management report available. - Analyses revenues for the quarter, plans expenditures and analyses recommendations of the peer group evaluations. - Meeting conducted. Check attendance list + signature	25 points if present, 0 if absent	25
- Personnel evaluation form and order of transfer of the bonuses available (the total amount of the premium must correspond to that noted on the summary of income / expenditure)	25 points if completed and signed with phone number, 0 otherwise	25
Participation of staff at indices management tool process. - Interview at least two people per department shows that they have participated and that they know the receipts, expenses, the envelope of the premiums and the criteria of distribution, that the bonuses marked in front of his name are received.	50	50
TOTAL		100

6.14 Roles of the District Health Management Team

Countries have different local regulatory health systems. In most countries, they are district (health) authorities; in Nigeria, they are local government authorities; and in Gabon, they are regional health departments. In this course book, we refer to the District Management Teams (DMTs), which usually cover a target population of between 50,000 and 400,000 inhabitants. They must ensure provider quality, particularly in retail pharmacies.

The regional department and the district management teams sign a performance contract under the supervision of the National PBF Unit and the MOH. The regional departments will conduct quarterly evaluations of the DMT's activities. The National PBF Unit, in collaboration with the MOH, may counter-verify the regions' evaluations on a random basis by selecting at least one district each quarter.

The roles of the DHMTs are the following:

1. Develop each quarter a district business plan;
2. Conduct the mapping and rationalization of the district health map for the primary and hospital level catchment areas annually without discrimination against either public or private providers;
3. Conduct each quarter technical quality reviews of providers at the primary level;
4. Accredite health facilities
5. Organize, in collaboration with the CDV Agency and the RHD, the validation of data and invoices for the payment of subsidies for the health facilities in the district;
6. Inspect all retail pharmacies in the district;
7. Conduct quarterly coordination/evaluation/planning meetings with providers and other key district partners;
8. Enter the quality review data of the primary level health facilities in the national PBF portal;
9. Ensure the proper management of the material and financial resources of the district;
10. Ensure proper documentation and archiving.

6.14.1 Develop a business plan for the Health District

To carry out its activities, the RHD and the DHMT, represented by the District Medical Officer, sign a quarterly performance contract. The business plan is a quarterly work plan that outlines strategies for

achieving the objectives set after analyzing the district's problems. The DHMT develops a business plan, which will be an annex to the contract with the RHD. Send the contract and business plan to the RHD for analysis no later than the 5th of the second month of the quarter. The business plan must be signed no later than the 15th of the second month of the quarter.

6.14.2 Map the health care providers and rationalize the principal and secondary catchment areas

For a more detailed description of the mapping and rationalization process, see paragraph 6.15 below.

The DMT carries out the mapping, rationalizes the district into primary provider catchment areas, and updates them as necessary. This is done as follows:

1. Conduct a mapping of health facilities in the health district, including *private* not-for-profit and for-profit providers.
2. Update the district population and existing health facility catchment areas using the best available demographic data.
3. Organize a workshop with representatives of all health facilities and district authorities to validate the data and produce a list of catchment areas. The workshop objective will be to rationalize the population in the catchment areas so that they cover between 5,000 and 8,000 inhabitants in rural areas and between 8,000 and 15,000 in urban areas. Hospitals can cover a population of between 50,000 and 200,000. This is achieved either by merging the old catchment areas or by dividing large areas into new, smaller catchment areas of between 5,000 and 15,000.

Share the district health map showing the catchment areas with relevant stakeholders and post it on the DMT wall. Send a copy of the list of health facilities, including their catchment areas and populations, to the CDV Agency and the RHD.

6.14.3 Evaluate the professional quality of providers at primary level

For most DHMTs, conducting quality reviews of primary-level providers is their main activity because it means spending one day per quarter at each health facility with at least two qualified staff members. For a detailed description, see paragraph 6.18.

6.14.4 Accreditation of health facilities

Experience in different countries shows that the average baseline score is between 10% and 40%, which is far from the accreditation standard of 80%. If regulators adhered to the standards, it would mean closing most health facilities because they pose a danger to the population's health. This is obviously not possible and would create an informal sector without *any* control.

Regulators and CDV agency staff should therefore:

1. Review the quality of all health facilities in the district both in the public and private sector;
2. Develop performance contracts with enough providers capable of serving the complete population;
3. Agree with health facilities on how they will progressively improve their quality scores toward the desired 80%. During the next review, follow up on the extent to which previous recommendations have been implemented, and at the end of the evaluation, formulate new recommendations. A feedback session should be organized for all staff, and a report should be produced, and a copy should be kept at the health facility and at the district office;
4. Health facilities that score 80% or more in two successive district quality reviews will receive accreditation. The regional health authority must double-check this accreditation and, if necessary,

an independent counter-evaluation team must also do so. Yet, after obtaining accreditation, if health facilities receive scores below 80% on two successive quality reviews by the DHMT, they will lose their accreditation.

6.14.5 Organize monthly district validation committee meetings

The District Medical Officer or his representative chairs the monthly committee meetings to validate health facilities' output invoices, held before the 30th of the next month. The CDV Agency Manager or his representative, along with all the CDV district medical verification officers, attends the meetings. The committee may decide to invite two representatives from the health facilities (one from the primary level and one from the hospital level), chosen by the peers of those facilities.

The validation meeting of the last month of the quarter concerns: (1) the quantitative outputs and invoices of the health facility for the last month of the quarter and the indices management tool; (2) the quality reviews conducted during the quarter at the primary level by the DHMT and the peer group review of the hospitals and; (3) results of the household interviews conducted by local NGOs.

The RHD representative presents the data from the hospital peer review at the meeting. The invoices generated during the validation meetings will be submitted to the MOH PBF portal. They will be printed in triplicate and signed by the District Medical Officer or his representative and the Manager or the Deputy Manager of the CDV Agency. The health facility, the district, and the CDV Agency keep copies. The Health District prepares a summary report of all health facility invoices, with recommendations, and the members who participated in the meeting sign it. The Health District scans and uploads this summary report to the portal.

The participation of the various actors (transport and per diem, if appropriate, and other) is covered in their respective budgets. The DHMT bears the meeting costs.

6.14.6 Inspect retail pharmacies in the district

First, the DHMT maps all retail pharmacies (approved or not approved by the MOH). During inspections, the DHMT team should include at least one pharmacy technician. The inspection questionnaire covers the Ministry's standards for infrastructure, documents authorizing the practice of the profession, storage conditions, and the source of supply for drugs in stock.

Retail pharmacies with a score of 80% or higher will be accredited and allowed to sell essential medicines to the population. Pharmacies with scores between 50% and 80%, but with potential to improve, will receive recommendations. A new inspection must then take place within 3 months. Pharmacies with scores below 50% and/or without the potential to improve will be closed. The DHMT should develop a plan with local authorities for closing these structures. At the end of the inspection, the DHMT establishes the list of validated and retained pharmacies to be distributed in the district and to the populations, with a copy to the RHD.

6.14.7 Conduct quarterly coordination/evaluation and planning meetings

The DMT organizes a quarterly coordination/evaluation/planning meeting. The District Medical Officer chairs this one- or two-day meeting. During this meeting, the district's performance and that of health facilities will be presented and discussed. Training sessions may be conducted on topics related to problems identified during health facility quality reviews and pharmacy inspections. The team may discuss PBF best-practice issues. Prepare a report showing the main problems identified and the proposed recommendations, along with the attendance list.

6.14.8 Enter the results of the health facility quality review in the MOH PBF portal

The DMT should enter the data from the health facility quality reviews into the PBF portal. This data entry is made no later than the 10th of the first month of the following quarter.

6.14.9 Ensure the management of human, equipment, and financial resources of the DHMT

To manage the DHMT's human, material, and financial resources, the DMT must apply the indices management tool. It allows analysis of revenues, identification and planning of expenses, and the distribution of profits, which can be distributed as performance bonuses to staff. The DMT staff propose the criteria for the indices management tool, which is applied monthly.

6.14.10 Ensure proper documentation and archiving

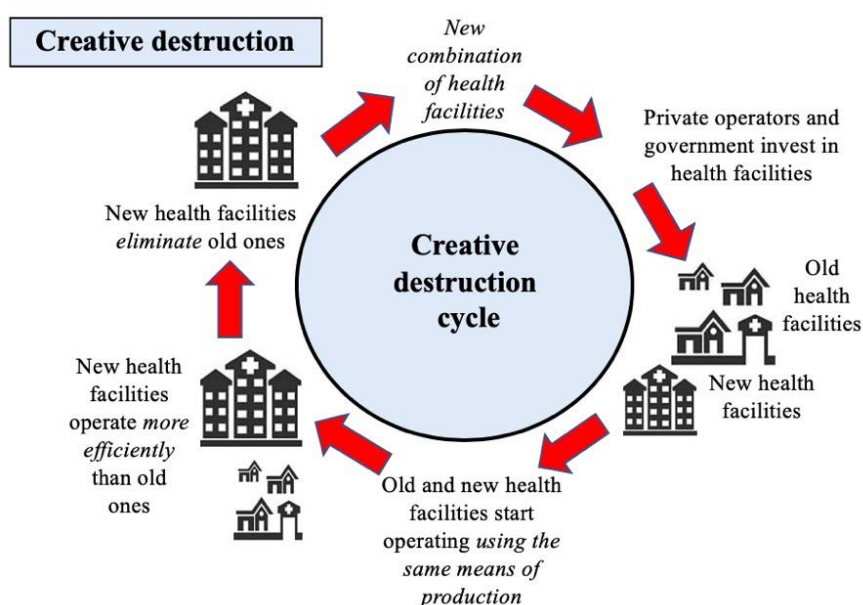
All working tools, including the business plans, the district performance contracts with the Regional Health Department, the indices management tools, quarterly quality reviews of the health facilities, district coordination reports, semi-annual inspection reports of retail pharmacies, individual staff records, administrative letters, and financial records must be properly archived and filed in the filing cabinets. Keep important documents for at least five years, in both hard and soft copies.

6.15 Mapping and rationalization of the catchment areas in the health district

Rationalizing health areas at the primary and hospital levels is one of the key roles of health district regulators. This should be done without any bias of the regulator in favour or against certain providers from the public or private sector.

Some facilities – both government and private - may not be eligible at all for a contract when the quality is below acceptable standards. Loss-making or below-standard quality facilities should disappear, allowing efficient facilities to take their place. This is “**creative destruction**” that the economist Shumacher in 1942 described as the “process of transformation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one”.

In other (rural) areas, the regulator may not find any health structure; in this case, a private investor or the government must start a new facility. The CDV Agency can accelerate its construction, equipment, or human resource recruitment by offering Quality Improvement Bonuses or Investment Units.



The mapping and rationalization process will be carried out as follows:

1. Begin by mapping the HF in the health district. Use the following questionnaire for this purpose. Interviewers selected from district management teams familiar with the environment can conduct the mapping. The mapping includes all formal and informal public and private health facilities. A good approach is to ask staff at each health facility whether they know of other previously unknown health facilities operating nearby. An external expert specializing in public health, PBF, and mapping can supervise the mapping exercise. The external expert should also ensure the work's neutrality and avoid bias for or against any facility.
2. Collect information on the district's population and health facilities. If the data are not from the same year as the PBF intervention, adjust them by multiplying by the annual growth rate. These data may come from either the immunization program, local municipalities, or other demographic studies.
3. Organize a workshop with representatives of all health facilities and district authorities. Confirm with participants that the (estimated) demographic data are correct. If there is a difference, the catchment-area population can be increased or decreased.
4. The next step during the workshop is to rationalize the population in the catchment areas to an average of 12,000 for urban areas and 8,000 for rural areas. This is achieved by merging small catchment areas into larger ones or by dividing overly large catchment areas into smaller ones. For a health area with a main contract, all activities in the minimum package must be provided, or at least the main contractor must commit to evolving toward the complete package.
5. For hospitals, a target population of 50,000 to 200,000 people may be used.
6. Once the areas are identified, it is necessary to determine who will obtain the main contract. The HF with the highest score for the activities already carried out will be selected as the main contractor, and the others will receive secondary contracts. In urban areas, typically 70-90% of the main contractors are private, but in rural areas one can also find (often religious) private facilities.
7. The CDV Agency (after consulting the DHMT) may change primary and secondary contracts based on developments in the catchment area and the quality of each facility's services.

	Questionnaire for mapping public and private health facilities in the district		Activities carried out Yes / No	Score = 0 / 1
1	Name CS or hospital:	1	OPD consultations - Children	
2	Population Current HF area:	2	OPD consultations - Adult	
3	HF is in urban / rural area	3	Treatment of malaria	
4	Name suburb / village	4	Treatment of tuberculosis	
5	HF is public / private	5	Vaccination for children	
6	Name of interviewee:	6	Vaccination pregnant women	
7	Phone number:	7	Growth Monitoring	
8	Qualification:	8	Prenatal consultation	
9	Function:	9	Normal delivery	
10	If other - Full name of In-Charge of HF:	10	Caesarean section	
11	Phone number In-charge:	11	Post-natal consultation	
12	Latitude:	12	FP: pill - injectables	
13	Longitude:	13	FP: IUD - Implant	
14	Altitude (in meters):	14	FP: tubal ligation - vasectomy	
15	Distance centre district to HF - in km:	15	VCT HIV	
16	Distance centre district to HF - in hrs trip:	16	PMTCT - treatment mother	
17	Existence of Health Committee yes / no	17	PMTCT - treatment new born	
18	Name President:	18	Treatment PLVIH - ARVs	
19	Phone number:	19	Laboratory services	
20	Health Committee active: yes / no	20	Department of Hospitalization	
21	Bank account HF:		Total Score	.. / 20

22	Name of bank HF:	Nbr	Number of hospital beds	
	Staff		HF invited for contract?	
23	Qualified staff - physician		Type Contract: Primary / Hospital / Sub-contract	
24	Qualified staff - nursing - lab		If under contract: Who is the main contract holder?	
25	Qualified staff - admin or other			
	TOTAL Qualified personnel			
26	Support staff			

6.16 The DMT indices management tool and its integration in the quality evaluation

The indices management tool will also be used for the DHMT. The district will establish criteria for paying individual performance bonuses to staff. Criteria that may be used include promptness in executing tasks, lost/worked hours, individual evaluation, quality assessment score obtained by the DHMT, etc.

Revenues	Amount received	%
Government payments: - salaries – operational budget		
PBF Subsidies		
Resources from other partners		
TOTAL		

Expenses	Amount spent	%
Salary payment		
Operating expenses including missions		
Investments, including depreciation of equipment		
Increase in bank reserve (for salary + operating expenses)		
Sub Total Expenses		
Performance bonus (total revenue - total other expenses)		
TOTAL		

The following elements are used by the national Regional Health Department to evaluate the DHMT's use of the Indices Tool.

<i>If the revenue and expenditure are not balanced, the evaluation of the index tool cannot continue and the DHMT loses everything.</i>		
CRITERIA	Norm	Total points
Quarterly Technical Report available. - Analyses revenues for the quarter, plans expenditures and analyses recommendations of the peer group evaluations. - Meeting conducted. Check attendance list + signature	25 points if present, 0 if absent	25
- Personnel evaluation form and order of transfer of the bonuses available (the total amount of the premium must correspond to that noted on the summary of income / expenditure)	25 points if completed and signed with phone number, 0 otherwise	25
Participation of staff at indices management tool process. - Interview at least two people per department shows that they have participated and that they know the receipts, expenses, the envelope of the premiums and the criteria of distribution, that the bonuses marked in front of his name are received.	50	50
TOTAL		100

6.17 DHMT working tools

- 1. The Business Plan:** Is a quarterly work plan that outlines the strategies needed to achieve the objectives set for the Health District.
- 2. The contract:** It is a document that connects the Regional Health Department and the DMT; It is signed by the Director of the Region and the DMO. It includes the obligations of both parties, the definition of performance indicators and their price, payment terms, and provisions for cases of fraud and conflict management.
- 3. Indices management tool:** It is a transparent and participatory management tool that allows analysis of the revenues, identification and planning of the expenses of the district, and distribution of the profits, which can be paid in the form of a performance bonus to the staff.
- 4. DHMT quality review questionnaire:** This is a questionnaire that is used by the RHD to evaluate the performance of the DMT.
- 5. Pharmaceutical Inspection questionnaire:** This questionnaire evaluates procurement documents, availability of medicines, storage conditions and hygiene, permanent electricity, cold chain, safety, and conducts drug quality tests.
- 6. Questionnaire for District Mapping:** It is a questionnaire that allows for general information (location, distance, population, personnel, etc.) on the public and private health facilities in the district and collects specific information about the activities carried out.
- 7. The MOH PBF portal:** It is an electronic platform that allows the DMT to collect data, use data, and track indicators.

6.18 DHMT evaluation process

The Regional Health Department will evaluate the DHMT no later than the 25th of the first month of the following quarter. The evaluation will cover the Business Plan's implementation status. After this first evaluation, the RHD will recommend actions to the DHMT based on the DHMT quality questionnaire above and its evaluation of the DHMT indices management tool. The two reviews will be used to calculate the overall quality bonus.

An invoice detailing the total quantity produced, the equity bonus, and the quality bonus will be issued. This will be uploaded to the MOH PBF portal at the end of the RHD's evaluation. The invoice will be paid within 7 days.

6.19 The payment of the DHMT – quantity and quality

The DMT quarterly payment will be made as follows: (1) A fixed part is based on the output activities carried out and verified by the RHD; (2) The equity bonus is added depending on the vulnerability of the district; and (3) the quality bonus is added. The quality bonus is calculated by adding the total output activities and the equity bonus, then multiplying the sum by 15% x the quality score, which is based on the indicators presented on the next page. The MOH defines the prices of the output indicators and the district equity bonuses.

N	Output indicators	Number	Unit Cost	Total Cost
1	Quality review of a health facility		F 60,000	F
2	Mapping and rationalisation of health district in catchment areas		F 350,000	F
3	Inspection of a retail pharmacy in the district		F 50,000	F
4	Coordination meeting with on average 30 health facility managers after quality reviews		F 300,000	F
5	Organization of District Validation Committee Meeting		F 150,000	F
6	Special visit with TOR and recommendations		F 100,000	F
7	Quality Improvement Bonus or Investment Unit		F 1 500 000	F
	Total 1			F
	Equity bonus (... % x Total 1)			F
	Total 2 (Total 1 + equity bonus)			F
	Quality bonus (= total 2 x 15% x quality score %)			F
	Total Invoice (Total 2 + quality bonus)			F

6.19.1 The description of the output indicators of the DHMT

The criteria for validating the health district quantity indicators are included in the following table:

Output indicators DHMT	Validation Criteria
1. Quality assessments of a health facility	- The original copy of the evaluation questionnaire is complete, includes recommendations made to HF and is signed by the Chief of the HF and members of the evaluation team with their names and qualifications. <i>(NB A copy of the evaluation grid must always remain in the HF and another at the DHMT. If during verification the two copies are different, the payment will be cancelled)</i> - The evaluation team is led by a DHMT staff. Check on the list of signatories in the evaluation questionnaire. - The report includes an analysis and recommendations for the HF and describes what happened with the recommendation of the previous quality review.
2. Mapping and rationalisation of District in HF catchment areas	- Was there a need to rationalise the catchment areas? - The report shows information about the old- and new catchment areas; - A map is available showing the villages /suburbs with population, health facilities, and distances in km and time of traveling.
3. Evaluation of a Retail Pharmacies in the District	- The evaluation is carried out by a team led by at least one technician in pharmaceutical sciences. - The copy of the evaluation grid is complete and signed by the staff of the DMT, who conducted the evaluation and the person in charge of the pharmacy evaluated. <i>(NB: Copies of the evaluation questionnaire must remain at the pharmacy prior to departure and at the DMT. In case that there are differences between the two copies, the payment will be cancelled);</i> - The DMT report includes recommendations to the pharmacy for quality improvement.
4. Coordination meeting with HF in charges after the quality reviews	- A Report with the list of persons, who attended - The report should present the activities with which HF have problems => Actions proposed and undertaken by DHMT to solve them. - If there was training on a specific topic at the meeting, the training modules should be available in request. -
5. Special visit by DHMT with TOR, report written and recommendations	- Attached to the invoice are the Terms of Reference, which justify the special visit; - The report of the special visit contains at least 2 recommendations - To what extent at least half of the recommendations have been implemented.
6. Quality Improvement Bonus	- In the business plan, the DHMT may have identified the need to invest in the infrastructure, the equipment or the human resources. Once the investments are implemented, the QIB can be validated by the Regional Health Department.

6.19.2 The DMT quality indicators

The quality indicators for the DHMT performance conducted by the RHD are the following:

	Criteria for the quarterly evaluations of the district management teams by the Regional Delegations	Points
1	District maps available. - Map shows main roads, hospitals, main health facility contract holders, pharmacies, natural barriers, and location of key collaborating institutions with distances (km and hours of travel). - Map is accessible for visitors and in good condition.	5
2	Reports of key documents available. (1) Quality reviews; (2) Meetings of the monthly district PBF validation committee; (3) Inspections of pharmacies; (4) Individual files of DHMT staff, administrative letters. - Documents neatly into folders and accessible within 5 minutes for evaluators	5
3	Mapping and rationalisation of provider catchment areas carried out - The DMT has updated each year the rationalisation of the catchment areas with main contract holders at primary level and hospital level. There is a list with map showing the contract holders; - Population in catchment areas of main contract holders is not below 5,000 and not above 15,000; - The average of all primary main contracts holders is between 8,000 and 12,000; - At least 20% of main HF contract holders have secondary (or sub)-contract(s).	5
4	Quarterly District Business Plan (BP) available and implemented - The Business Plan of the last quarter is available with contract signed between Regional Department and DMT, accessible within 5 minutes; - District has identified at least 4 key problems for the last quarter BP and has proposed solutions - What is the evidence that at least 3 of those 4 proposed activities are implemented?	5
5	HF quality reviews conducted by the district health management teams and accreditation - At least 90% of quality reviews were done by the end of the quarter by at least 2 staff of the DMT; - Check whether the reports are available with recommendations; - Health facilities will be accredited, with a score of 80% or more during two successive visits of the quality reviews conducted by DHMT; - The Health Facility lose their accreditation if during two successive quality reviews the scores are less than 80%; - Review two successive reports of quality reviews; - Verifies whether recommendations from quality reviews of the previous quarter were followed.	15
6	Meetings of district validation committees conducted - Monthly HF output data with invoices submitted by CDV verification officers were presented to district PBF committee and validated. - Monthly meetings attended by District Officer or representative, CDV Agency Manager or Deputy and all CDV district verification officers. The committee may decide to invite a representative of the primary level and the hospital level - Quarterly quality review scores conducted and submitted by DMT discussed and validated by committee at the first month after the previous quarter - Quarterly community verification and satisfaction survey data conducted by CBOs submitted by CDV community verification officer discussed and validated by committee - Quarterly meetings validating output, quality and CBO data attended by same team as for monthly meetings + representative of the Region, CDV community verifications officers. Committee may decide to invite a representative of the CBOs. - 100% of the validation committee meetings held before the end of next month - Validation meeting reports available with signatures of participants	15
7	The quality review scores with invoices of health facilities are submitted to the PBF portal - A DMT member has submitted 100% of quality scores of main contract holders at primary level within 7 days after the district validation committee meeting	5
8	Inspections of (retail) pharmacies for accreditation done. - A mapping is available of (licensed and non-licensed) pharmacies in the district with a baseline inspection; - Based on an annual plan, 100% of the pharmacies (pharmacy, retail) are inspected twice per year by at least a pharmacy technician; - Pharmacies with scores above 80% are accredited; - Pharmacies with scores between 50% and 80% and the potential to improve have been given recommendations for improvement. Within 2 months a new inspection took place; - All pharmacies with scores below 50% and / or without the potential to improve will be closed; - District has a plan with local authorities for the closure of illegal pharmacy outlets.	15

9	District quarterly coordination meetings conducted - HF heads, CDV Agency and key district stakeholders are invited - Report of the last two quarterly meetings are available with list of participants - Report of last quarter coordination meeting identified 4 key problems and solutions were proposed - There is evidence that 3 of 4 priority problems were solved during the current quarter	5
10	Presence of latrines in sufficient number and in good condition - At least one latrine accessible to visitors and well maintained: - With doors closing - No flies, no cobwebs, no dust, no smell - With walls in good condition and clean, - Well covered with tiles without water flowing inside - Pots without corrosion - Cleaned - no visible faecal matter - Two barrels of at least 100 litres of reserve water per toilet	5
11	Cleanliness of the courtyard - Absence of papers and other garbage in the courtyard; - Maintenance of the yard (cut grass - well maintained garden if necessary, no animal excreta, no stagnant water puddles) - Availability of non-full garbage cans in the yard and accessible to visitors.	5
12	Hygienic conditions in offices - Waste bins available in each office - Clean dust-free windows, - Window curtains clean - Clean floor - Dust free cabinets and shelves, without spider webs - All documents tidy on desks and in shelves and cabinets <i>The office toilets must fulfil the same conditions of cleanliness as those described above</i>	5
13	Financial and accounting documents available and well shelved <i>Accounting documents held well, tidy and accessible in less than 5 minutes, (retained for at least 5 years);</i>	5
14	Established system of monthly calculation of performance bonuses exists and is known by staff - Criteria for the calculation of the performance premium established with staff informed about the indices management tool; - Calculation of performance bonuses in a transparent and participatory way; - Interview 3 to 5 people at random.	5
	TOTAL	100

Priority issues identified

.....

.....

Evaluation recommendations

.....

.....

.....

Made in the.....

Evaluators' Team (Names, Function and Signature)

- (1)
- (2)
- (3)
- (4)

For the DMT (Names, Function, Signature, Stamp).

6.20 Strategies and instruments for quality assurance in PBF

6.20.1 Different strategies

Quality services being the main aim of PBF is implemented through several strategies:

1. *Health facility managers* must have the *resources* to improve quality. This requires at least USD 7 per year per beneficiary for health centers, USD 20 for hospitals, and USD 100 per pupil at primary schools.
2. *Managers* must have the *autonomy to use their resources* to improve quality. This means the autonomy to recruit and fire skilled staff, buy drugs, equipment, and furniture, and rehabilitate infrastructure.
3. *Managers* must develop *performance contracts with staff* to influence behaviour towards quality.
4. Local health authorities or peer group reviewers (from other hospitals) *conduct quality reviews*. For this, they use national questionnaires with SMART quality indicators.
5. The PBF system uses both *positive and negative incentives* to reward high quality and discourage low quality.
6. The regulator uses a quality review questionnaire and may, for example, set 80% as the *minimum standard for accrediting providers*. After a grace period, providers that remain below standard may have to close.
7. *Competition among health facilities* should ensure alternatives if any need to close.
8. The *CDV agencies* negotiate contracts with providers conditional on quality improvement. They may also give providers *quality improvement bonuses* (e.g. USD 1000 for health centres and USD 2000 for hospitals) against infrastructure or equipment improvements proposed in the business plans. Providers receive these quality improvement bonuses once they meet certain benchmarks, verified by a RDC engineer or architect. This demand-driven investment approach is probably around 10 times more efficient than centralized construction approaches.

6.20.2 Quality tools: standard reviews, vignettes, direct observations, patient interviews

Most governments using PBF apply standard questionnaires comprising 120 to 200 composite quality indicators, which regulatory authorities use each trimester. Local NGOs routinely conduct patient satisfaction surveys in PBF systems to assess how far health facility data have been falsified.

New quality review tools are also introduced, such as 1. vignettes to test staff on their knowledge of how to treat common diseases; 2. exit interviews, if possible; 3. direct observations (Fritsche, G & Peabody, J 2018).

This latest development in PBF aims to *distinguish among structural, process, and outcome measures of quality*. Structural measures are the inputs necessary to provide quality services, such as equipment, drugs, and trained providers. Process measures are the actions and activities of health providers, and outcomes are the results of medical action, such as patient satisfaction, improved health, disability, or death.

The quality bonus may be paid through the “carrot + carrot” approach. In the “carrot + carrot” approach, the health facility’s or school’s quantitative results are rewarded separately from the quality results. So, if a provider’s quantity result over a three-month period was USD 10.000, the quality bonus may be up to 15% (or 25%) of the total output subsidies. At 100%, the quality bonus is $\text{USD } 10.000 \times 15\% \times$

100% = USD 1.500. If the quality score was 50%, the quality bonus would be $\text{USD } 10,000 \times 15\% \times 50\% = \text{USD } 750$.

Whatever mix of quality assurance tools is used, it should first undergo rigorous field testing of the questionnaire and the feasibility of applying the tools within an acceptable time frame and cost. The testing should ensure that both evaluators and providers understand the methodology and indicators. The scores should yield the same outcome when evaluated by different evaluators and be free from personal interpretation.

An important criterion is that all quality review components must be completed within a single four-hour visit to the health facility. It should therefore be optional to the extent that direct observations or patient exit interviews are possible, because, for example, this assumes that there are patients now at the visit. Staff should be able to test knowledge of common diseases using vignettes during the visit.

6.21 Standard questionnaire for Health Facility Quality Review

Local health or school authorities conduct systematic quality reviews, for example, once per trimester or per school term. They typically make use of composite indicator lists. One composite indicator may contain several elements that must be satisfied to earn a point (or sometimes more than one). Indicators may be weighted as 1, 2, 3, 4, or 5 points, depending on their importance.

An example of a composite indicator is “cold chain fridge assured,” which must fulfil the following criteria in order to obtain a point:

- *Thermometer available and regular temperature control*
- *Presence of a fridge – temperature form available, filled twice a day, including the visit day*
- *Temperature remains between 2 and 8 degrees Celsius in the register sheet*
- *Supervisor verifies functionality of thermometer*
- *Temperature between 2 and 8 degrees Celsius also according to thermometer*
- *Temperature tag does not change colour*

The following checklist shows the 17 components of the quality questionnaire used in several African countries, with a total of 195 composite indicators

HF with main contract Name:	Catchment area Population:
Supervisors' names:	Date of the evaluation:
Region of:	District of:
HF: public / conf. / private	Number of beds / 1000 inhabitant. :
Subcontracts? Yes / No	Technical quality Score of last trimester:
Community evaluation score of last trimester:	.....
Number of qualified personnel:	Number of non-qualified personnel:
Qualified personnel rate (1 /1000 inhab):	Increase (or decrease) planned qualified staff : Y / N

QUALITY EVALUATION SUMMARY

All components	Available score	Number of indicators	Achieved score	Achieved %
1. General Indicators	9	9	....	... %
2. Business Plan (quarterly)	10	3	....	... %
3. Financial aspects	12	4	....	... %
4. Hygiene & sterilization	25	11	....	... %
5. OPD department / emergency room	44	31	....	... %
6. Family Planning	22	10	....	... %
7. Laboratory services	13	10	....	... %
8. Inpatients ward	10	6	....	... %
9. Drugs management	13	6	....	... %
10. Tracer essential drugs	34	34	....	... %
11. Maternity	34	23	....	... %
12. Minor surgery Operating Theatre	7	5	....	... %
13. Tuberculosis services	10	8	....	... %
14. Immunization services	17	12	....	... %
15. Antenatal Care (ANC)	14	6	....	... %
16. HIV Control Services	21	7	....	... %
17. Community PBF and equity	30	10	....	... %
TOTAL	325	195	....	... %

1. GENERAL INDICATORS	Protocol Respected	NOT Respected
1. Health map of the health facility catchment area available and attached on the wall (at least A3 format size) - Map displayed in the HF showing other HFs, villages/suburbs, major roads, natural obstacles, special places and distances	1	0
2. Important reports available - Business Plan, indices tool, NHIS monthly report - Meetings minutes and other important documents (staff records, official letters) - Documents in bonders, well displayed on shelves and accessible by the officer in charge within 5 minutes (OIC, DOIC, or on-call nurse)	2	0
3. The work schedule - Work schedule and planning of on-calls available and displayed	1	0
4. HF monthly technical meeting conducted and minutes available - Check last month technical meeting minutes, - Minutes has date and time of beginning and end of the meeting and agenda, - Attendance list of participants signed - Minutes of the meeting with relevant recommendations	1	0
5. Unused referral sheets available - At least 10	1	0
6. Availability radio or mobile for communication HF and reference Health Fac - Marked HF details and number displayed - Radio or mobile phone (property of the HF) with batteries and/or credit (minimum of 1000 F)	1	0
7. Catering services for in-patients available and clean - Walls in sheets or bricks, roof well covered with sheets or tiles - With trash bin for waste disposal - Running water at distance less than 5m, or water container of at least 50 L	1	0
8. Availability of mortuary - A room or small building - Away from direct observation and out of sight of other patients	1	0

TOTAL Score - 9 points maximum	 / 9	XXXXX
Observations about component		
2. QUARTERLY BUSINESS PLAN	Protocol Respected	NOT Respected
1. HF Quarterly Business Plan available and accessible - The evaluator checks the BP signed by the CDV Agency (current quarter) - Strategies of subcontracts with secondary health services providers - Outreach strategies (EPI, surveillance, FP, ANC, PMTCT, bed net distribution)	4	0
2. Business Plan developed with key stakeholders - Heads of HF departments, health committee members (if functional) - Representative (s) of subcontracted Private Clinics or Health Posts (if applicable) - The minutes of the meetings for the drafting of business plans with attendance list	3	0
3. Analysis of achievements of the business plans is done monthly - This point on the analysis can be one of the topics in the technical monthly meeting.	3	0
TOTAL Points - 10 points maximum	 / 10	XXXXX
COMMENTS on the COMPONENT		

3. FINANCES, INCOMES, RUNNING COSTS PERFORMANCE BONUS	Protocol Respected	NOT Respected
1. Financial and accounting documents available and well kept - Monthly report treasury available and correctly filled to date, without omissions - Theoretical balance cash-book corresponds to liquidity at time of verification	3	0
2. If a health facility with a principal contract at primary level, liquid revenues must exceed USD 7,00 per person per year for the target population and if at hospital level it should be USD 20 per person per year	4	0
3. Basic salaries + performance bonuses do not exceed 60% of total HF income - The evaluator adds fixed salaries, performance bonus and government salaries (if applicable) and compares them with the total HF income	2	0
4. System of monthly performance bonus is known by staff - Criteria for the calculation of performance bonus established in the HF as: (a) Responsibility; (b) Additional (over time) or lost hours; (c) Quarterly individual performance evaluation; (d) Non-private sector practice (e) Quality evaluation (of the department) The HF must have at least 3 criteria - Find out from 2 people chosen randomly on the knowledge of the indices tool	3	0
TOTAL Points - 10 points maximum	 / 12	XXXXX
COMMENTS on the FINANCIAL COMPONENT		

5. HYGIENE & STERILISATION	Protocol Respected	NOT Respected
1. Availability of running water in the HF <i>- At least in the OPD consultation room, in-patients ward and toilets / latrines</i>	5	0
2. Health facility fence available and well maintained <i>- If grass fence exists => well cut; If made of sticks or wall fence => without through passage</i>	2	0
3. Availability of a trash bin in the courtyard <i>- Bin with a lid and accessible to clients - not full</i>	1	0
4. Presence of sufficient latrines or toilets and in good condition <i>- At least 3 latrines or toilets for patients (if > 30 beds, at least 1 toilet for 10 beds) - Floor without cracks with single hole and lid - Doors can be closed, without flies - Toilet with walls made with bricks, roof covered with sheets or tiles - Recently cleaned without visible faecal matter</i>	2	0
5. Presence of showers in sufficient numbers and in good condition <i>- At least 3 showers; - Shower with running water, or container with at least 20 litres; - Evacuation of the wastewater in a sanitation pit.</i>	2	0
6. Incinerator and placenta pit within a fence <i>- Functional incinerator in use and empty - Placenta pit with lid - Well-built fence with door locked by key at moment of inspection</i>	5	0
7. Waste pit for non-contaminated objects <i>- Hole of min 3 metres depth, fenced, without infected or non-decomposable objects</i>	1	0
8. Courtyard cleanliness <i>- No waste or dangerous objects in courtyard: needles – gloves – used swabs.</i>	2	0
9. Maintenance of the courtyard <i>- Grass cut – garden well maintained – no animal excrement</i>	1	0
10. Staff sterilises instruments according to standards <i>- Sterilizer (poupinel or autoclave) in good condition and functional. - Sterilisation protocol displayed.</i>	3	0
11. Hygienic conditions assured in wound dressing and injection room <i>- Bins infected objects with lid –security box for needles well positioned and used</i>	1	0
TOTAL Points - 25 points maximum	 / 25	XXXXX
COMMENTS on the COMPONENT		

6. OPD CONSULTATION DEPARTMENT / EMERGENCY	Protocol Respected	NOT Respected
1. Good conditions in waiting area <i>- With sufficient benches and / or chairs, protected against sun and rain</i>	1	0
2. Cost recovery rates are displayed outdoors for the public <i>- Fees rates easily visible for patients before consultation</i>	1	0
3. Existence of a filter system with numbered cards at the reception	1	0
4. Outpatient consultation room in good condition and clean <i>- Walls in concrete, paved and painted, - Floor paved with cement or tiles without cracks, - Ceiling in good condition, - Glasses windows (not broken) with curtains, and functional doors with lock</i>	2	0

5. Consultation room and waiting space well separated ensuring privacy - Room with closed door – curtains on windows – no through way	1	0
6. Consultation room and emergencies ward with lights on at night - Electricity or solar light or from a generator	1	0
7. All the OPD consultations are conducted by qualified nurse - Identification of consulting staff on the particular day from patients that consulted on the evaluation day	2	0
8. Staff is uniformed - Medical officer: white clinical coat, long sleeves, clean - Nurse: white clinical coat, short sleeves, clean, buttoned with name tag, covered shoes (no slippers), nail trimming, no varnish, no dangling jewellery	1	0
9. Correct monthly numbering in the OPD patients registry - Correct numbering (monthly numbering must exist) - Registry concluded at the end of the month - Total number old and new consultations of the month - Diseases under surveillance: measles, Acute Flaccid Paralysis, neonatal tetanus, yellow fever registered at the end of the month	1	0
10. Service availability 7 / 7 and 24 / 24 - The evaluator checks entries in register for the last 2 Sundays	1	0
11. Protocol posted on the wall for management of malaria - National protocol of simple and serious malaria and their management	3	0
12. Simple malaria correctly managed - Check the register for last 5 case (AS / AQ; A/L)	1	0
13. Severe malaria correctly managed - See last 2 cases in the register - Antipyretic, anticonvulsant if convulsion and transfer if need arises	1	0
14. Correct Management of Acute Respiratory Infections - Flow diagram available and applied	2	0
15. Correct management of Diarrhoea - Flow diagram available and applied	2	0
16. The proportion of patients treated with antibiotics < 50% - Check in the register the last 30 cases, and analyse the diagnosis and calculate the rate – no more than 14 over 30 cases	2	0
17. Look out for TBC in chronic coughing patients - Check in the register the 5 last cases of cough for more than 2 weeks that were requested to do a sputum examination for BAAR	1	0
18. Development of progress graphs - Coverage with regard to expected targets: contraceptive, immunization, up to date curative utilisation - Displayed on the wall	1	0
19. Stethoscope & BP machine available and functional - Check blood pressure and ask somebody to verify functionality	1	0
20. Thermometer available and functional - Inspect the thermometer	1	0
21. Otoscope available with kits - Inspect: available charged batteries with strong light	1	0
22. Availability of a Salter scale (baby weighing) in good condition - Scale set to zero - Available short and not torn	1	0
23. Examination Bed - Iron made) available with mattress	1	0
24. Scale available and functional - Inspect in comparison with the known weight of supervisor, after weighing the needle of the scale should come to zero	1	0

25. Availability of a tongue depressor	1	0
26. Availability of a height measurement in good condition (easy to read)	1	0
27. Availability of Weight / Height proportion tables BMI for adults and Z score for the child	1	0
28. Determination of the nutritional status of all children under the age of 5 years who come in consultation	3	0
29. Determination of the nutritional status of any woman whose sick child is less than 6 months old	2	0
30. Screening for nutritional status - <i>Note book available and well filled (updated)</i>	2	0
31. Malnutrition management according to national protocol	3	0
TOTAL Points - 44 points maximum	 / 44	XXXXX
COMMENTS on the COMPONENT		

7. FAMILY PLANNING	Protocol Respected	NOT Respected
1. All FP consultations conducted by qualified nurse trained in contraception - <i>Check completed and signed reference cards</i>	2	0
2. Clean consultation room safeguarding confidentiality available - <i>Room with closed door– curtains on the windows – no through way</i>	2	0
3. Wall poster or box image with available family planning methods for demonstration	1	0
4. Business Plan contains convincing strategy to achieve FP targets by improving the supply and promoting the demand	2	0
5. Safety stock for oral and injectable contraceptive supplies For each 10,000 inhabitants - <i>147 doses of DEPO or stock $\geq$ MMC</i> - <i>36 boxes of 3 blisters/cycles of pills</i>	3	0
6. IUD methods available and staff trained to use it - <i>At least 5 IUD available as well as a box for insertion / withdrawal</i>	2	0
7. Implants Method available and staff trained to insert/remove them - <i>At least 5 implants available</i>	2	0
8. Condoms available (male and female) - <i>At least 288 condoms (male female) are available</i>	2	0
9. FP register available and filled in (up to date and in all sections filled)	3	0
10. FP individual forms available and correctly filled in - <i>Randomly select 5 clients in the registry and check their individual forms</i> - <i>It's mandatory to have the following indicators: blood pressure, hepatomegaly, varicose veins, weight</i>	3	0
TOTAL Points - 22 points maximum	 / 22	XXXXX
COMMENTS on the COMPONENT		

8. LABORATORY	Protocol Respected	NOT Respected
1. Qualified laboratory technician available	2	0
2. Laboratory is open 7/7 - <i>Evaluator checks the last 2 Sundays in the laboratory register</i>	1	0
3. Results recorded correctly in the laboratory register and match with results in inpatient sheets or OPD laboratory examination card - <i>Evaluator checks the last 5 results</i>	1	0
4. List of all examinations performed posted in the laboratory	1	0
5. Availability of parasites samples - <i>In a plasticized paper, in a colour book, or posted on the wall</i> - <i>Blood smear: Vivax, Oval, Falciparum, Malariae</i> - <i>Stools: roundworm, Entamoeba, hookworm, Schistosoma</i>	1	0
6. Availability of a functional microscope - <i>Functional objectives - immersion oil – mirror or electricity – slides– slides cover – GIEMSA available</i>	2	0
7. Availability of a functional centrifuge machine	1	0
8. Cleanliness of preparation table - <i>No spider web</i> - <i>Material well stored</i> Waste disposal: - <i>Organic waste in a bin with lid</i> - <i>Security box for sharp objects available and in use</i>	2	0
9. Personnel put stained slides and pipettes in a container containing a decontamination solution (protocol displayed)	1	0
10. Presence of at least 10 pregnancy tests in the stock of the laboratory tests.	1	0
TOTAL Points - 13 points maximum	 / 13	XXXXX
COMMENTS on the COMPONENT		

9. IN-PATIENT WARDS	Protocol Respected	NOT Respected
1. Available equipment is clean and in good condition - <i>Bed with not torn leather covered mattress</i> - <i>Mosquito nets, bed linen, bedside tables</i>	2	0
2. Good hygienic conditions - <i>Regular cleaning, access to drinking water (less than 20 m),</i> - <i>Beds well-spaced (at least 1 m)</i> - <i>Good ventilation without bad smells</i>	2	0
3. Ward illuminated at night - <i>Electricity, solar light or rechargeable battery lamp / generator</i>	1	0
4. Privacy ensured - <i>Wards for men, men and children separated –without being seen from outside</i>	1	0
5. In-patient register available and well filled - <i>Check for full identity and hospital bed days</i>	1	0
6. Monitoring forms available and well filled - <i>At least 10 blanks forms</i> The evaluator checks 5 filled forms: - <i>Temperature, BP, pulse, laboratory examinations well filled</i> - <i>Treatment monitoring marked and in complying to protocol, care plan, (specific requirements), planning and execution.</i>	3	0
TOTAL Points - 10 points maximum	 / 10	XXXXX
COMMENTS on the COMPONENT		

10. DRUGS MANAGEMENT	Protocol Respected	NOT Respected
1. Staff keeps stock forms for drugs showing security stock = <i>Monthly Average Consumption (MAC) / 2</i> - Supply in register corresponds to physical supply - Evaluator takes a sample of three drugs	2	0
2. Health facility has access to wholesale distributors of medicines , equipment and supplies operating in competition and approved by the RHD - Evaluator checks invoices of a sample of 5 random sampled drugs - Identifies the distributor - Checks if the lot number on the drug is identical to that on the invoice.	5	0
3. Drugs are kept properly. - Clean room, well ventilated with cupboards, labelled shelves - Drugs stored in generic form / alphabetical order	2	0
4. Main HF pharmacy store delivers daily drugs according to the requisition of drug distribution department - Evaluator checks whether the requisitioned quantity equals to the served quantity - See requisition form required signed by the 2 parties	1	0
5. Absence of expired medicines or with falsified labels - Evaluator checks randomly 3 drugs and 2 consumables - Expired products well separated from normal stock - Monthly inventory of expired products and destroyed according to the standards	1	0
6. Place of distribution of drugs: - Drugs packed in the medicine bag - Handling medicines with spoon - Drinking water (in a water filter or mineral water) with disposable cup for taking the first oral dose from the HF	2	0
TOTAL Points - 10 points maximum	 / 13	XXXXX
COMMENTS on the COMPONENT		

11. TRACER ESSENTIAL DRUGS <i>Security 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. Artesunate 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 – folic acid tabs 200 mg + 25 mg	1	0
7. Mebendazol tabs 100 mg	1	0
8. Methergine/ Syntocinon inj 10 Unity	1	0
9. Metronidazole tabs 250 mg	1	0
10. Paracetamol tabs 500 mg	1	0
11. Artesunate injectable/Quinine tablets and quinine injectable	1	0
12. ORS / oral sachet	1	0
13. Sterile gloves	1	0
14. Sterile swabs	1	0
15. Glucose Solution 5%	1	0
16. Ampicillin injectable 1g or 500mg	1	0
17. Azithromycin	1	0
18. Benzathin / Benzylpencillin	1	0
19. Betamethasone / Dexamethasone	1	0

20. Calcium Gluconate	1	0
21. Cefixime	1	0
22. Chlorhexidine	1	0
23. Gentamicin	1	0
24. Hydralazine / Methyldopa / Nifedipine	1	0
25. Magnesium Sulfate	1	0
26. Misoprostol	1	0
27. Oxytocin	1	0
28. Quinine injectable	1	0
29. Resuscitation kit	1	0
30. VAT.	1	0
31. Zinc	1	0
32. Obstetrical Kit – Delivery Kit – <i>bought by the HF</i>	1	0
33. Obstetrical Kit – Caesarean section Kit– <i>bought by the HF</i>	1	0
34. Obstetrical Kit – Emergency box – <i>bought by the HF</i>	1	0
TOTAL Points - 15 points maximum	 / 34	XXXXXX
COMMENTS on the COMPONENT		

12. MATERNITY	Protocol Respected	NOT Respected
1. Sufficient water with soap in the delivery ward - <i>A functional water point or at least a full 20 litres container</i>	1	0
2. Delivering ward with light - <i>Electricity, solar light or rechargeable battery lamp/generator</i>	1	0
3. Waste collected properly in the delivering ward - <i>Bin with trash bag and lid</i> - <i>Security box for needles + solution for decontaminating</i>	1	0
4. Delivery ward in good condition - <i>Walls with durable materials and oil painted or tiles</i> - <i>Paving in cement without fissures, ceiling in good condition(clean, should not ooze)</i> - <i>Windows with opaque windows and functional doors</i>	1	0
5. Availability of the partogramme - <i>At least 10 empty forms</i>	1	0
6. Partogramme completed correctly - <i>The evaluator randomly pulls 5 deliveries files and checks their partogramme</i> - <i>Identification of the woman - date and time of admission – discharge date</i> - <i>Dilatation - descent of the presentation</i> - <i>Taking and recording blood pressure every 4 h</i> - <i>Pulse - urine volume - FHS (foetal heart sound)</i> - <i>Contractions every 30 minutes</i> - <i>APGAR</i>	5	0
7. Care administered to the new-born - <i>Vit K, heating and early breastfeeding, eyes' care</i> - <i>Evaluator pulls randomly 3 deliveries and checks in the delivery report</i>	1	0
8. All deliveries performed by skilled personnel - <i>Identification of attendants/midwives from names and signatures in registry</i>	2	0
9. Availability of a scale (to measure height), obstetrical stethoscope, measuring tape, urinary test strip, thermometer and blood pressure machine	1	0
10. Availability of a functional vacuum extractor - <i>Trained/Skilled Nurse in its use</i> - <i>Vacuum extractor effectively used</i>	1	0

11. Availability of sterile medical gloves - At least 10 pairs of normal size gloves - 2 pairs of gloves for uterine revision - 2 pairs of boots.	1	0
12. Availability of at least 2 obstetrical sterilized delivery sets - With at least 1 pair of scissors, 2 clamps - Check the contents of a set at random	2	0
13. Availability of two episiotomies sets of which one is sterile - Availability of absorbable and non-absorbable sutures, disinfectant, local anaesthetics, sterile swabs. - A sterilized set with needle holder, needle, 1 anatomical clamp & 1 surgical clamp	2	0
14. Delivery table in good condition - Table with clean and waterproof mattress - Two functional leggings with oilcloth.	2	0
15. Baby scale available and functional - Evaluator checks the scale with an object of known weight	1	0
16. Available equipment for care of new-borns - Umbilical cord clamp, a PEAR (for single use) or manual vacuum / electric vacuum, a heater, antiseptic for eyes care, vit K	2	0
17. Bucket or basin for dirty linens available	1	0
18. Availability of bed nets in the in maternity ward	2	0
19. Beds with mattress and beddings in good condition in the maternity ward - Mattresses covered in canvas and waxed with two bed sheets	1	0
20. Adequate labour ward - At least 2 beds with not torn mattresses, leather covered, spaced at least 1 meter	1	0
21. Adequate monitoring of postpartum - At least 48 hours and maximum 72 hours after childbirth - General condition, conjunctivae coloration, BP, globe security, bleeding status, temp - Condition of new-born (general condition, conjunctiva, temperature, breathing, feeding, cord care	1	0
22. Delivery register - Available and filled in over the last 3 weeks	1	0
23. The rates for payment of obstetric care cost fares are displayed - Rates visible to clients prior to the consultation	2	0
TOTAL Points - 34 points maximum	 / 34	XXXX X
COMMENTS on the COMPONENT		

13. MINOR SURGERY THEATRE	Protocol Respected	NOT Respected
1. Operating theatre for minor surgery available and in good condition - Walls of durable material with plastering and painting - Floor paved with cement without fissures	1	0
2. Examination bed available in the room - With foam topped with waxed canvas	1	0
3. Basic equipment available - Anaesthesia available (at least 20 ml) - Drum with sterile swabs & sterile linen drum - 3 boxes with needle holder, anatomical clamp, Kocher clamp, pair of scissors - Sterile gloves (at least 3) - Absorbable and non-absorbable sutures (at least 2 for each) - Surgical blade (at least 3) - Kidney-shaped basin (at least 2)	3	0
4. Register of minor surgery well filled in and up to date	1	
5. Hygiene conditions insured in the minor surgery room - Bins for infected materials with a lid - Security box (for needles) well placed and used - Decontamination solution	1	
TOTAL Points - 7 points maximum	 / 7	XXXXX
COMMENTS on the COMPONENT		

14. TUBERCULOSIS – screening centre	Protocol Respected	NOT Respected
1. Conditions met for DOTS - Case management forms, register & technical manual available	2	0
2. Blade Handler available	1	0
3. Diamond pencil available	1	0
<i>Minimum/Security Stock = Monthly Average Consumption (MAC) / 2</i>	Available YES > MAC / 2	Available NO < MAC / 2
4. Rifampicine-isoniazide-pyrazinamide : cp120+50+300mg RHZ	1	0
5. Streptomycin 1 gr (in the case of resistance)	1	0
6. Ethambutol tabs 400 mg	1	0
7. Receptors for sputum available	1	0
8. Blades and reagents available	2	0
TOTAL Points - 10 points maximum	... / 10	XXXXXX
COMMENTS on the COMPONENT		

15. VACCINATION + PRE-SCHOOL CONSULTATION	Protocol Respected	NOT Respected
1. Cold Chain Assured - regular control of the cold chain and thermometer present in the refrigerator compartment - <i>Presence of a fridge – availability of note books or temperature chart sheet filled in twice a day – including the visit day</i> - <i>Temperature remains between 2 and 8 Celsius degree on the chat sheet</i> - <i>Evaluator checks the functionality of the thermometer</i> - <i>Temperature is between 2 and 8 degree Celsius from the thermometer</i>	5	0
2. No out of stock of toxins DTC+HEPB, BCG, measles, polio, tetanus, pneumonia, ROTARIX. - <i>Presence of stock taking control cards</i> - <i>Evaluator checks the physical stock in the fridge that has to match with the theoretical stock</i>	2	0
3. Vaccines are correctly stored in fridge - <i>Freezing compartment:</i> - <i>Not frozen compartment:</i> - <i>1st floor: polio 0– measles- VAA-BCG</i> - <i>2nd floor: DTC+HepB, +Hib Pneumo, tetanus</i> - <i>3rd floor: diluents</i> - <i>More below: Not frozen energy accumulators' batteries.</i> - <i>Absence of expired vaccines or vaccines which the temperature indicator changed</i> - <i>Labels on vaccine vials easily visible</i>	1	0
4. Cold chain condition - <i>Oil / gas fridge => oil and gas bottle available</i> - <i>Solar fridge=> battery in good condition</i> - <i>Electric fridge => available back up system in case of power cut</i>	1	0
5. Cold accumulators - <i>Well frozen</i> - <i>At least 6</i>	1	0
6. Syringes available - <i>Auto Disable– at least 30</i> - <i>For dilution – at least 3</i>	1	0
7. Waste is collected in appropriate bins Waste are collected in bins with bag - <i>Availability of safety box (container)</i>	1	0
8. Stock of books or the road to growth card EPI & Pre-School Consultation - <i>For the woman or the child - at least 10</i>	1	0
9. EPI register well filled in or form system available - <i>System able of identifying drop-outs and completely vaccinated children</i>	1	0
10. Good waiting conditions PSC and immunization services - <i>With sufficient benches and / or chairs, protected against the sun and rain</i>	1	0
11. Patients receive numbered waiting coupons according to their arrival time order	1	0
12. Availability of a Salter scale (baby scale) in good condition - <i>Scale calibrated to zero + Pants available, clean and in good condition</i>	1	0
TOTAL Points - 17 points maximum	 / 17	XXXXXX
COMMENTS on the COMPONENT		

16. ANTENATAL CARE CONSULTATION	Protocol Respected	NOT Respected
1. Scale for persons - <i>Well calibrated to zero</i> - <i>Scale appropriate for ANC Consultation</i>	4	0
2. Measuring tape for mid-arm circumference - <i>Available and in good condition (easy to read)</i>	1	0
3. Determination of the nutritional status of any woman in ANC - <i>Described in the ANC form</i>	3	0
4. ANC form (for HF) available and well filled in - <i>Evaluator checks 5 forms randomly</i> - <i>Examinations: weight, BP, height, parity, LMD, mid-arm circumference</i> - <i>Laboratory: Albuminuria - Glucose - Hb</i> - <i>Obstetric examination made: FHS (foetal heart sound), FH (Fundal height), presentation, foetal movement</i>	3	0
5. ANC Notebook (for mother) - <i>Available – at least 10</i>	1	0
6. ANC Register available and well filled in - <i>Complete identity, vaccination status, date of visit, and High Risk Pregnancy (HRP) corner well filled including problems and actions taken</i>	2	0
TOTAL Points - 14 points maximum	14	XXXXX
COMMENTS on the COMPONENT		

17. HIV/AIDS CONTROL	Protocol Respected	NOT Respected
1. Counselling room in good condition - <i>Walls of durable material with plastering and painting</i> - <i>Ceiling in good condition</i> - <i>Windows with glasses and curtains and functional doors</i> - <i>Desk with three chairs, shelf</i>	2	0
2. Counselling register - <i>Available, used and up to date</i>	2	0
3. Presence of a trained person providing counselling in VCT	2	
4. Availability of blood collection equipment - <i>In at least the ANC counselling and delivery rooms</i> - <i>Equipment: blood sample bottles and needles (at least 20), blood sample bottle holder, tourniquet</i>	3	0
5. Hygiene ensured in counselling room (ANC) - <i>Bins for stained materials with lid</i> - <i>Safety box (needles) well placed and used</i>	2	0
6. Minimal/security stock of reagents - <i>At least 50 tests of determine and at least 5 confirmation tests</i> - <i>Match between physical and theoretical stock</i>	5	0
7. Compliance to the HIV testing protocol - <i>Algorithm of HIV testing must be displayed on the wall</i> - <i>Verify in the CDV register for 5 cases</i>	5	0
TOTAL Points - 21 points maximum	21	XXXXX
COMMENTS on the COMPONENT		

17. COMMUNITY PBF - EQUITY	Protocol Respected	NOT Respected
1. Protocol for selecting the very poor and vulnerable available <i>- Including for permanent very poor, circumstantial cases and during disasters</i>	1	0
2. List of vulnerable in the catchment area of the HF is available <i>- Accessible within 5 minutes</i> <i>- at least 2% of households are identified as poor</i>	1	0
3. OPD Consultation for the poor <i>- At least 3% of all patients to the outpatient consultation are exempted</i>	5	0
4. In observation/hospitalized poor <i>- At least 3% of all patients admitted are exempted</i>	3	0
5. Home Visit According to Protocol Conducted <i>- At least 20 home visits were done during the last month</i>	5	0
6. Effect of home visit on FP <i>- At least 5 new cases in the past month for FP arrived at HF after home visit</i>	3	0
7. Effect of home visit on toilets / latrines <i>- List of houses of the catchment area of the HF showing available toilets / latrines with convincing improvement strategies</i>	3	0
8. Malnourished children <i>- Malnourished children properly identified</i> <i>- Supplementary feeding</i>	5	0
9. Effects community PBF on the follow-up of TB <i>- Protocol on the follow-up of dropouts available</i> <i>- At least one case of TB</i>	2	0
10. Effect of Community PBF on the follow-up of EPI dropouts <i>- Protocol on the follow-up of dropouts available</i> <i>- Evidence that the follow-up program is running</i>	2	0
Points TOTAUX – 30 points maximum	 / 30	XXXXX
OBSERVATIONS COMPONENT		

SUMMARY OF TE QUALITY ASESMENT		
TOTAL GENERAL	325 points = 100% (195 indicators)	Points scored : Quality score:

VERIFY THAT ALL QUESTIONS ARE FILLED IN
Evaluator thanks the staff

Problems identified as priority

.....
.....

Immediate actions for improvement suggested

.....
.....

Name and signature of the evaluation team leader

.....

Name and signature of the HF Officer-in-Charge

.....

7. CDV AGENCY, DATA COLLECTION, HMIS & AUDIT

Jean Pierre TSAFACK, Moussoume EKOUANGUE, Jean Claude TAPTUE

Main messages of the module

- Contract development and verification (CDV) agencies are entities, separate from the regulator, that ensure providers' results are strictly verified and forwarded to the central-level PBF unit and the payment agency. They also coach providers in using their business plans and indices management tools. The CDV agency or the regional health authorities also organize action research projects at the regional level.
- For economies of scale, CDV Agencies may cover a complete region, state, or county, targeting between 700,000 and 2-3 million people. Yet for this to work, they must also open CDV Branches at the local (often district) level, covering 70-300.000 inhabitants, with CDV verification officers who reside there but remain members of the (regional) CDV Agency.

The steps from the declaration of the provider results until the payment are the following:

- Providers *declare each month* all the services provided in their routine NHIS report and forward the PBF data to the district branch of the CDV Agency;
- The CDV Agency medical verification officer *verifies the data in the HF registers, including for the Quality Improvement Bonus*;
- The CDV Agency organizes quarterly *community verification visits* through local NGOs to households, whereby patient satisfaction surveys are also conducted.
- The NGOS should have at least one qualified interviewer for the verification of sensitive activities such as family planning, manual vacuum aspiration, and HIV. This interviewer should preferably be a qualified health worker and know *how to maintain confidentiality*.
- The CDV Agency checks with the service providers regarding improvements to infrastructure and equipment. Based on well-defined progress steps in advance, this results in the payment of *quality-improvement bonuses (QIBs)* or investment units. The PBF Unit will conduct the QIB audit of the Regional Health Department (RHD) infrastructure. The RHD will audit the QIB for the DHMT infrastructure.
- The CDV Agency *prepares the invoices* for the monthly primary level and hospital level quantity results, the quarterly community verification results, and the QIBs;
- The DHMT and the CDV Agency organize a *district validation committee meeting each month to validate* all outputs, QIB data, and invoices. During the last month of the trimester, the validation committee also validates the quality review data (realized by the DHMT) and the results of the community verification and satisfaction surveys (done by the local NGOs).
- The CDV Agency *enters* the data and invoices from quantity and community verification and the indices management tool scores *into the MOH PBF portal*. The DHMT enters quality review data into the PBF portal, and the Regional Health Department enters hospital quality review data there as well.
- The national PBF Unit *confirms the data and invoices on the portal and forwards the data to the payment agency*
- The payment agency must transfer the funds to the beneficiaries within 7 days.
- Cooperation between the PBF data collection system and the national health information system (NHIS) is possible. However, NHIS systems often pose problems, notably because they contain

1000 or more data elements. It is impossible to verify so many indicators each month; therefore, PBF cannot be held responsible for the quality of those indicators. PBF works with a select set of SMART indicators, which are stringently verified.

7.1 The history and development of the (regional) CDV Agencies and local NGOs

CDV agencies are autonomous entities that develop contracts with providers and verify their quantitative results monthly. They were created as independent organizations so district and regional regulatory authorities could focus on their regulatory role rather than also handling contracting and payment issues. The CDV agencies broke the public monopoly in health services and are neutral organizations. This separation of functions avoids conflicts of interest. CDV agencies strongly resemble insurance companies in developed countries that purchase services from providers. Yet, CDV agencies adapted to the realities of low- and middle-income countries and the informal sector.

The first CDV agencies emerged through International NGOs in Cambodia (1999), Rwanda (2002), DRC (2005), and Burundi (2006). Later, open recruitment processes were initiated, allowing any (international) organization to apply to play this role (Nigeria, Central African Republic, Burkina Faso, Chad). However, this later competitive process was time-consuming and expensive when it involved international organizations. The high administrative costs made this unsustainable.

In the Democratic Republic of Congo, starting in 2008, new local provincial organizations were established to serve as CDV agencies. In Cameroon, in 2011, CDV agencies were integrated into existing regional organizations established 20 years earlier through German cooperation. This significantly reduced costs and avoided lengthy legal procedures for setting up the CDVs.

From its start, the PBF approach competed conceptually with *voluntary community-based health insurance (CBHI) schemes or “mutuelle”* (DRC, Burundi). Yet, this social insurance system for the informal sector of often-poor populations has failed to produce convincing outcomes (Burundi, DRC, Ethiopia). Social health insurance systems have high administrative costs; participation remains low; and insurance companies can rarely pay health facilities' bills and may even go bankrupt. Although they have been popular since the 1980s, they have lost appeal because they failed to ensure quality services and lacked a convincing system to verify results.

From the mid-2010s, PBF also competed with *mandatory health insurance schemes* (in Benin and Mali). Similarly, obligatory insurance schemes (Gabon, Ghana, Rwanda) face challenges with sustainability, quality control, fraud verification, and cost overruns, and the Presidency's much-promoted insurance program in Benin has not taken off since 2018 because of its extremely high cost and conceptual problems.

To address problems such as those in insurance schemes, PBF introduced CDV agencies to develop and verify contracts. Second, PBF contracted local NGOs in health providers' catchment areas through CDV agencies to conduct patient satisfaction surveys and ensure that patients in health facility registers were not fake.

Since around 2020, PBF experts then proposed that PBF should not compete with insurance schemes but cooperate to create “win-win” outcomes.

From 2022 onwards, the first PBF–insurance scheme cooperation program was launched, tested, and evaluated positively in Mali (World Bank Project Completion Report 2025). The CDV agency was integrated into the already existing regional obligatory health insurance organizations.

The PBF approach strengthens formal-sector health insurance systems without requiring fundamental changes. The CDV agency verifies quantitative indicators for insurance scheme members. Under the PBF contract, district authorities review the quality of the health facilities serving scheme members, thereby addressing a major problem for the schemes.

However, for the informal sector, traditional CBHI approaches or social insurance can be better replaced by the PBF equity approach, whereby 5, 15, or 25% of patients can be exempted from paying fees by reimbursing health facilities with higher subsidies. The PBF approach supports cost control through flexible quarterly contracts, which allow subsidies to be increased or reduced and help prevent insurance/PBF companies from going bankrupt.

7.2 The objectives and roles of the CDV Agencies

The overall objective of the regional CDV Agency is to assist in the implementation of PBF. Depending on each country's administrative setup, the CDV Agency may operate at the regional level (Burkina Faso, Cameroun), the County level (Kenya), the provincial level (DRC), the State level (Nigeria), or the country level (Guinea-Bissau).

Each CDV Agency may cover 2-3 million people. National (small countries), regional (Mali, Cameroun), or Provincial (DRC) CDV Agencies may create district CDV Branches, covering 70-300.000 inhabitants. For example, in Mali, the coordinator, deputy, portal, and financial managers operate at the regional level, but these CDV Agencies post permanent teams of 2-4 medical and community verification officers in each district. So, while these district verification officers are part of the regional CDV Agency, they are posted in the districts. This reduces travel and per diem costs and improves accessibility for district providers and local (health) authorities to the CDV Agency.

The Regional Contract Development and Verification Agency (ACV) is responsible for:

1. Negotiate and sign contracts with health facilities or other structures such as local NGOs;
2. Verify monthly the quantitative results of the health facilities or other structures under contract PBF;
3. Organize quarterly community verification visits to households together with satisfaction surveys among patients or users of other providers;
4. Verify the improvements in infrastructure, equipment, and human resources that may benefit from a Quality Improvement Bonus;
5. Coach providers in the use of PBF instruments (Business Plan, Indices Management Tool);
6. Organize PBF training sessions for health facility staff or other providers;
7. Attend monthly meetings of the District Validation Committee;
8. Enter the output and quality data in the MOH PBF portal;
9. Produce quarterly CDV Agency activity reports;
10. Conduct action research.

7.2.1 Negotiate and sign contracts with health facilities or other providers

The CDV Agency negotiates contracts based on the regulator's mapping of potential providers in the PBF districts. The manager or deputy manager will visit each district during the month following the end of the quarter to negotiate and sign new performance contracts with health facilities or other providers for a 3-month period. Each provider must submit a business plan, which the manager will evaluate. If the business plan is convincing, the manager can sign the contract. For those already under a PBF contract, in addition to the business plan evaluation, the DHMT's technical quality review scores

and the Indices Management tool evaluation will be considered. The principal contract holder will sign subcontracts with other health facilities within the same catchment area, but the main contract may be assigned to the secondary contract holder if performance in terms of output and quality is better.

7.2.2 Verify the quantitative results of the provider under contract PBF

At the end of each month, the health facility or other providers report their production in HMIS forms to the district branch of the CDV Agency. CDV medical verification officers visit the health facilities with these forms to verify the entries in the registers. The quantitative results of secondary contract holders are verified before verifying the registers of main contract holders. If the difference between the reported data and the verifier's verified data exceeds 10%, subsidies for this indicator will be canceled. This creates a strong “stick” to ensure not only quality PBF data but also reliable HMIS data. After the CDV officer verifies it, make two copies of the form, signed by the primary contract holder and the CDV officer. Each subsidized activity at the health facility must have a standard register in which the activities carried out are recorded and in which one can find the patient's complete address and/or telephone number. This usually means registers must be adapted to make this information available. Sometimes this is simple, but other times it requires designing new registers that contain the data required for HMIS and PBF.

Registers must be harmonized either within the PBF intervention area or nationally once the PBF has become the national approach. The medical verifier must check each page. No page should be missing, and there should be no errors in counting patients in the registers. The registers then become verifiable documents that auditors of government agencies and financial partners can use to verify the number of patients for whom subsidies have been paid. The registers must remain in the HF for at least 5 years. If the activity does not meet the verification criteria, no payment will be made, and the provider will be informed.

7.2.3 Organize Community Verification and Satisfaction Surveys

Community verification checks whether patients registered by the provider are using the health facility and collects information on users' satisfaction through a household-administered questionnaire. Local NGOs contracted by the CDV Agency conduct these interviews under the supervision of CDV community verification officers.

Selection of local NGOs and the interviewers

We may prefer NGOs with social objectives. The NGOs must be recognized by local authorities, have a good reputation, and have been operational for at least 2 years. NGOs can propose interviewers for the surveys, and the CDV community verification officer then trains them.

The selection criteria for local NGO interviewers may be:

- Be able to read, write, and understand local languages; knowledge of other languages is an asset;
- Available for approximately 14 days each three-month period to conduct the interviews;
- Have the skills to accomplish tasks in a friendly atmosphere, with commitment, discipline, honesty, and integrity;
- *Confidentiality.* Have at least one qualified interviewer for the verification of sensitive activities such as family planning, manual vacuum aspiration, and HIV. This interviewer should preferably be a qualified health worker and know how to approach sensitive issues. There should also be counseling to maintain confidentiality.

Choice of patients to be investigated

At the end of each quarter, the medical verification officers, during their visit to the provider for the verification of the data in the registers, draw at the same time from the registers a sample of *30 to 40 patients/users for primary level contracts* and a sample of *40 to 60 patients/users for the hospital level contract*. The sample must be taken from all indicators, such as OPD consultations, childbirths, and fully vaccinated children, during the 90 days preceding the visit. Select 50% of the sample by random sampling; for the remaining 50%, CDV staff may use a reasoned method by selecting equity indicators (vulnerable hospitalized or undergoing surgery, etc.), indicators posing problems, or indicators with suspected cheating.

Conducting the survey and how to prevent fraud by the NGOs

CDV community verification officers transfer the information needed to trace patients' households (names, location, telephone number) to the questionnaire and forward the questionnaires to interviewers at local NGOs.

Other information (e.g., the baby's sex and which lab tests were conducted) from the patient remains with the CDV Agency and must be collected by the interviewer. This test question allows the CDV Agency to verify that the interviewer has really visited the patient and not invented the answers. Another method to detect falsification by local NGOs is to introduce “phantom patients” into the list of those to be visited who do not exist. If the NGO then “successfully detects” those patients, it proves it is providing fraudulent results. Another method to prevent fraud is for local NGOs to use tablets with geolocation to confirm that the interviewer has visited the household.

This survey also collects information on patients' satisfaction after their visit to the health facility. The fieldwork will take place over 15 days, and this will be supervised by the CDV. The CDV community verification officer then collects and analyses the survey questionnaires. The analysis results must be available by the end of the last month of the following quarter. The results and feedback from the surveys are presented to the in-charges of health facilities during the quarterly district coordination meeting. Representatives from local NGOs are *not* present at these feedback meetings. This is to prevent conflicts. This separation also aims to ensure independence, and *it discourages close relationships between local NGOs and health facilities*.

The results of the patient satisfaction survey enable the CDV Agency and local health authorities to negotiate the renewal of quarterly contracts with health facilities more effectively. The patient satisfaction score may also be one of the criteria used to calculate the provider quality bonus. The community assessment score of the health facility may be calculated as follows: the proportion of patients found x the average satisfaction of patients/users.

The evaluation of patient satisfaction may be calculated using the following indicators:

1. % of patients who answered that they were well received
2. % of patients who answered that the waiting time was reasonable
3. % of patients who answered that the health personnel were respectful
4. % of patients who answered that they obtained all prescribed drugs at the pharmacy of the HF
5. % of patients who answered that the user fee payments were reasonable
6. % of patients who were able to pay all their bills
7. % of patients who said they were cured or benefited from the treatment

The patient satisfaction score for the health facility is the average of these 6 indicators.

7.2.4 Analysis by the CDV Agency of the household surveys conducted by the local NGOs

If paper survey questionnaires are used, then the CDV verification officer must enter the survey data into an EXCEL database. Alternatively, if interviewers can use tablets, data collection quality will improve, and analysis will be easier. The community verification officer must then clean the data before their analysis. The following analysis may be done:

1. Does the patient exist

The person may exist but, when asked, may deny having visited the health facility during the specified study period. This may happen when staff copy old data to create patient contacts, but the contacts are in fact new, non-existent cases, and the health facility tries to increase its output data (and subsidies) through false entries.

For the calculation of the proportion of patients who have been traced at the household level, compared to the patients declared in the registers of the health centers, the following table can be used:

Proportion of patients traced:

HF Catchment areas	Patients declared by HF (N)	patients interviewed (n)	% (= n/N)	Patients not interviewed (N-n)	% (N-n)/N
1					
2					
3					

2. Reasons for not being interviewed

Reasons	HF Catchment area 1	HF Catchment area 2	HF Catchment areas 3
Interviewer did not visit the household			
The questionnaire was filled out incorrectly			
The patient does not exist			
Total of patients not interviewed			

When the patients are found, several questions are asked about the following topics:

3. How much did the patients pay at the health facility?

=> Ask how much the patients paid, who they paid (at the cashier or directly to staff), and compare the payments with the official prices of the health facility.

4. Appreciation of the cost by the patient or user

Was the cost OK / too high / OK, but paid with difficulty? Have there been any changes since the beginning of the PBF intervention? Are the poorest excluded from payment?

Appreciation of the patient of the costs per health facility and per activity

HF Catchment areas	Number of Patients (N)	Patient saying the cost was OK (%)	Patients saying that cost is too high (%)	Payment was done with difficulty (%)
1				
2				

5. Patient satisfaction with services rendered by the health facility

Were patients satisfied with the service provided or not? Did the introduction of PBF positively impact their satisfaction?

6. Suggestions for patients to improve health services.

What suggestions and recommendations have the patients made? This may be done by pre-fixed answers such as 1. Need to improve infrastructure; 2. Need to improve equipment; 3. Need to reduce the prices; 4. Need to improve the availability of medicines; 5. Need to improve the respectful treatment by staff; 6. Other concerns

Outline of questionnaires for the community verification at household level

EXTERNAL CONSULTATIONS (Auditor)

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

CHILDREN FULLY IMMUNIZED

Sample	N° of register	Name of child	Sex	Name of father	Name of mother	Commune	Village	Date of last vaccination	Birth Date
1									
2									

7.2.5 Coaching in the application of PBF instruments (Business Plan, Indices management)

The Manager and/or Assistant Manager, and sometimes verification officers with adequate skills, will coach all providers at least once a year. Coaching on the indices management tool will support managers in analyzing revenue, identifying and planning expenses, and calculating profits that can be paid as performance bonuses to staff. Each quarter, the CDV Agency prepares a coaching plan as part of its business plan, covering provider management instruments (Business Plan, indices management tool, and other topics deemed appropriate). The PBF Unit and the MOH representatives will validate these activities during quarterly evaluation visits by reviewing coaching visit reports (topics discussed, recommendations made, staff presence sheets).

7.2.6 Organize training sessions with regional actors on PBF-related topics

The CDV Agency organizes PBF training sessions for actors involved in implementing PBF in the region (CDV Agency staff, Regional Health Department staff, DHMT, Health Facilities, community PBF actors, civil society, or other structures). These courses will be organized at least twice per year or as needed. The CDV Agency may request external trainers to assist.

7.2.7 Attend the monthly District Validation Committee meetings

These committees validate the quantitative results of all providers and other actors each month and assess providers' performance in terms of technical quality, community perception, and use of the indices management tool. The validation committee includes the district medical officer (or his representative), the CDV Agency manager (or his assistant), CDV verification officers based in the district or at sub-region level, and a provider representative. The district medical officer or

representative convenes and chairs the committee. During the third month of the quarter, at the district validation meeting, the committee will be strengthened by a representative of the regional health department or other sectors and by a representative of the local NGOs.

The committee also has the task of arbitrating any conflicts among actors at the local level. Cases of fraud, as well as the sanctions taken, must be reported, discussed, and documented by the District or Sub-Region Validation Committee and reported to the PBF Unit and MOH. CDV Agency staff may identify fraud during quantitative verification visits, or local NGOs may identify it through community surveys. Cases of fraud will be punished in accordance with the criteria defined in the contract.

7.2.8 Enter data into the MOH PBF portal

CDV Agency staff must upload to the MOH's online PBF portal the data from the quantitative verification, community verification (including satisfaction survey results), and the indices management tool evaluation of the health facilities/other structures. Once the District Validation Committee validates the data, the CDV Manager and the District Medical Officer validate them in the PBF portal and transfer them to the PBF Unit. The results of the quarterly quality reviews of health centres are entered in the portal by the DHMT. The Regional Health Department enters the results of hospital quality reviews and direct evaluations into the portal.

7.2.9 Produce Quarterly CDV Agency Activity Reports

These reports will be sent before the 15th of the second month following the end of the quarter to the PBF Unit of the MOH.

7.2.10 Conduct Action Research

Action research topics concern the strengths and weaknesses of the PBF system and the operational modalities of its subcomponents. This action research can be carried out by technical assistants with proven research experience. The research budget is allocated at the CDV level, but any PBF researcher may propose conducting the research. The district validation committee may propose topics, and the PBF Unit validates the research results.

7.3 Quality Improvement Bonuses (QIB)

7.3.1 How do QIBs operate

To address various infrastructure or equipment issues, providers can request one or more QIBs, with values such as \$750 at the primary level and \$5000 at the hospital level.

In PBF, facility managers organize construction activities and equipment purchases. CDV agencies and local health authorities verify the results and ensure the infrastructure is built to the Ministry's standards.

Improvements to infrastructure and equipment can be achieved as follows:

- Health facility managers must set aside a proportion of their income for minor repairs to improve service quality.
- When the overall condition of the infrastructure is so poor that new health facilities are needed, the PBF budget should include a significant number of QIBs for infrastructure improvements, ranging from 10 to 30% of the total budget. Providers will include infrastructure improvements in their business plans, which they can negotiate with the CDV Agency. Rehabilitation can be carried out in several phases, allowing a CDV Agency engineer to verify the work after a few weeks. When the

previously agreed infrastructure benchmarks are achieved, a QIB can be included in the monthly invoice, following the same procedure as for the other (output) indicators.

- When the provider is starting major rehabilitations or investments, this requires liquid funds. The provider may obtain these funds from a microcredit institution, a bank, or another donor organization.

Health facilities may benefit from a BAQ *after the realization of the investments* made by the provider or their community based on the following achievements:

1. *Infrastructure improvements*: rehabilitation, construction, staff housing, fences, incinerators, latrines... The CDV agency's consulting engineer must present and validate the estimate. After completion by the health facility, the engineer validates the quality of the work done;
2. *Acquisition of equipment*: Beds, mattresses, microscopes and other laboratory equipment, solar kits, refrigerators, surgery box, delivery box ...;
3. *Acquisition of furniture*: Chairs, tables, cabinets, shelves, ;
4. *Acquisition of means of transport*: motorcycles, bicycles, vehicles, motorized canoes ;
5. *Recruitment of qualified personnel*: To address staff shortages, the provider may request a QIB once it has recruited qualified staff at a level at least equivalent to a Health Assistant. Once the provider has recruited the staff, it notifies the CDV Agency. Validation criteria include the recruitment report, an employment contract of at least one year, a copy of the diploma, and the certificate of service. The Regional Health Department, the District Health Department, and the CDV Agency coach the provider in this recruitment process.
6. In the event of serious humanitarian crises or calamities affecting the catchment area of a provider, the District Validation Committee may decide to increase the ceiling for patients exempted (targeted free health care) from, for example, the existing 10% to 50%, 75%, or even towards total free care. This decision must be made only in exceptional cases, and the provider must continue to seize any opportunity for cost recovery. Cost recovery remains important for increasing health facility revenue, reducing dependence on external financing, and increasing the population's appropriation for their health facility.

7.3.2 The process for allocating the Quality Improvement Bonuses for health facilities

1. The national PBF Unit allocates the total quarterly budget per region and district for the minimum health package, the hospital package, the quality bonus, and the QIB;
2. The CDV Agency estimates which of this total amount must be reserved to pay the subsidies for the primary level, the hospital level, and the quality bonus *without the QIB*;
3. Based on this estimate, the CDV Agency can calculate the amount available for the QIB. Each regional CDV Agency must produce invoices with a value between 90% and 110% of the quarterly budget allocated by the national PBF unit;
4. The providers propose in their business plans for which infrastructure and equipment improvements they wish to obtain a QIB;
5. The CDV Agency then negotiates the business plan through staff deemed capable of negotiating and coaching the health facility.
6. The CDV manager or deputy signs the quarterly contract.

The CDV manager, seeking the advice of his staff and other key stakeholders, allocates the QIB for the health facilities based on the following six criteria:

1. The infrastructure business plan must be convincing and demonstrate the need for a QIB.
2. The correct application of the indices management tool (consult the score of the evaluation of the indices management tool)
3. How much do the providers or their community contribute to achieving the improvements?
4. What progress did the provider achieve in improving its *quantity* indicators? The CDV Agency may calculate the health facility's progress over the last two quarters using data from the PBF portal.
5. What progress did the provider achieve in improving the *quality* of the services? The CDV Agency may calculate the health facility's progress over the last two quarters using data from the PBF portal.

Table 1: Favorable decision criteria for the allocation of BAQ by district

FOSA	1. Quality of the Business Plan (convincing, entrepreneurial spirit)	2. Correct application of indices management tool <i>Indices Score 60% - 80% (1p) ; > 80% (2p)</i>	3. Contribution of own resources for the achievement of the QIB <i>0% (0 p) -25% (1 p) - 50% (2 p) -75% (3 p)</i>	4. Progress output indicators	5. Progress quality indicators	Total points for the allocation of the QIB
HC 1	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2 / 3	0 / 1 / 2	0 / 1 / 2	
HC 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2 / 3	0 / 1 / 2	0 / 1 / 2	
Hospital	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2 / 3	0 / 1 / 2	0 / 1 / 2	
HC 3	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2 / 3	0 / 1 / 2	0 / 1 / 2	
HC 4	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2 / 3	0 / 1 / 2	0 / 1 / 2	
Etc						

The score obtained, if at or above the average, determines the allocation of QIBs among providers in each district. However, if a new health facility opens or one reopens after a crisis, this structure will take priority.

The CDV Agency proposes the QIBs for validation during the District Validation Committee meeting.

7.4 The CDV Agency team members profiles and responsibilities

The CDV Agency team will consist of a manager, one or more assistant managers, a data manager, an accountant, a secretary, medical verification officers, community verification officers, infrastructure verification officers, a courier, cleaners, and drivers. A deputy manager can cover a sub-region population of 600,000 to 1 million people. In a large region, several deputy managers may cover a few districts and operate from that sub-region. If the PBF program includes Quality Improvement Bonuses, it is also necessary to recruit infrastructure verification officers on a fixed or ad hoc basis. One CDV Agency may cover 2 to 3 million people. The number of verification officers depends on the population to be covered (1/100,000 for medical verification officers and 1/200,000 for community verification officers). Factors such as long distances between district and health facilities and the state of the roads may also influence the number of verification officers per district or sub-regional centres. The CDV Agency will, if necessary, set up a CDV branch in each of the health districts / sub-regional centres (for other sectors) or a CDV branch covering several health districts or districts when they have a small population.

7.4.1 The CDV Agency manager

1. Skills Required

- Public health doctor / public health economist /
- Has at least five (5) years' experience in the implementation or management of public health activities;
- Received PBF training in an accredited course with a certificate;
- Has experience in the implementation of PBF;
- Has excellent negotiation skills
- Has good knowledge of the health system of the country concerned;
- Has good command of the main language
- Has a good command of computer tools and statistical analysis software such as EXCEL
- Can work under pressure and in a team

2. Responsibilities of the CDV agency manager

- Advocates with regional decision-makers for PBF;
- Ensures that money is spent according to the costing;
- Collects and ensures the transmission of bank statements; ensures that the CDV Agency database is updated;
- Coordinates the technical and financial activities of the CDV Agency;
- Training / Coaching of the different players, in particular the follow-up of the application of the business plan, indices management tool in PBF;
- Ensures that contracts are signed with health facilities, local NGOs or other structures;
- Addresses any emergency or force majeure and takes precautionary measures to ensure the smooth running of the CDV Agency;
- Prepares quarterly reports on the activities of the CDV Agency;
- Prepares the annual budget and supervises the preparation of the CDV Agency financial statements;
- Organizes the recruitment and management of the CDV Agency
- Manages the movable and immovable property, tangible and intangible assets of the CDV Agency in compliance with the procedure of the organization in charge of the CDV Agency;
- Acquires the logistics for activities;
- Assures the representation of the CDV Agency in society and in legal terms

7.4.2 The Deputy manager

1. Skills Required

1. Public health doctor or nursing license with a master's degree in public health
2. Has at least three (3) years' experience in the implementation or management of public health activities
3. Is trained in PBF in an accredited course
4. Has experience in the implementation of PBF;
5. Has a good knowledge of the local health system;
6. Has a good command of the main local language;
7. Has a good command of computer tools and statistical analysis software such as EXCEL, etc .;
8. Can work under pressure and in a team environment.

2. Deputy manager assignments

Under the authority of the CDV manager, the deputy manager is responsible for:

- Substitutes for the Manager in case of impediment to the activities;
- Attending meetings of district validation committees and signing the contracts in the districts / sub-regions;
- Coaching of health facilities, including monitoring of the application of the business plan and the indices management tool;
- Ensuring the timetable for visits to the different health facilities, local NGOs and districts for the staff of the CDV Agency;
- Recovery and consolidation of verification reports;
- Follow-up on activities of staff under his / her responsibility, in particular the verification officers;
- Attending CDV Agency coordination meetings;
- Training and coaching of medical and community verification officers and health facility staff / other actors;
- The performance of any other tasks entrusted to him by the Manager.

7.4.3 Accountant

1. Skills Required

- Has at least a master's degree in accounting;
- Has at least 3 years' experience in accounting / financial management;
- Maintains the accounting activities within a company, NGO, or project;
- Good knowledge of the Internet and accounting software
- Has a good command of the local main language;
- Be able to work under pressure and in a team environment.

2. Accounting duties

- Maintains CDV Agency accounting in accordance with the procedures;
- Assists the manager in the development of the CDV Agency budget;
- Ensures the follow-up and the management of the treasury;
- Develops CDV Agency financial statements and periodic reports;
- Supervises supply and inventory management;
- Performs inventories of fixed assets;
- Prepares annual financial audits under the supervision of the owner of the CDV Agency
- Ensures documentation and archiving of financial and accounting information
- Prepares the periodic budget execution
- Participates in the receipt of CDV Agency materials;
- Attends CDV Agency coordination meetings;
- Ensures the fiscal management of operations
- Performs all other tasks consistent with his or her ability, as assigned by the Manager.

7.4.4 Administrative assistant

1. Skills Required

- Has at least one degree in secretariat;
- Has at least three years of experience in a similar position;
- Has good knowledge of computer tools;

- Has a good command of the local main language;
- Must be able to work under pressure and in teams.

2. Responsibilities of the administrative assistant

- Ensures the processing, monitoring, and archiving of incoming and outgoing mail and other documents;
- Plays the role of payment agent;
- Monitors personnel files at the relevant institutions, such as for social benefits;
- Provides documentation and archiving of staff administrative records;
- Prepares, organizes meetings, and attends some meetings to prepare reports;
- Ensures logistics management;
- Performs other tasks compatible with his / her professional skills to be entrusted to him/her by the Manager;
- Be able to work under pressure.

7.4.5 Medical verification officer

1. Skills Required

- Be a health worker with the level of registered nurse/nursing or midwife license
- Has at least five years of work experience at the health district system level.
- Has a driver's license;
- Masters' computer tools (Word, Excel, PowerPoint);
- Can work under pressure and in a team

2. Duties of medical verification officer

- Conducts the verification of the quantitative performance of HF under contract with CDV Agency;
- Writes the verification reports;
- Provides the community verification officers with samples for the community verification tasks.
- Attends the CDV Agency coordination meetings;
- Enters the PBF quantity data in the cloud computing PBF portal.

7.4.6 Community verification officer

1. Skills Required

- Has a background in social sciences (at least a bachelor's degree in sociology, anthropology), legal sciences;
- Has experience in community activities and conducting surveys;
- Has a driver's license;
- Masters computers (Word, Excel, Power Point);
- Masters the main local language;
- Can work under pressure and in team

2. Duties of the community verification officer

- Organizes, every three months, with local NGOs, in the catchment areas of the health facilities under contract with the CDV Agency, the community verification of the activities and conducts at the same time patient satisfaction surveys;
- Verifies and supervises the work of community-based interviewers at the household level
- Transmits to a database and analyses the results of the community surveys;

- Writes the report of the community verification and patient satisfaction surveys;
- Attends CDV Agency coordination meetings;
- Enters community survey data into the PBF "cloud computing" portal.

7.4.7 Quality improvement bonus verification officer

Depending on population size and infrastructure needs, 1 quality improvement bonus (QIB) verification officer may be required for 600,000 people or 60 health facilities.

1. Skills Required

- A civil engineer or a senior technician in civil engineering/construction engineering.
- Experience in infrastructure activities;
- Have at least one "A" driver's license;
- Master computer (Word, Excel, PowerPoint);
- Master at least one of the official languages;
- Be able to work under pressure and in a team

2. Duties of the QIB verification officer

- Assist health facilities in preparing specifications for infrastructure and medical equipment in their Business Plans. This ensures that the Ministry of Health's standards are respected.
- Check work progress and determine when the QIB can be given. Payment will be made after the completion of the work, in whole or in part, as defined in the business plan. The value of a QIB for the health facility for each step is, for example, USD 1000, and that of a QIB for hospitals is, for example, USD 2000. A health facility can have one or more QIBs, depending on what was agreed during the negotiations in the Business Plan and the results achieved.
- The BIQ officer should also encourage health facilities to obtain resources from other financing sources for construction and equipment purchases, such as the government, communities, and local or international donor agencies.

7.4.8 Other personnel

Profiles to be defined by the CDV Agency.

1. Driver(s)

He must have an appropriate license, at least 3 years' experience in the field, and good knowledge of the region.

He must also be able to work under difficult conditions, perform routine vehicle maintenance and complete logbook entries, be respectful, and keep CDV Agency information confidential.

2. Maintenance Staff

Must have experience in this field. Must keep CDV Agency information confidential. Able to perform any other tasks compatible with his aptitudes entrusted by the Manager.

3. Courier

Must have two years of experience in this field. Has good knowledge of the region. Keeps CDV Agency information confidential. Can work under pressure. Perform any other tasks consistent with his / her aptitudes as assigned by the Manager.

7.5 Recruitment process for CDV Agency staff

The organization responsible for the CDV Agency, such as the regional obligatory insurance company in Mali, will recruit the manager, assistant manager, and accountant in accordance with the terms of reference defined above. The PBF Unit must validate the recruitment files for the manager, deputy manager, and accountant before publication. The CDV Agency manager will then recruit additional staff. The organization responsible for the CDV Agency must validate the recruitment files. All calls for personnel recruitment must comply with the terms of reference set out in the PBF manual.

7.6 Description and use of tools for implementing the CDV Agency activities

The contract is signed with the *agent*, which can be a health facility / a local NGO / other structures) It links the CDV Agency to the agents under contract. The signatories are the CDV Agency manager and the agent's direct daily manager. It includes both parties' obligations, the definition of performance indicators and their price, payment terms, and provisions for fraud and conflict management.

The business plan is a quarterly work plan that proposes the strategies needed to achieve the objectives set by the government and to solve the problems identified during the agent's analysis over a period. The Plan covers the implementation of all performance activities and indicators.

The declaration/validation sheets show the agent's production per indicator. The health facility manager and the medical verification officer sign them after verification.

The indices management tool is a transparent, participatory tool that enables revenue analysis, identification and planning of the organization's expenses, and distribution of profits as performance bonuses to personnel.

The sampling form is a data sheet containing demographic information (name and surname, patient location, telephone number) for a sample of patients/clients who used a health facility (or other provider), and it describes the services used. The local NGO, recruited by the CDV agency, uses this form to visit these patients during a household visit

7.7 Presentation of CDV Agency indicators

The CDV Agency has two types of performance indicators: quantity indicators and quality indicators.

7.7.1 The quantity indicators and the criteria for their validation evaluation

The description of the CDV Agency quantity indicators is included in the following table:

Output indicators for CDV Agency	Verification Process
Provider at primary level verified (1 per 7500 population)	Results of data verification are available in the portal
Hospital verified (1 per 50,000 population)	Results of data verification are available in the portal
Coaching of a provider at primary level in indices tool and/or BP for 1 day (1 x semester / provider)	A coaching meeting was held of at least three hours with report and recommendations
Coaching of a provider at hospital level in indices tool and/or BP for 1 day (1 x semester / provider)	A coaching meeting was held of at least three hours with report and recommendations
Quarterly contracts with providers signed	List and signed quarter contracts available and archived at CDV Agency. The PBF Unit checks that the number of contracts registered in the list exist and are signed by the CDV Manager and the in-charge of the providers

District Validation meeting conducted	Results of district validation meeting are available in portal. A copy of the summary report of the validation meeting is available at the CDV Agency
Supervision of Community Verification of a local NGO conducted	Verification officer distributed the names of people to visit or contact and collects the results.
Local NGO survey: pop / 10,000 x 40-60 interviews per quarter:	Verification officer assesses the quality of the survey and the questionnaire before approving the payment
1 Training session of at least 2 days with 30 people per year for 100,000 population	Training is carried out with report and recommendations. Participants took a test
1 Mission AT - action research per year for 200,000 population	The CDV Agency organised a research project on a topic relevant for PBF and discussed it during the district validation committee meeting. The PBF Unit verifies and validates its payment after reviewing the research report.

7.7.2 Evaluation criteria for the quality performance of the CDV Agency

The CDV Agency develops its Business Plan and submits it to the PBF Unit for its assessment. Once validated, the CDV Agency and the PBF Unit sign a performance contract for 3 months. The PBF Unit, accompanied by representatives of the Ministry's directorates, will evaluate the CDV Agency no later than the 25th of the second month of the following quarter. The evaluation will cover the implementation status of the business plan as defined below and the application of the indices management tool. At the end of this evaluation, the PBF Unit will assign a quality score to the CDV Agency.

	Criteria for quarterly evaluations of the regional CDV Agencies conducted by the national PBF Unit with representatives from the MOH departments	Points	Score
1	Contracts with business plan signed with main health facility contract holders - List of potential contracts available for the primary level established by the district team after division of the sanitary map into health catchment areas with an average population of 5000 to 10.000 in rural area and 8000 to 15000 in zone urban - Business plans and contracts prepared and negotiated between providers and CDV Agency - Contract renewal negotiations with providers finalised by 21st of the first month of the next quarter - More than 80% and less than 120% of the contracts signed against number of potential contracts	5	....
2	Key Document available (1) CDV Business Plan and Contract with National PBF Unit; (2) Copies of BP and performance contracts between CDV and providers; (3) Copies of provider invoices validated by district committee; (4) Copies of reports and invoices of local NGOs of patient interviews; (5) Files of all staff, and administrative letters; (6) Accounting documents. - Documents neatly into folders and accessible in 5 minutes to evaluation team	5	....
3	Medical verification visits to health facilities completed - 95% of medical verification visits completed compared to the number of contracts signed - before the 20th of the following month	10	....
4	Community verification performed - The average number of CBOs should not exceed 1 per 25.000 or be less than 15.000; - For a population of 10.000, the CBO should conduct, per quarter on average, 30-40 interviews at the primary level and 40-60 interviews at the hospital level; - Community verification is conducted in the next quarter (e.g., T2) for the previous quarter's activities (e.g., T1). - 95% of community verification visits (e.g., T1) completed before the end of the next quarter (e.g., T2)	10	....

5	Counter-verification of CDV medical and community verification - During regional evaluations, the PBF Unit team selects a health district in a reasoned manner (e.g., if there is suspicion of cheating). The team counter-verifies the CDV Agency activities: (a) the output data of the health facilities in the registers; (b) visits a household chosen at random to counter-verify the local NGO community verification visit. - The gap between the ACV-verified and CTN-verified data in the registers should not exceed + or - 10%. - If the 10% gap seems to be a simple error, the CDV only loses 10 points. If there is suspicion of fraud, the CDV Agency will be sanctioned with a 3% reduction in the total quarterly payment. In case of a second case of fraud, the CDV Agency will be sanctioned with a 10% reduction in the quarterly payment. In a third case of fraud, the CTN must investigate the CDV Agency and take administrative measures.	10	....
6	District validation committee meetings conducted - Monthly output provider invoices submitted by CDV medical verification officers to the district validation committee are discussed and validated; - The District Medical Officer or representative chairs the monthly validation meetings. Other members include the CDV Agency Manager or Deputy and all CDV medical verification officers. The district validation committee may decide to invite a representative from the primary level contract holders and another one from the hospital level; - The scores from the quarterly HF quality reviews (conducted by the DMT) are submitted. The validation committee discusses and validates the results and invoices before the end of the first month after the previous quarter; - The CDV community officer submits the quarterly community verification and satisfaction survey data conducted by the local NGOs. The committee discusses and validates the data; - During the last month of the quarter, the committee validates the output, quality, and community survey data, and is attended by the same team as for monthly meetings + a representative of the Region and the CDV community verification officers. The committee may also decide to invite a representative of the local NGOs; - 100% of the validation meetings are conducted before the last day of the next month.	5	....
7	Health facility invoices and indicator data submitted to the PBF portal - Medical Verification Officer submitted the output data and invoices to the PBF portal before the last day of the following month; - Community Verification submitted the community survey scores to the PBF portal (the percentage of patients found x the average patient satisfaction score). - Medical and community data submitted for at least 90% of all contracts signed - The indices management tool scores are submitted to the portal	5	....
8	Comparison of the invoices submitted with the available funds for the region per quarter - The CDV Agency knows the potentially available PBF funds for the primary level (MPA), the hospital level (CPA), and the quality improvement bonuses (BAQ). The information about the available funds is provided by the National PBF Unit; - The sum of invoices submitted to the PBF portal for the last quarter is known by the CDV Agency; - Between 90% and 110% of the potentially available PBF funds per region are submitted to the PBF portal.	20	....
9	Monitoring of key (groups of) indicators during the quarter 1. 2. The National PBF Unit determines annually at least two (groups of) important indicators such as for targeting the vulnerable, community PBF and family planning, etc. - The two (groups of) indicators showed a significant improvement. The national PBF Unit will annually determine the target for what is a "significant" improvement.	5	....

10	Training and coaching activities proposed in the quarterly CDV business plan are achieved. - Quarterly training and coaching plans are available; - The training plan must contain at least the HF business plan and the indices management tool; - Check how far at least 80% of the training and coaching sessions planned in the action plan of the CDV Agency were completed; - The national PBF Unit, during the counter-verification visit to the health facilities, also questions the in-charge on the use of the business plan (e.g., are all key stakeholders involved) and the indices management tool (Information on the HF revenues, the expenses, and the performance bonus distribution of the last month is available. Randomly selected staff know the criteria for how performance bonuses are calculated).	10	....
11	Action research and technical assistance conducted - CDV Agency has an annual action research plan and plan for technical assistance and technically agreed by regional health department; - Quarterly progress report on Action Research and TA conducted in previous quarter is available; - Discuss in how far the action research and TA mission produced significant progress during the last quarter.	10	....
12	CDV Agency has effective mechanism for motivating staff and paying performance bonuses - CDV Agency produces each quarter an overview of revenues and expenditures; - CDV Agency has the criteria for the allocation of the performance bonuses; - CDV staff knows indices management tool and the criteria for their performance bonuses.	5	....
13	Presence of latrines in sufficient number and in good condition - At least one latrine accessible to visitors and well maintained: - With doors closing - No flies, no cobwebs, no dust, no smell - With walls in good condition and clean, - Well covered with tiles without water flowing inside - Pots without corrosion - Cleaned - no visible faecal matter - Two barrels of at least 100 litres of reserve water per toilet	5	
14	Cleanliness of the courtyard - Absence of papers and other garbage in the courtyard; - Maintenance of the yard (cut grass - well maintained garden, if available, no animal excreta, no stagnant water puddles) - Availability of non-full garbage cans in the yard and accessible to visitors	5	
15	Hygienic conditions in offices - Waste bins available in each office - Clean dust-free windows, window curtains clean - Clean floor - Without spider web - Dust free cabinets and shelves, without spider webs - All documents tidy on desks and in shelves and cabinets - The office toilets must fulfil the same conditions of cleanliness as those described above	5	
16	Financial and accounting documents available and well shelved - Accounting documents held well, tidy and accessible in less than 5 minutes, (retained for at least 5 years);	5	
	TOTAL CDV Agency	100	

After the PBF Unit evaluates the CDV Agency, it issues an invoice, which is paid within the next 15 days. This invoice includes the quantity produced, the equity bonus, and the quality premium. The CDV Agency's quantitative results will be uploaded to the PBF portal after regional validation concludes.

7.8 Payment modalities and Invoice Template of CDV Agency

CDV Agencies are paid quarterly based on the equity bonus, quantitative and qualitative performance. Once the CDV starts operating, it will receive a start-up advance corresponding to the estimated quarterly budget for the planned activities. After each quarterly evaluation, the CDV Agency will be paid based on the sum of the activities carried out, the equity bonus, and the quality bonus according to the following table:

CDV Agency Payment Invoice

ACV output indicators	Quantity quarter	Unit Cost	Total
Provider at primary level verified (1 per 7500 population)		F 90,000	
Hospital verified (1 per 50,000 population)		F 150,000	
Coaching of a provider at primary level in indices tool and/or BP for 1 day (1 x semester / provider)		F 100,000	
Coaching of a provider at hospital level in indices tool and/or BP for 1 day (1 x semester / provider)		F 150,000	
Quarterly contracts with providers signed		F 75,000	
District Validation meeting conducted		F 150,000	
Supervision of Community Verification of a local NGO conducted		F 125,000	
ASLO survey: pop / 10,000 x 40-60 interviews per quarter:		F 3,100	
1 Training session of at least 2 days with 30 people per year for 100,000 pop		F 3,000,000	
1 Mission AT - action research per year for 200,000 pop		F 6,000,000	
SUBTOTAL 1 outputs CDV Agency:			
Equity Bonus by Region:	0% - 53%		
SUBTOTAL 2:			
Quality bonus (= SUBTOTAL 2 X 15% x quality score):	0% - 15%		
TOTAL PAYMNET CDV:			

7.9 CDV Agency indices management tool

The CDV agency also uses the indices management tool and determines the criteria for paying individual staff performance bonuses. The following criteria can be used: promptness in conducting verification, the quality of coaching, prompt submission of invoices in the PBF portal, etc.

Revenues	Amount received	%
Bank resources at beginning of period		
Half-yearly advance		
Quarterly Payments		
TOTAL REVENUES		

Expenses	Amount spent	%
Fixed salary payment		
Operational costs		
Investments		
Depreciation of equipment		
Increase in bank reserve (for salary + operating expenses)		
Sub Total Expenses		
Performance bonus (Total revenue - total other expenses)		
TOTAL EXPENSES		

Each CDV Agency develops its own indices management tool, which the PBF Unit will evaluate during the quarterly visit. The following criteria are used to evaluate the application of the CDV Agency indices management tool. All CDV Agency revenues are integrated into the indices management tool as a single basket.

Evaluation criteria for the indices management tool: If revenue and expenditure are not balanced, the evaluation of the indices management tool cannot continue and the CDV Agency loses its quality bonus		
CRITERIA	Standard	Total point
1. Monthly technical report analysing the month's revenue, planning expenses and analyses the sustainability Indicators (with follow-up of recommendations) plus attendance list + signatures	10 points if present, 0 if absent	10
2. Personnel evaluation form and order of transfer of the performance bonus available (the total amount of the premium must correspond to that noted on the summary of receipts / expenditure)	10 points if completed and signed with telephone number, 0 otherwise	10
3. Participation of all staff. Interview two people from the CDV Agency that confirms that they have participated and that they know the revenues, expenses, the envelope for the performance bonus and the criteria of distribution and that the bonuses marked in front of his name in the indices tool are actually those received.	40	40
4. Depreciation and amortization represent at least 80% of depreciation for the period	20 points if more than 80%, if between 50% and 80% => 10 points. If <50% => 0 point	20
5. Personal Efficiency: Fixed Salary + Performance bonus / Total Expenses	If <60%, Score = 100 points, Si > 60% 0 points	5
6. Performance bonus / Performance bonus + Fixed Salary	If > = 20% 5 points, Si <20% => 0 points	5
7. Number of reserve days (3 months of operation) = (money in bank / average expenses per month) x 30	> 90 days = 100 points; If > 60 days and < 90 days; => 5 points; If < 30 days => 0 points	10
TOTAL		100

7.10 Contract negotiation techniques: the carrot and the sticks

Accepting change may be achieved by applying the “*carrot*” negotiation technique. CDV agencies may inform local stakeholders that securing a PBF contract offers several advantages, including improved services, higher staff remuneration, and coaching to enhance quality and client satisfaction.

Yet, CDV agency managers and regulators may also apply several “*stick*” negotiation techniques to improve the performance of providers:

1. Inform local authorities, provider committees, boards, or owners that the performance of their health structures is poor, thereby applying pressure for improvements.
2. Cancel a contract temporarily or indefinitely. This has immediate financial consequences not only for the provider manager but also for the owner, which may be the government, a private person, or a religious organization.
3. Seek alternative providers to replace the existing contract holder and thereby use competitive pressure. CDV agencies may inform potential candidates, including those from the private sector, about opportunities.

7.11 **PBF data collection and problems with NHIS**

Can the data from the routine national health information system (NHIS) be used for PBF data collection and payments? Ideally, developing the PBF data collection system should also strengthen the NHIS, creating potential “win-win” opportunities. There should be no problem for those indicators where the NHIS and the PBF indicators are the same. In that case, the CDV verification officer will only need to verify the NHIS data the provider declared. If the difference between the NHIS data declared and the data verified by the CDV Agency is larger than 5% or 10%, the subsidy for that indicator may be canceled. This will create a strong stick not only to obtain quality PBF data but also NHIS data. Yet, the PBF output data to be verified are usually limited to 25-35 indicators, while the NHIS data set typically contains 1000 or more data elements. Verification officers cannot verify 1000 or more output data, and therefore PBF cannot be held responsible for the quality of non-PBF NHIS data. Moreover, the PBF list of 25-35 output indicators *must be strictly verified*, as subsidies depend on them and therefore require an accurate audit system.

Thus, while it is desirable that PBF also improves the quality of the NHIS data collection systems, this also requires that the NHIS system addresses the following problems:

- a) Data collection for different MOH departments or aid agencies may not be coordinated so that they overlap or become excessive – sometimes 20-40 forms (34 in Zambia). This overburdens the facility and health workers, who then choose which forms to fill in.
- b) Sometimes NHIS forms are not SMART, are poorly understood by staff, and are filled in incorrectly.
- c) Health workers are not motivated to collect quality data when they do not see the benefit. This happens when programs demand data without ensuring it is also useful to providers.
- d) Feedback systems on the data provided are often lacking, further demotivating provider staff.
- e) Managers may deliberately under-report data to avoid taxes. In DRC, providers must pay district managers between 5% and 30% of their revenue, a share that can be calculated using reliable NHIS data. As a result, providers then underreport their data to avoid taxes. In Zambian health centres, cost-sharing revenues must be forwarded to the treasury. Money may then go unaccounted for, and staff may also not report the activity for which they received it.
- f) Monthly NHIS reports and files may be missing due to staff turnover or unclear responsibility for NHIS data collection.
- g) District NHIS officers may make mistakes in analyzing health facilities and therefore forward incorrect data back to the health facilities and to national levels.

Comprehensively addressing the above problems may not be realistic in the short term; therefore, only NHIS data required for PBF can be verified.

7.12 **Collecting data through PBF websites and links to NHIS**

In some 10 PBF countries, PBF data collection is conducted through national Ministry websites, which are typically managed by the National PBF Unit. Regional health departments, regional CDV Agencies, and district branches usually upload the PBF data. RHD, MOH representatives, CDV agencies, and health facilities have access to these website data and extract and calculate coverage per indicator relative to the target for each provider, district, region, or country. Verified data improve quality and help providers improve performance. The public may also have access to the data. For example, they may verify the quality score of their local provider. If this quality is poor, the population may start to

frequent other providers with higher scores. This mechanism will pressure providers to improve service quality.

Linking the national PBF data website to the NHIS system may also improve NHIS data quality, but it is important to reduce the number of monthly NHIS output data elements to no more than 50. The other required NHIS data may be transferred to the PBF quality indicator lists, which include more than 200 composite indicators. If this is still not sufficient, other data collection may be obtained from specific (research) studies. Finally, data collection may be done in sentinel research centres.

8. SOCIAL MARKETING and PATIENT SATISFACTION

René Queffelec, Juvénal NDAYISHIMIYE, Claude WILONDJA

Main messages of the module

- Community participation in the primary health care of the Alma-Ata approach, through voluntary health facility committees, did not yield the expected results.
- The PBF approach proposed separating community participation into two functions: a. *social marketing* and health facility oversight by traditional health facility committee members, and b. *community voice empowerment* by local NGOs operating independently of health facilities, with a performance contract to conduct patient satisfaction surveys.
- In community PBF activities, quality should come first, too. This requires adequate incentives and, sometimes, qualified staff for effective social marketing activities.
- Non-qualified local NGO members should *not* conduct curative community activities.

8.1 The community participation approach of Alma-Ata through health committees

According to the community participation approach of *the 1978 Alma-Ata Conference on Primary Health Care*, *community-elected* members of health facility committees played an important role. They were volunteers and constituted the interface or *bridge* between the health facility and the community in two ways: (a) bringing services to the population; (b) involving the population in managing the provider.

This *traditional interpretation of community participation* has been criticized because, although health committee members were supposed to champion the community's interests on a voluntary basis, in practice they were more closely linked to health facilities and pursued their own interests. Another often observed problem was that, in the free health care system, committee members “policed” how far staff applied free care and therefore were often given management power. They became volunteer administrators, bookkeepers, treasurers, or even drugstore keepers. However, in practice, they were not qualified to perform such roles effectively, and their unpaid status caused considerable confusion. It created tensions with health workers about power and money. In conclusion, the traditional community participation approach did not achieve all its expected results.

8.2 The PBF approach of social marketing and community voice empowerment

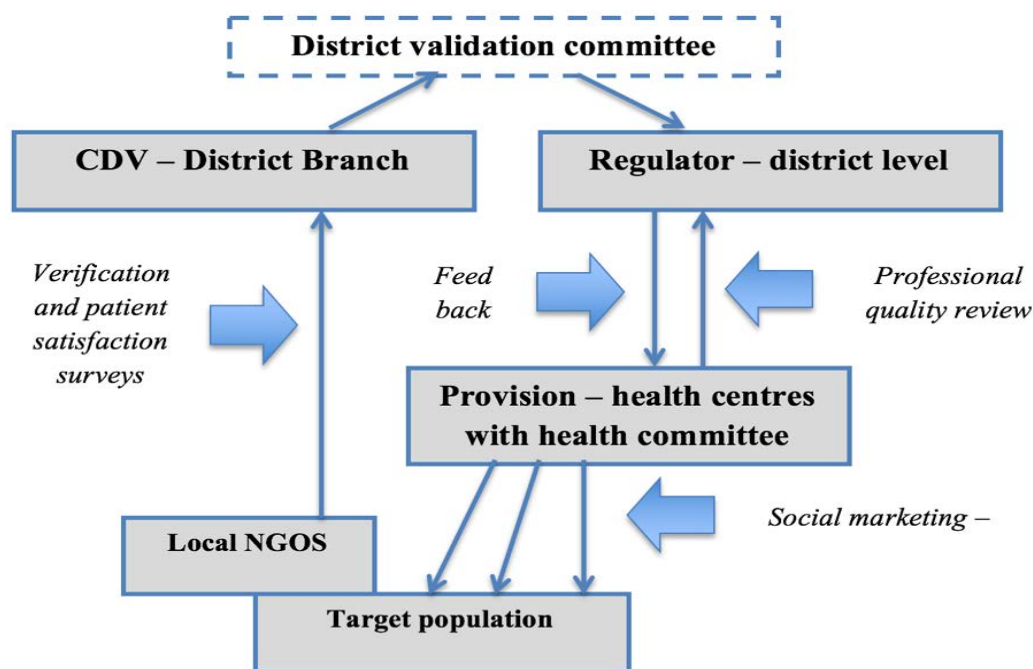
- a. *Members of the traditional primary health care committees continue to strengthen health facilities and bring services to the people through social marketing.*

Yet, under the PBF approach, health committee members are no longer directly involved in daily management; instead, they meet once per trimester to monitor progress and resolve problems or conflicts as needed at the health facility. The health committee of each facility may discuss user-fee tariffs with the community and propose what seems reasonable. In this logic, health committee members are no longer “police officers”.

In this logic, the PBF staff, consisting of qualified and appropriately remunerated personnel, are responsible for daily management and occasionally discuss health matters with the health facility committee members, who function as the “board,” as in a company.

- b. *The other part of the traditional primary health care role of representing the community should be handed over to local NGOs to conduct patient satisfaction surveys, thereby strengthening the community's voice. In a second role, local NGOs verify during household visits that patients did indeed visit health facilities. The (regional) CDV agency signs contracts with the local NGOs.*

The following diagram illustrates the separation of functions between strengthening the population's voice through satisfaction surveys conducted by local NGOs and social marketing through health training, including members of the health committee.



8.3 Consumer empowerment and household verification of HF activities

In PBF, there is a need to verify and audit, at the household level, how far the services at health facilities for which PBF pays subsidies were indeed provided, and that data in facility registers are not falsified. Therefore, local associations or NGOs verify at the household level every three months to assess how far the health services were indeed provided. Verification is based on a sample from the facility registers, representing 1-3% of all patients who visited the facility during the previous three months. CDV Agency community verification officers do the sampling. They organize the surveys with the local NGOs.

In addition to this verification role, it allows community group interviewers to simultaneously *assess patients' satisfaction with services at the facilities*. This information is very helpful for the CDV agency and local authorities during the three-monthly contract renewal negotiations with the facilities. Complaints and recommendations from patient surveys may orient the discussions, and the information may be included as a criterion for paying the PBF quality bonus (see Module 6 on regulation and quality assurance). It therefore constitutes an important tool for *community empowerment*.

8.4 Social marketing

In the late 1960s and early 1970s, several academics and social workers wondered how the Coca-Cola Company managed to distribute and market its soft drinks so successfully. Coca-Cola also succeeded in the most remote areas of Africa, despite different tastes and drinking habits. What methods and tools did they use? Why not also apply the same techniques for socially desired products and services such as the

use of family planning methods and condoms, hand washing, breast-feeding, or using bed nets? Social marketing emerged as a pragmatic approach, using tools developed for private-sector marketing to achieve social objectives.

PBF offers a social marketing and community PBF approach based on the following principles:

- Identify key messages and the desired changes concerning behaviour. This can be based on professional analysis and population studies.
- Turn key messages and change topics into SMART community indicators, such as a home visit protocol and specific indicators like TB patient dropout/recovery or follow-up for a couple using family planning.
- Providers should be given the flexibility to choose which strategies to apply when implementing social marketing activities. For example, health committee members and community health workers can be effective for social marketing in rural areas, but in urban areas it may be better to develop other strategies with qualified agents or through other social marketing methods such as radio or social media.
- Providers may allocate 15-20% of total provider expenditure for social marketing activities. This can be reimbursed through the subsidies for the community PBF indicator outputs.
- Ensure the quality of community interventions by allocating sufficient financial resources and involving qualified staff.
- Prohibit non-qualified community volunteers from conducting curative activities, such as distributing antibiotics or contraceptives. In most African countries, the shortage is not of qualified personnel but of their unequal distribution between urban and rural areas. It is better to address qualified staff distribution problems and to invest in it through PBF subsidies than to invest, for example, in training community health workers to become government-authorized village doctors.

8.5 Community PBF - household visits following a protocol

The PBF program in Cameroon, financed by the World Bank, introduced a new national indicator in 2011, defined as *"household visit following a protocol"*. During 30-minute encounters, a team of 2-3 people may systematically cover several health issues. Responses were favorable, and countries that apply the FBP adopted the same indicator. It is included in the minimum package of activities in the PBF program and accounts for 15-20% of the total PBF budget, showing its importance.

Action research is required to adapt it to country- or region-specific circumstances.

The following questionnaire has been developed in the DR of Congo.

Key questions to answer during household visit following the protocol	Which action to be taken by who and when
1a. Are there children under 5 years? Yes / No	
1b. Do the children under five years sleep under the bed net the night before the visit? There are no children U5 / All did / Some did / None did	
2a. Is there a pregnant woman? Yes / No	
2b. Did the pregnant women sleep under the bed net the night before the visit? There is no pregnant woman / She or they did / Some did / None did	
3a. Is there a breastfeeding mother with a child less than 6 months? Yes / No	
3b. If yes, does she practice exclusive breastfeeding? Yes / No	
4a. Are there children > 6 months who are underweight in the household? Yes / non	

4b. If yes, do they receive complementary feeding? Yes / No	
5. Are the insecticide impregnated bed nets properly mounted? No bed nets / The bed nets are NOT properly mounted / The bed nets are properly mounted	
6a. Is there a place or device for hand washing in the household? Yes / No	
6b. If yes, does the household use it? Yes / No	
7a. Is there a functional toilet / latrine? Yes / No (<i>interviewer must directly observe</i>)	
7b. If yes, do the household members use it? Yes / No / Not sure	
8. Is the surrounding environment free of unclear bushes, wastewater logged, over filled waste in the garbage bin? Yes / No	
9. Is there access to safe water? Yes / No Is the water well preserved (stored in a clean and covered container)? Yes / No	
10a Does each child in the household have an immunization card? Yes / No	
10b. Have they all completed their vaccination schedule in time? Yes / No	
11. Does each child under 5 years have a birth certificate? Yes / No	
12 Does the household members use the following health services? a. Family Planning Yes / No / NA b. Ante natal Consultations Yes / No / NA c. Delivery care Yes / No / NA	
13. Was there any new birth in the last month? Yes / No If yes, how many	
14. Was there any case of under 5 deaths at home in the last month? Yes / No	
15. Was there any case of maternal death at home the last month? (During pregnancy or post-partum)? Yes / No	
16. Is the family vulnerable? => Do they belong to the 10% most vulnerable household compared to other households visited?	
Full names of qualified staff: Signature	
Full names of community health worker: Signature	
Names and surnames of the family head: Signature	

1. During the first visit, the team examines and records the household's baseline situation in a register. The team discusses the specific measures that the household, the health center staff, and local administrative authorities will take over the next two months. The team develops a household "business" or action plan.
2. During the second visit, the objective is to monitor the extent of plan implementation. Have vaccinations for children under one year old or family planning visits been completed? Did the household obtain a hand-washing device or bed nets? Were toilets or latrines improved? Health facility staff conducting the household visit may also coordinate their work with the environmental health officer from the local authorities and issue more binding recommendations, including, in extreme cases, penalties. If the results during the second visit to the household are satisfactory, that concludes the visits to that household. These may include waste disposal and the use of latrines or toilets.
3. If problems remain after the second home visit, a third visit may be proposed, and so on.

However, household visits will be highly participatory and must be oriented toward behavior change communication. Household visits will take a friendly approach to the population to improve health-seeking behavior and to promote a healthy population.

Health center staff will provide services at the visited household, ideally accompanied by a community health worker or community members (to be determined), and PBF will pay for them. During the consultation, households will receive information on available health services and best practices for preventive health behaviors at the household level. Home visits may also address children's nutritional status and help identify vulnerable families in need of the PBF individual equity subsidy, so they are exempted from fee-paying.

8.6 Indicators for non-professional community health workers in PBF

When we talk about the community in health systems, this often refers, in rural areas, to community health workers, traditional midwives, or members of health facility committees. In urban areas, they may be volunteers, interns, or qualified agents with performance contracts.

Community PBF indicators by non-professional volunteers	Unit cost FCFA
Cases referred by community volunteers: (a) Pregnant women referred and arrived in health facility for childbirth; (b) Mother referred for postnatal consultation and arrived at health centre; (c) New PF case referred to health centre and accepting method;	F 250
Drop out cases recovered: (a) Child under 12 months recovered; (b) Pregnant women recovered; (c) Cases of severe acute malnutrition identified; (d) TB ++ smear identified and confirmed by the health facility	F 750

9. FEASIBILITY SCORE of a PBF PROGRAM & ADVOCACY

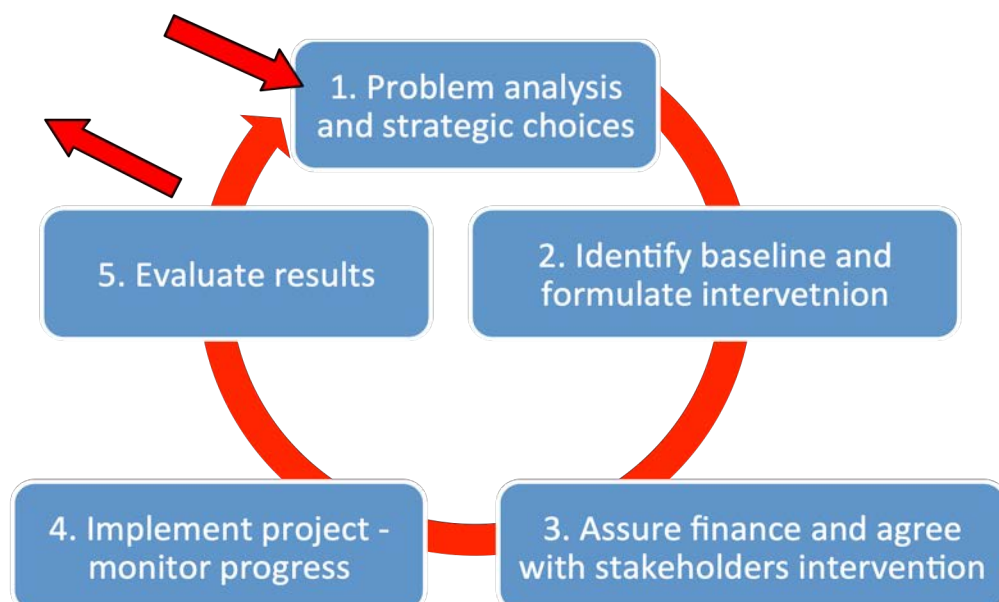
Sosthène HICUBURUNDI, Michel BOSSUYT

Main messages of the module

- PBF programs have long-term (3-5 years), medium-term (6-18 months), and short-term (3 months) management cycles, which allow flexibility to adapt strategies at each stage.
- This module examines *the feasibility score* of a PBF program and how to make it as "pure" as possible to maximize the chances of success. An important skill for PBF advocates is effectively managing the change process and informing decision-makers about best practices and instruments to introduce.
- To increase the likelihood of success, PBF advocates must design interventions that meet at least 80% of the 23 feasibility criteria, drawing on best practices and using PBF instruments such as business plans and indices management tools. They must also avoid killing assumptions, such as an insufficient budget (less than US\$4 per capita per year) or accepting to work with monopolies for inputs.
- PBF advocates must sometimes promote politically sensitive changes in input procurement, separate functions to prevent conflicts of interest, and more autonomous provider management. In this advocacy, prepare clear, concise messages; allow time for them to sink in; identify allies and adversaries; and avoid false promises.

9.1 The standard project management cycle

A standard management cycle has five stages: (1) Problem analysis and strategic choices; (2) Identify the baseline, which includes a feasibility study, and formulate the intervention; (3) Assure finance and agree with stakeholders on the intervention; (4) Implement the project and monitor progress; (5) Evaluate results and either end the intervention or re-enter with a new project.



In PBF, we usually distinguish three management cycles:

- The 2–5-year PBF project cycle;
- A shorter 6-12-month cycle for the regular adaptation of subsidies and indicators;
- The 3-monthly cycle of the facility business plans. The regular renewal of the facility contract allows flexibility and adaptation when required.

PBF programs are no longer limited-duration projects (e.g., 3 years) but reform programs of indefinite duration.

When an organization wants to initiate a PBF intervention, it must begin by drafting a proposal to submit to authorities and/or aid agencies. It may contain the following elements:

1. Background – problem analysis, feasibility score analysis
2. Place of the intervention (**where**)
3. Target population (for **whom**?)
4. Project motivation (**why**?)
5. Which indicators will be financed (**what**?)
6. The duration of the project (**when**?)
7. Monitoring and evaluation mechanisms
8. The costing of the project (subsidies + overhead)
9. Roles and responsibilities of stakeholders

9.2 PBF feasibility score analysis: How many PBF criteria out of the 23 are fulfilled

The initiative to start a new PBF intervention may come from a government, an aid agency such as the World Bank, or an NGO such as Cordaid. When starting a PBF intervention, it is important to conduct a feasibility study. This requires collecting information and determining how far the government or key stakeholders are willing to go in accepting the changes needed for PBF programs to succeed.

When preparing the new PBF intervention, and after collecting as much information as possible, the initiators review how fully the proposal includes PBF best practices and instruments. Is the intervention “pure”? The following criteria may be applied. The PBF program is feasible if the score is 80% or above. If the score is lower, you may suggest negotiations and discussions to bring the proposal closer to the 80% threshold.

Criteria to establish in how far the programme is “PBF”	Points
1. The PBF program budget is not less than \$ 4 (simple intervention) - \$ 6 (more complex interventions with many equity elements) per capita per year of which at least 70% is used for HF subsidies, local NGO contracts and quality improvement bonuses for infrastructure improvements, means of transport, medical equipment, support in case of emergencies. • <i>Thus, a program with minimum packages of activities (MPA) at the primary level and complementary package of activities (CPA) at the hospital level), lasting three years, with a budget of \$30 million, cannot cover more than 2.5 million inhabitants if overhead costs are included (\$30 million / \$4.00 USD / 3 years = 2.5 million).</i>	4
2. At least 20% of the PBF budget comes from the government and the PBF program has a plan to reduce donor dependency.	2
3. The National PBF Unit is integrated into the Ministry of Health at a level high enough that allows it to coordinate all activities of the MOH with the Directorates and Programs.	2

4. The Directorates and Programs of the central Ministry have performance contracts with standard output and quality indicators.	2
5. The PBF program at both health centre (MPA) and hospital (CPA) levels has at least 25 output indicators, for each level, for which they receive PBF subsidies, and it has a performance-based quality review system with composite quality indicators.	2
6. The PBF program contains the community indicator “visit to household following a protocol” to be applied by all primary level principal contract holders.	2
7. District regulators conduct quality reviews of at least 125 composite indicators at public and private health facilities. They also do the annual mapping of health facilities and assure the rationalization of catchment areas in units of between 6,000 and 14,000 inhabitants.	2
8. The PBF program has a district validation committee that brings together for the validation of the invoices the district regulator, the CDV Agency and a representative of the providers	2
9. The program includes a baseline household and quality study, which establishes priorities and allow to measure the impact of the program.	2
10. Cost recovery revenues are spent at the point of collection (facility level) and the health facilities have bank accounts on which the daily managers of the HF are the signatories.	2
11. Provider managers have the right to decide to buy their inputs from several accredited distributors operating in competition.	4
12. The project introduces the business plan that includes the quality improvement bonus (QIB)	2
13. The project introduces the indices tool for autonomous management of all cash revenues (not only PBF subsidies), planning of the expenses and the transparent calculation of the staff performance bonuses	2
14. CDV agencies sign contracts directly with the daily managers of the providers – not with the indirect owners such as a religious leader or private person.	2
15. Health facilities are allowed to influence cost sharing tariffs	2
16. Health facilities have the right to hire and to fire	2
17. There is a CDV Agency that is independent of the local authorities with enough staff to conduct contracting, coaching and medical & community verification.	2
18. There is a clear separation between the contracting and verification tasks of the CDV agency and the payment function	2
19. CDV agents accept the promotion of the full government determined packages (this in Africa mostly concerns discussions about family planning)	2
20. There is a system of quality improvement bonuses (\$ 750 – 5000) for initial capital injection, infrastructure rehabilitation, means of transport, equipment, and support in case of emergencies, which are paid against achieved benchmarks based on agreed and signed business plans with the CDV Agency.	2
21. Public religious and private providers have an equal chance of obtaining a contract	2
22. There are geographic (region, district) and health facility specific equity bonuses	2
23. The project includes, at the primary (MPA) and hospital-level (CPA) levels, equity indicators that exempt patients from paying fees, up to a maximum of 10- 25% of all patients. Vulnerable patients should be selected locally based on SMART criteria. For these indicators, the health facilities receive a subsidy 4–6 times that of a fee-paying patient.	2
TOTAL	50

Multi-sector PBF may improve the financial feasibility and increase impact

When creating a CDV agency in a remote province or district, it may be more efficient to include rural development (maintenance of roads and bridges) and education (educating girls, sexual education) in the PBF program and to seek additional funding from other sources. This creates economies of scope, and the intervention may become more effective in achieving the social objectives. For example, a 2010 feasibility study in the Central African Republic showed that reproductive health goals could only be achieved if, at the same time, girls' education was included in the original health intervention.

9.3 Killing assumptions in the PBF project design and how to tackle them

A killing assumption is a condition under which it becomes highly doubtful how successful a given program can be. Therefore, it is necessary to improve the program's design.

We may consider the following conditions killing assumptions:

- Authorities do not accept the separation of the functions of provision, regulation, and contract development & verification
- The proposed per capita PBF budget is below USD 4 per capita per year
- Facilities depend on central distribution for their inputs (essential drugs, equipment), and they have no alternative suppliers other than, for example, government central medical stores.
- Facility managers are not allowed to spend cash
- Subsidies are paid in kind and not in cash

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

- The project is too ambitious and aims to reach a too large a population. A minimum of USD 0.50-1.00 per capita per year is required for administrative costs only. For example, if a total of USD 1.00 is proposed, 50-100% will be spent on administrative costs. If USD 4 is available, administrative costs will be reduced to 20-25% of total project expenses. If USD 4-6 is available, the administrative costs will be further reduced.
- Government officials, aid agencies, and NGOs may wish to control a large proportion of the program budget by investing it in inputs such as essential drugs, ambulances, or centrally planned infrastructure projects. This allows them to claim administrative costs or even siphon off money as kickbacks, which they negotiate with suppliers during tender procedures. These inefficiencies clearly harm providers and society.
- Decision-makers may be reluctant to abandon existing procedures due to a lack of flexibility: "that's how the law is here," which rely, for example, on a monopolistic supply of medicines and other inputs, or on the fact that the law stipulates that all revenue from public institutions must be transferred to the Treasury.

How to deal with killing assumptions?

A killing assumption blocks the successful implementation of a PBF program, and the main reason may be a lack of knowledge, which can be removed by providing information. This allows the design to change so the killing assumption is removed. Often, outdated laws prevent the implementation of certain performance-based financing (PBF) reforms. Therefore, PBF advocates (usually the World Bank) negotiate a document with the government proposing exemptions to the law only for the regions, districts, and health facilities included in the PBF program.

If this also proves impossible, the initiator is better off diplomatically acknowledging a serious problem with the project design, proposing to resume negotiations later, and, in the meantime, seeking advice from other ministries or from performance-based financing (PBF) programs that have successfully resolved similar issues. That said, some programs, such as Zimbabwe's PBF, started with several fatal assumptions but abandoned them over time. However, PBF pilot projects in Katanga (DRC) and Uganda also failed because of the existence of killing assumptions.

If decision-makers insist on continuing the project "because we don't want to lose the money," while refusing to eliminate the identified fatal assumption, the project cannot be classified as PBF. This label should be reserved for proposals with a feasibility score of 80% or more that contain no fatal assumptions. This problem of projects that are not, in fact, true performance-based financing (PBF) programs has cast a negative light on PBF's reputation in the PBF literature. Some evaluation articles on PBF programs in Benin and the DRC have criticized PBF, with feasibility scores below 50%.

9.4 Memorandum of Understanding to establish the outline for the PBF intervention

When negotiations are successful, the next step is to draft a memorandum of understanding with the main stakeholders that outlines the intervention. A detailed description of the proposal is not the priority of the memorandum because such discussions tend to block progress. It may therefore be a small document of less than 10 pages. It specifies the best practices or propositions on which the project will be based and describes practical issues such as the funding source, the total and annual per capita budgets, the geographic location, and the organization that serves as the CDV agency.

Unclear issues may be settled in a paragraph on issues that need to be investigated through action research and during the pilot phase, or for which the partners agree on exemptions from the current law for the PBF area only. This broader, more flexible outline of the PBF intervention allows adaptation to external factors during project implementation. It is a relational contract (see also module 4). It is wise to propose regular reviews, internal and external evaluations, and the acceptance that lessons must be learned from both successes and problems during project implementation. The proposal may include adequate technical assistance, and the design should allow changes during implementation. This also applies to the choice of indicators and their respective subsidies.

9.5 Advocacy for PBF

Advocacy or lobbying is a process by which a cause or theme is actively promoted for which (political) change is sought.

The theme must be well defined, clear, and as simple as possible: It should be SMART. PBF advocates should begin by explaining **PBF best practices** and a few key notions about the underlying theories. It may be useful to develop a few short advocacy slogans such as:

"Equity = YES; Free health care = NO" or

"The effect of USD 1 PBF equals USD 4 in inputs" or

"Well applied PBF can achieve the Sustainable Development Goals and Universal Health Coverage".

Searching for such short messages may also help advocates specify exactly which messages they wish to communicate.

When making an advocacy business plan, one identifies key actors and decision-makers who have the power to change things (parliamentarians, local VIPs, key figures in the ministries), and they may be put in one of the following categories:

- a) **Allies** are also seeking to innovate or enhance development.
- b) **Adversaries**. These may be groups or individuals who are not informed, who fear change, who are searching for their private interests, or who genuinely think PBF is the wrong way to go;
- c) **Undecided**. This group is equally important because they can swing the balance toward one decision or the other.

Based on the **power dynamics** between the main actors, PBF advocates may develop strategies:

- Reinforce support for PBF among allies and enter alliances;
- Neutralize the opposition by either information campaigns or pressure;
- Inform and convince the undecided.

Identify appropriate communication channels to ensure messages reach the target audience. The following can be organized:

- Direct meetings with decision-makers and technical and financial partners;
- Short seminars, lasting 1 to 3 days, for decision-makers;
- Technical working groups at national level. However, one must ensure that powerful participants in such working groups (from the Ministry of Health) without PBF expertise do not make proposals or take decisions that run counter to PBF best practices.
- High-level, 14-day international Performance-Based Financing (PBF) courses for senior officials and decision-makers, hospital directors, senior managers of CDV agencies or partners involved;
- National PBF courses or workshops for operational-level actors lasting 4-6 days, such as facility managers and verification officers of CDV agencies. Such a workshop can be organized at the start of the PBF program in a new district, during which, at the same time, the output of each health facility attending is a convincing business plan, against which an initial quality improvement bonus is paid, for example, of \$ 750 to initiate the PBF activities, make urgent repairs, recruit qualified staff, buy a stock of drugs.
- Organizing exchange visits between countries. Burundi, Rwanda, and Mali are currently (in 2026) interesting destinations.

Advocates regularly **monitor and evaluate** the activities and objectives related to the advocacy plan and how far they are on track.

9.6 Exercises on PBF feasibility and role-play on advocacy skills and attitudes

1. Discuss in groups the PBF feasibility score for PBF and how far they are from killing assumptions for a (potential) PBF program in your country, region, province, or district. Propose strategies for dealing with them. The results of the analysis will be included in the country or subject presentation during the course.
2. Role-play of 5 minutes. In groups of 5-7 participants, prepare a role-play that advocates the PBF program and addresses one or two important problems. This role-play focuses on the style, the environment, and lobby tools. Is one senior decision-maker in the role-play (a Minister, a Director General, or an aid agency decision-maker) who listens to the arguments and, hopefully, by the end, based on how the lobbyists do their work, will be convinced.

Issues to be covered by the other participants observing the role play:

- How well prepared was the advocacy group?
- What icebreaker or “slogan” type statements did they use?
- How clear and SMART were the arguments?
- Was time not wasted on formalities when, in fact, there was no time?
- What follow-up strategies were being proposed?
- Were the statements clearly made, and was there an attitude of active listening?

10. CONFLICT RESOLUTION and NEGOTIATION TECHNIQUES for PBF

Freddy BATUNDI, Silvain MUNYANGA & Godelieve Van HETEREN

Main messages of the module

- Experience in PBF shows that resistance to change often stems from fear of the unknown, a lack of information, or the feeling among key actors that they are not part of the new approach. This leads to conflicts. This chapter aims to manage such conflicts and negotiate the best possible outcomes.
- Some conflicts are not important enough to warrant attention, and they may be *avoided*.
If the conflict is important and the person is close (e.g., a spouse), it may be better to *give in*.
When the conflict is important, but the relationship is weak, one party may *enforce* it (e.g., the police).
If the conflict is important and the relationship is equal, problems need to be handled through a *careful process of confrontation and negotiation*. The latter is often the case in PBF. Involve key actors and decision-makers from the beginning.
- Understanding the arguments and motives of the “opponents” improves negotiation success and helps reach the best possible area of agreement. In negotiations, one must diplomatically indicate which positions are open to retreat, and which are non-negotiable.

10.1 The importance of conflict resolution and negotiation skills in PBF

PBF has social aims like those of traditional health system approaches, such as Primary Health Care and the Bamako Initiative. However, the strategies and instruments to achieve these aims differ greatly; therefore, PBF requires changes in concepts, skills, and instruments, and sometimes in the attitudes of those who must implement it. It requires reforms in how organizations and individuals operate, and anxiety and conflict are inevitable. This chapter aims to best manage such conflicts and negotiate the best possible outcomes.

While we believe that many change issues can be handled with a careful approach, it is sometimes difficult to change individuals or societies with *deeply felt opposing values*. For example, some may argue that free market principles and competition among providers are fundamentally wrong. Such views deserve respect, but PBF advocates argue they can impede efficient management of public resources and may even obstruct the achievement of those social goals. The change process, unfortunately, now becomes a “battle”. A democratic process to reach a conclusion can best address this. Leaders with a great vision may also influence this. They may explain why the change is necessary and thereby change the mindset of the population or specific target groups.

10.2 Some definitions concerning conflicts

A **conflict** is a struggle over 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:

1. **Mechanical**, concerning money, land, property, equipment;
2. **Socio-emotional**, whereby the identity or values of people are at stake.

Such problems may create conflicts arising from differences in points of view, aspirations, or assets. Conflicts may occur at different levels: (a) **Intra-personal**: within the person; (b) **Interpersonal**:

between individuals; (c) **Intra-group**: within a group; and (d) **Intergroup**: between social groups or broader entity groups.

10.3 Change as the source of conflict and what can be done?

Development is inherent to change because it assumes shifting from one situation to another that is supposed to be better. Even if everyone can rationally understand that change will improve a given situation, it may not be emotionally welcome. This is even more true when there are good reasons to fear that the change may threaten someone's interests.

Why do people or groups resist change and what can be done?

1. Loss of control

When decisions and activities are imposed, opposition becomes likely. Change is easier to accept when it is done **with us**, but it may become threatening when it is done **for us** (= against **us**). The more people feel they can influence decisions, the more likely they are to accept them. So, change agents should be sensitive to the fact that individuals wish to control events and their lives.

2. Uncertainty and a lack of information

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. Failure to share information between individuals or groups reinforces perceptions of differences and may become a source of conflict. However, the conflict may be a misunderstanding that can be resolved by taking the time and effort to provide information.

3. The “surprise” effect

People resist change when it surprises them. The logical reaction to something completely new and unexpected is “no”. Providing information alone may not be enough, because the process matters, and new ideas need time to “sink in”. Sometimes it is good to present a new idea without immediately asking for a response. After a few days, the same topic may come up again, giving the other person time to nuance her position or opinion.

4. Loss of face

Change creates resistance when it suggests people have done things wrong before. Nobody likes to admit this and to “lose face”. To increase the likelihood that new ideas are adopted, it is wise to put the previous behavior in its historical context, such as a lack of modern means of communication and access to the internet for exchanging data. Loss of face may be avoided by saying that “those days are over,” and people may then claim they are strong and flexible.

5. Worries about future competencies

Sometimes people resist change because they wonder whether they can adapt or acquire the required skills. It is important to explain the new system clearly, so people do not worry about skills.

6. The “snowball” effect of change

People may resist change because they feel this will negatively influence other personal or work-related activities. Sometimes change can disrupt other plans, projects, and personal activities. Therefore, people may refuse change for the “wrong reasons”. A good change manager is sensitive to these considerations and shows flexibility. For example, a manager could postpone an employee's transfer until the new school year to avoid disrupting the children's education.

7. Change means more work

Change may require a learning process when it means moving away from easy old routines. This may mean more work, such as when facilities must launch new PBF-subsidized services to attract more patients. Staff may consider this a threat, particularly when the rewards are unclear or not high enough. Scaling up activities needs to be well managed, for example by recruiting more staff.

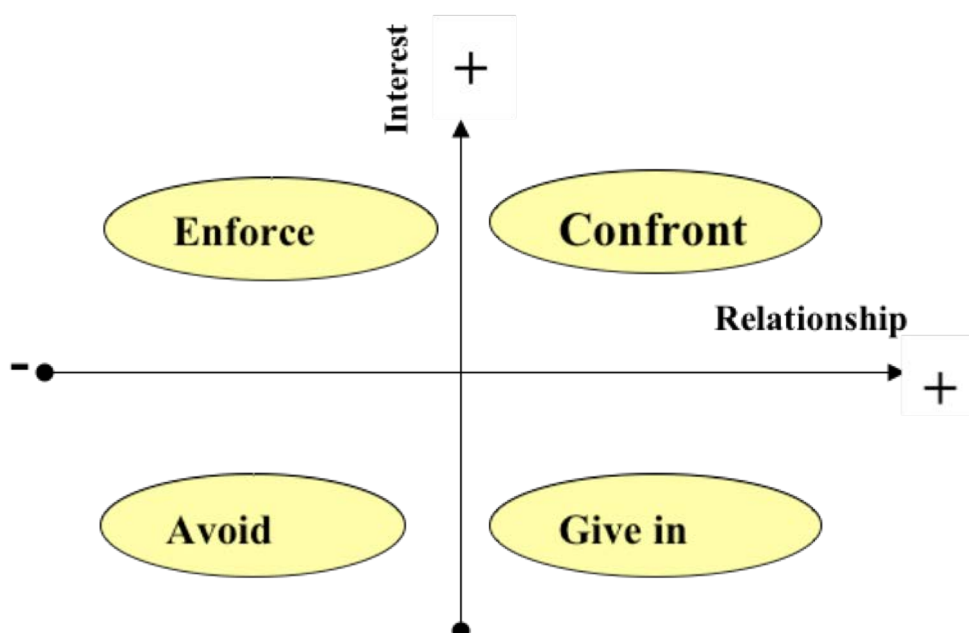
8. The threat may be real

Another reason for resistance to change is the most reasonable: when the threat is real. Stakeholders may lose their jobs, be forced to move away from easy moneymaking, or lose a powerful position. Whether this is socially just or not, it must be considered. People may also fundamentally oppose the proposed change for ideological reasons such as: “Any market influence on social services is bad” or “Workers should always follow the public interest behavior and financial incentives should not play a role in motivating them”. If such problems exist, there may not only be winners but also losers. It is difficult to create a win-win situation.

10.4 Conflict management styles: enforce, confront, avoid, or give-in

Conflicts are inherent to human relations, and it is utopian to think that they can always be prevented. However, when conflicts are not well managed, it may result in further damage in terms of anxiety, unhappiness, disease, and loss of goods, and sometimes even loss of life.

Individuals react differently to conflicts. This depends on how important the issue is and how close the relationship is between individuals or groups. See the illustration below.



There are the following conflict management styles:

- **Enforce.** This is usually done when the interests are big, and the relationship between individuals or groups is weak. Authority may come in to settle the conflict. This may be the case when someone violates the law, engages in dangerous behavior such as drink driving, or ignores traffic rules. Somebody may try to avoid paying taxes or deliberately pollute the environment. This manner of conflict resolution usually ends in a “win - lose” situation. This is how the police work: “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. In addition, PBF has rules and

standards, mostly set by the government, that should be enforced. A provider conducting dangerous medical practices or ignoring basic rules on hygiene and sterilization should be punished so that the public interest is defended.

- **Avoid.** People deny or avoid conflict because they consider the issue at stake not important enough to warrant the trouble or energy. This is the likely outcome when the opponents also have no direct relationship. They simply ignore each other, tolerate the problem, and avoid communicating with the opponent about the issue. For example, when drunken people shout insults at innocent bystanders or when a driver forces other cars to give way, the offended person or driver may simply ignore the issue. In fact, this is wise because such conflicts tend to quickly escalate with enormous damage or even death when they lead to drunken fights or traffic accidents.
- **Give in.** The group or individual is aware of the problem but also wants to preserve the relationship. The issue can then best be minimized. This may be the case with the irritant behavior of a child or a partner. However, giving in also implies that important facts or attitudes may be overlooked and left unaddressed. It may lead to new conflicts in the future because the underlying causes were not addressed.
- **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 for all; a win–win situation. This usually happens when two entities share an interest in finding a common solution because they work for the same organization or have a direct personal relationship. This will work best in a favourable climate in which both parties agree to avoid autocratic behavior that would influence the process. The people or groups are willing to express their needs, requests, and feelings to the opposing party. They are open to new ideas, change, and opportunities because they are motivated to find a solution. Here, negotiation techniques will be very helpful to reach a compromise.

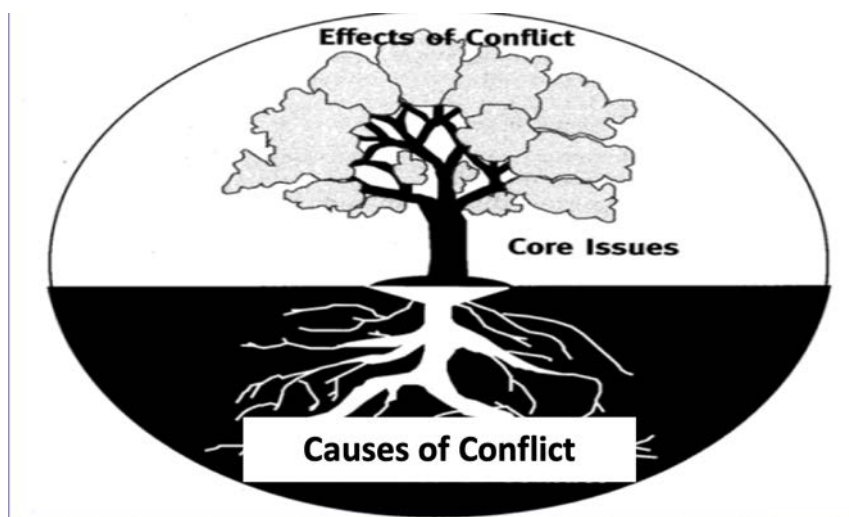
10.5 Negotiation techniques and seeking compromise

Negotiating does not mean to “fight”, but it is a communication intended to produce an agreement between people with both opposing and common interests. This requires formulating a third alternative or compromise, which includes parts of what each initially wanted and something that must be sacrificed. Negotiation is thus a *voluntary* discussion aimed at *reaching an agreement*. It involves a *dynamic process* in which the opponents become interdependent. Negotiation thus aims at achieving the “*best possible legitimate agreement*” under the given circumstances. It does not mean that the agreement will be ideal or perfectly fair but that the fundamental interests of the opponents are generally considered.

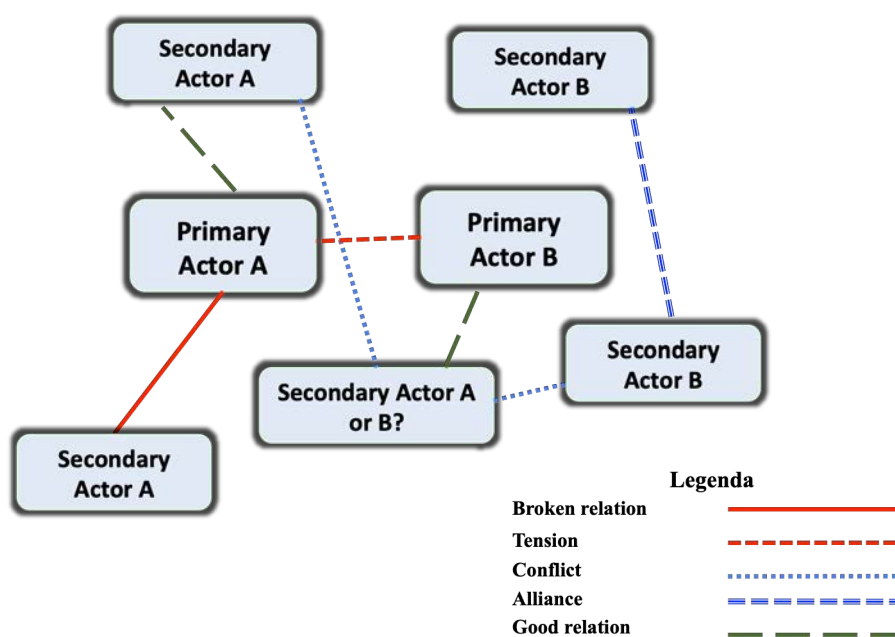
10.5.1 Preparing negotiations

When preparing negotiations for a cause, it is necessary to know:

- (1) What are your own negotiation objectives and what is your own initial negotiation position? How much room is there to change your standpoint, and what are your non-negotiable points or your point of retreat from the discussions? Conflict is often part of an underlying network of sub-conflicts that needs to be understood. Sometimes we see only the effects without understanding the root cause of the conflict.



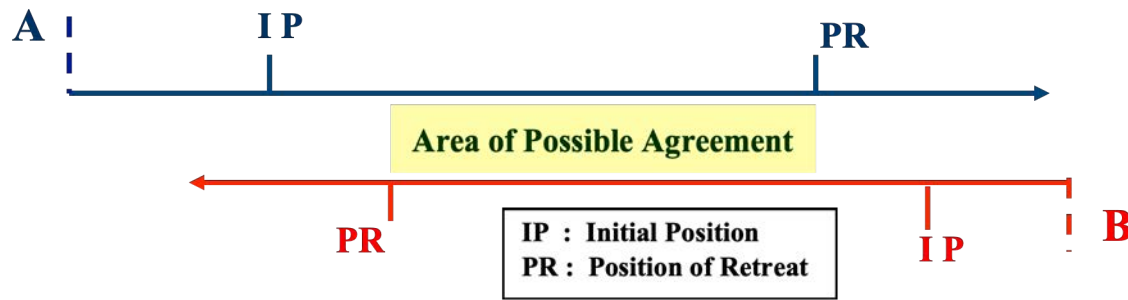
(2) Who is your opponent and who are the negotiators? What authority and decision-making power do they have? Are they motivated to reach an agreement? What are their likely points of view? If there are more entities, how do they interact? Who is at the centre of the conflict, and what are the positive or negative relationships between the belligerents? See the next illustration.



10.5.2 Conducting negotiations

The first stage is to establish the standpoints (key best practices of PBF, target population, complete package, sufficient funds, etc.) and identify the likely stakeholders who may either oppose or support those standpoints. Next, *consult* the other entity to confirm their standpoints and problems. Are they motivated to reach an agreement, and are there non-negotiable points?

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



The next step is confrontation, in which the parties present their wishes, needs, or requests and actively listen to each other's viewpoints. The next step is to reach a compromise, with some points to give up and others to win.

The characteristics of a good negotiation agreement:

- It should satisfy the interests of all parties and be the best possible option and legitimate;
- It should help to build good relations between the parties and develop an effective form of communication;
- It should include clear, realistic, and actionable commitments.

The results of the negotiations should be “validated” in a memorandum of understanding or contract. At this point, *there should be no further negotiations*. It is time to sign the contract.

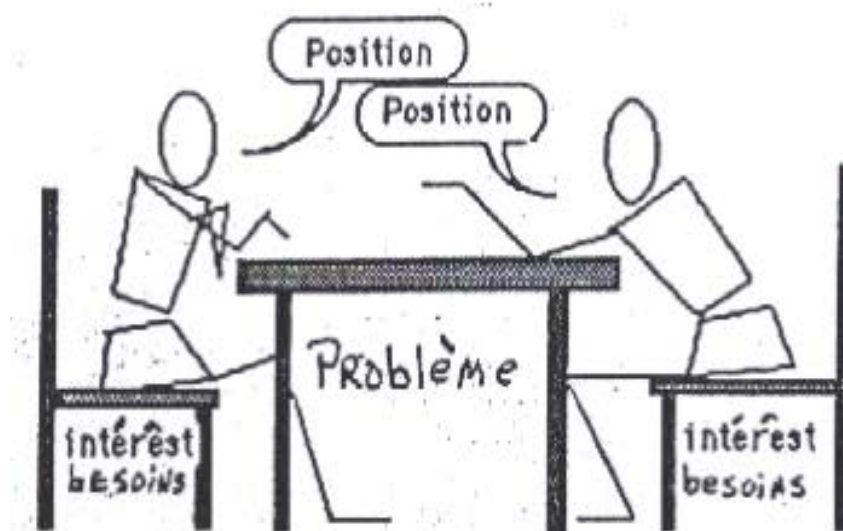
10.6 Negotiation skills: The DOs and DO NOTs when negotiating for PBF

The DOs in PBF negotiations

- **Inform.** In change processes, involve as many stakeholders and partners as possible as early as possible in the PBF transition process to build acceptance and ownership of the change. This may be done by presentations, sending PowerPoints or scientific papers to key individuals, or by conducting PBF courses and conferences.
- **Inform decision makers.** This is particularly important for opinion leaders and decision-makers during the first stage of the change process. Organize exchange visits to other countries or to in-country pilot projects so they can observe opportunities for reform.
- Obtain **reliable** information on the **other entities' standpoints**. Information may come from various sources: documents, Internet, meetings, telephone discussions, etc. The information may be contradictory, and it may be useful to verify it to avoid misunderstandings.
- **Identify champions.** For PBF advocacy, identify the “leaders” or “champions” who can explain the new system and may also be good “negotiators”. They must bring different views together but **without** violating the main PBF principles. Sometimes it may be necessary to assemble a group of people for this purpose: some more involved and skilled in content and others more focused on process and negotiations.
- **Create ownership.** Stakeholders should participate in preparing new PBF interventions. Being part of pilot projects, scientific intervention-control studies, and action research so that decision makers can observe the results and decide based on “what works “and” what does not work will also enhance ownership.
- **Create sufficient PBF training capacity.** This should be developed at all levels, short term, medium term, and increasingly long term, such as in the curricula of medical schools. In fact, in

Rwanda, after a few years of PBF, young health workers have never known traditional health systems. For them, PBF systems have become the standard, and there is no need for change.

- Choose a **favorable moment and atmosphere** for negotiations. Provide adequate means of communication and logistics, and a pleasant negotiation environment (accommodation, some entertainment). Ensure practical tools (meeting room, audio-visual equipment, and work schedule).
- **Negotiate on content.** Negotiations should focus on content issues (principles, best practices), not positions (statements). Separate problems from conflicts between individuals as much as possible. Try, therefore, to negotiate issues concerning content, persons, or relationships separately.



Don't stay in your position and try to identify the real problems and needs.

- **Active listening** techniques are very important for identifying uncertainties and possible misunderstandings. This requires the listener to be patient and to carefully absorb what the other person is saying. Avoid answering before the other person has finished speaking. It is good practice to first summarize what the other person has said before giving your own point of view. In fact, with careful listening, you may gain insights that change your own position or point of view. All this requires competent negotiators, but you can learn these techniques through role-plays and training.
- **Maintain friendly relationships.** Aim to develop good relationships through effective communication, even when negotiations do not reach a compromise.

The DO NOTs in PBF negotiations

- Do not stress that PBF is a “**revolution**”, which will change everything in a “big bang”. Underline that PBF is a gradual process of information sharing, developing country concepts, and best practices, whereby pilot initiatives play an important role in showing what works and what does not under the specific circumstances of a given country or area.
- Do **not accept killing assumptions**. Explain clearly but in a diplomatic and friendly manner where the non-negotiable standpoints lie.
- Do **not break off negotiations too quickly**. Do not do this even when the opposition shows irrational or dubious private-interest behavior. The question should then be: How do we deal with this opposition? What administrative or political pressure can be applied? Is there a “plan B” strategy? For example, when initiating a new PBF program, the initiators may discover that the

authorities in province A do not seem to be open to the changes. The negotiators may then communicate their intention to begin negotiations in another province B.

- **Do not make false promises.** If somebody, for example, loses his job, it is better to communicate this as directly as possible and thereby prevent a protracted situation of uncertainty, which may also allow the person or group to mobilize unnecessary opposition. The advantage of PBF is that it actively seeks economic multiplier effects and private-sector involvement, so that those open to change may find several opportunities to build a new livelihood.

10.7 Exercise on negotiations

1. Divide into groups of 5-7 people.
2. Each group selects one or two potential conflict and negotiation points from their action plan
3. Each of the groups then makes two sub-groups: (1) one that defends the traditional point of view; and (2) another subgroup that tries to convince the “traditionalists” why change is required. The “traditional” group tries to find valid arguments as to why not to change. The “change” group prepares a strategy based on the DOs and DO NOTs of negotiation skills and instruments.
4. Both groups start with a 1-minute opening statement on their positions, then enter a 4-minute debate. Both sides should *apply active listening skills*.
5. Ten-minute feedback plenary session on what was achieved, mistakes made, tips for improvement

Time:

30 minutes of preparation; 5 minutes of presentation per group and 10 minutes’ feedback.

11. BASELINE & EVALUATION STUDIES FOR PBF PROGRAMS

Celestin KIMANUKA, Robert SOETERS

Main messages of the module

- Conducting baseline and evaluation studies at the national, provider, and household levels is an important investment that directs public resources to the real problems in each country or region.
- In social science, systematic biases are more difficult to control than statistical biases.
- Well-designed studies with small sample sizes that produce results within a couple of weeks may be as effective as large-impact studies, which are complex and take longer to produce results.

11.1 Baseline and evaluation studies during PBF interventions

In many programs, baseline studies are not conducted, so resources may be spent on projects without knowing where they came from or where to go. Much information about the starting situation of a new project may already be available, but we may wish to know more, such as:

- Does the population have access to national package activities at health centre and hospital levels?
- What are the professional and patient-perceived quality of those services? What is the ratio of qualified staff compared to the desired standard and the revenues collected per provider per year for the target population in their catchment areas?
- What is the purchasing capacity of the population specified per socio-economic group? What coping mechanisms does the very poor socio-economic group have, and do they have access to the services?
- Are there problems concerning child schooling, sanitary conditions, access to water, and fertility rates so that the PBF intervention may also include non-health indicators?
- Are there motivational problems for provider staff or other stakeholders such as regulators? Is there a discrepancy between take-home salaries and what would be reasonable to achieve as a minimum standard of living?
- What community empowerment and patient feedback mechanisms exist?
- PBF baseline studies may be part of impact studies that aim to collect scientific evidence on how far the intervention also “works”. This may be needed not only to guide decision-makers and politicians, but also to share PBF results at international conferences and/or in publications. To be effective, the same study may be repeated after 2-3 years and may include control areas for comparison.

Baseline studies help PBF initiators select relevant SMART indicators, identify the baseline situation and targets, and determine the subsidy needed to purchase those indicators. PBF baseline studies usually have three components: (a) a household survey; (b) a quality survey; and (c) structured interviews with key stakeholders such as facility managers, regulators, NGOs, and administrative authorities.

Conducting PBF interventions *without* baseline studies is unwise, because it may lead to a poor understanding of the context and the main problems. “Saving money” by not doing baselines may, in fact, incur higher costs in terms of the reduced cost-effectiveness of the intervention when they are based on wrong assumptions and priorities and when there is no instrument to evaluate the results.

11.2 Setting up PBF household & professional quality studies

PBF studies may be relatively small, involving a few hundred households and targeting a limited number of facilities. NGOs or bilateral organizations that implement PBF interventions for a target population of 300,000 to 1 million people may conduct these. The cost of such studies, for example, for 1000 households and 50 facilities, is around USD 100,000. When resources and capacity allow, the studies may also be larger, targeting thousands of households and hundreds of health facilities. The latter may be done for national PBF interventions, such as those financed by the World Bank, and may cost up to USD 500,000 per study.

One should further decide whether the information is mainly sought to better orient the PBF intervention, or whether the results also aim to compare them scientifically. To meet scientific standards, researchers must conduct power calculations using estimated baseline means, standard deviations, intra-cluster correlations, and estimated treatment effects to determine the sample size needed to achieve a minimum power of 90% at a 0.05 significance level. Publishing results is important to involve the international peer group in commenting on the efforts. This process may identify errors and suggest alternative strategies already used in other countries but unknown to the project.

Yet, an effective PBF baseline study should make findings available within a couple of weeks so that they do not lose their practical value for implementation. The findings and preliminary study recommendations should be discussed and analyzed with the stakeholders who must implement them as much as possible. The study design should contain a strategy for dissemination and advocacy. Main stakeholders should be presented with the crude findings so they can formulate conclusions and recommendations together, rather than leaving this solely to the researchers.

11.3 Who should conduct PBF baseline studies?

There may be two options:

- **External research organizations** conduct the studies autonomously with their own researchers, supervisors, and interviewers. The advantage is that the studies do not disrupt local stakeholders' daily routines and are independent. A disadvantage may be the limited dialogue with the implementers of the PBF intervention. This may create problems because the study may not address the implementers' operational questions. Furthermore, researchers tend to be more academic and base their study objectives more on debates in the literature, while implementers have operational problems to solve. If such study objectives are not well managed, implementers may not understand the findings; they simply ignore them and lack ownership of the results. Thus, the impact is limited.
- **Study organizations conduct the study together with the PBF implementers.** These may be organizations or individuals who also support the PBF intervention. They conduct the study together with local authorities, Ministry staff, and employees of the CDV agencies. The advantage is that it helps them to better understand the context of their future intervention. Through the study organization, they learn from the fieldwork and therefore better own the findings and recommendations. However, there should be a balanced trade-off between sample size and feasibility so that the daily routines of local stakeholders are not disrupted. The disadvantage of this approach is that the study organization is too closely involved in both the study and its implementation, which creates bias. This may be a risk, but by acknowledging it and asking external specialists to review the methodology and results, the risk may be reduced. First, producing crude findings and leaving the interpretation to a working group may further reduce it.

In the past, Cordaid – SINA Health has conducted about 15 studies of this type in countries such as Rwanda, Burundi, the Central African Republic, Yemen, and the DRC.

11.4 Steps in conducting the household and quality studies

The steps of conducting a PBF study may be the following:

- 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 personnel;
- Develop and test survey questionnaires for the household and professional quality studies and for the main stakeholder interviews;
- Stratify districts, provinces, rural areas and urban areas and select clusters, villages and households randomly in the intervention and control areas;
- Carry out the study and start the data entry and cleaning simultaneously;
- Produce cross-tabulations with main findings and apply statistical tests to establish their significance;
- Organize 2–5-day workshops to analyze the findings with the main actors, leading to recommendations based on the findings
- Distribute the report, conduct advocacy, and make it available on a website.
- Transform the study findings, analysis, and recommendations into a publication.

If we take a sample of 1000 households, such a study may take 1 month to prepare and collect data, while analysis and information sharing may take another month. If carried out without interruptions, the results may be available within 2 months. Larger and more complex studies will take longer.

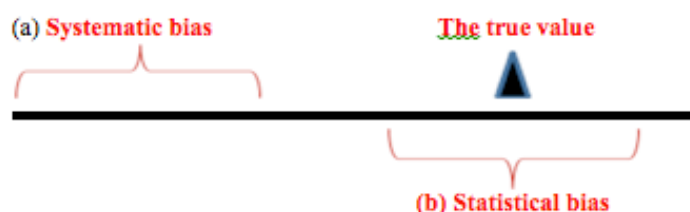
11.5 Study biases

Bias is a term used to describe a tendency towards a particular perspective, ideology, or outcome that interferes with the ability to be impartial or objective. We may identify: (a) Systematic bias, which is a bias of the measurement system or estimate method itself; and (b) Statistical bias, which is the error caused by observing a sample instead of the whole population.

Systematic biases may negatively influence studies more than statistical biases. Conducting a very large household study to reduce statistical bias may, in fact, *increase* the risk of systematic bias and therefore be counterproductive. For example, when the number of teams and interviewers is large, the complexity of ensuring all interviewers apply the same methodology increases the risk of systematic bias, compared with a situation with only 2-3 field teams. Study organizers should therefore aim for the *smallest possible sample size* that still *yields significant results* and invest heavily in data-collection quality to prevent systematic bias.

11.5.1 Systematic biases

Systematic biases consistently produce values that are too high or too low, relative to a given true value of the measured or estimated variable. In systematic bias, the study's sample size becomes irrelevant because interviewers consistently measure the wrong value due to a problem in the data collection methodology.



Categories of systematic biases that may appear and possible solutions:

1. **Questionnaire bias.** Caused by questions that are poorly formulated or poorly translated. The interpretation of questions can differ in the local language compared with the French or English text. Testing the questionnaire several times in the field to make it comprehensible and easy to use may reduce this bias. With a sample of more than 1000 households, it is unavoidable that all questions should be closed with a set of pretested answers. Analyzing thousands of open-ended answers is impossible.
2. **Respondent's bias.** The respondent may provide incorrect information out of fear of being considered ignorant, because they believe a certain answer is socially expected, or because they expect rewards for providing certain information. The respondent may withhold information about assets or income, fearing that the survey will lead to tax consequences. A respondent may also forget facts or misunderstand the question.
3. **Non-response bias.** The interviewer may not find the people at home in the randomly selected household, or the respondent may refuse to participate in the survey. Surveys often occur between 9 a.m. and 5 p.m. when household members are working. Unannounced household approaches in African studies may lead to non-response rates as high as 30%. The factors that differentiate non-responders from responders often include cultural factors, profession, and mental and physical capacities. For example, non-response households are likely to have higher average incomes, which may bias the study's results. Similarly, when conducting facility surveys, the manager in charge may be absent, and if other staff members answer the questions, they may provide different responses.
4. **Interviewer and data entry bias.** Personal opinions of the interviewers may bias the results when they use verbal or non-verbal language to indicate which answer is "correct". The interviewer may not read the question correctly.
To avoid this type of bias, select an equal distribution of male and female interviewers. It is also better to select skilled, experienced interviewers. Depending on the interviewers' experience, a 2- to 5-day training course may be organized. Role-plays during training can reduce interviewer bias. When supervisors have doubts about an interviewer's data, they may observe an interview directly. Supervisors and coordinators should check questionnaires the same day, and data entry should start immediately, so possible omissions or obvious mistakes can still be corrected.
5. **Confidentiality bias.** For sensitive questions concerning reproductive health, HIV / AIDS, and household income, respondents may be unwilling to answer in the presence of family members. In that case, the interviewer should find a strategy to ask such questions in confidence. Furthermore, interviewers should stress that the interview is confidential and should certainly prevent neighbours or friends from attending.
6. **Selection bias.** Examples 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 misinterpretation of the results. This may occur when the researcher tries to prove a certain hypothesis. Peer-group review of the results and analysis may reduce this type of bias.

11.5.2 Statistical or sample biases

Statistical bias or sampling error. The sampling error depends on:

- a) The size of the sample (n). When a question is asked to only a few people, they do not represent the whole population. By contrast, when the same question is asked 1000 times to a randomly selected sample from the population, the average of the answers will be close to the outcome if asked of 100% of the households in the study area.
- b) The expected frequency of the character or event under study among the population. This implies that if the occurrence is frequent (say, between 20% and 80%), a relatively small sample will suffice. When the event is rare (such as maternal mortality), you need a much larger sample.
- c) If outcomes vary widely, you may need a larger sample.
- d) Sample size also depends on the required level of accuracy for a given study. The higher the required accuracy, the larger the sample size. For example, if the significance sought is 1% instead of 5%.
- e) When a cluster sample design is chosen for efficient data collection, it will reduce the statistical power of the findings and may require a larger sample size.

For more details on statistics, we refer to specific books and course manuals.

11.6 Household surveys

11.6.1 Definitions, objectives and indicators

A household is generally defined as a person or a group of people who live together, occupy the same accommodation, and share the same resources, particularly the same kitchen. A household may also include domestic staff, such as a cook or a cleaner.

The objective of a household survey in PBF interventions is usually to better understand the population's health- or education-seeking behavior. The household survey may seek to identify unmet demand for basic service activities, such as malaria prevention through bed net distribution, institutional deliveries, and family planning. The survey may also collect information on patient satisfaction with facility services, such as waiting times, costs, and staff respect.

Household surveys may be conducted to collect information about impact indicators such as: (a) Health or Educational expenditure per person per year; (b) Disease 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 subsidized by the PBF program. The output indicators concern the Minimum Package of Activities (MPA) at the health center level and the Complementary Package of Activities (CPA) at the hospital level. The MPA includes curative care, such as external consultations, hospital days, and 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 from the routine Health Management Information System.

Household surveys will also collect information on *equity* matters, such as the proportion of health expenditure relative to household income. This proportion should be compared across different socio-

economic groups or quartiles to assess whether the poor have difficulty paying. The average cost per consultancy or inpatients admission also provides important information concerning financial access.

11.6.2 Methodology of a household survey

The sample size is calculated based on the target population. For example, for a target population of about 1,000,000 people, a sample of 600-1,000 households may be sufficient to achieve statistical significance for events that occur with a certain regularity, such as deliveries or disease episodes. PBF household surveys are often stratified random cluster surveys in which researchers randomly select clusters of 25-30 households. Clusters may be selected from statistical demographic units or provider catchment areas. Studies usually stratify the population by province or district, as well as by rural and urban status. Thus, if the population in one district is twice that of another, the first district will also have twice as many clusters. If 33% of the population lives in an urban setting, then also 33% of the clusters should be urban.

The cluster design. If PBF household surveys take on average 1 hour, experience shows that each interviewer may cover a maximum of 5 households per day, so that one cluster of 25 households can be covered by a team. One survey team may then have five interviewers, a supervisor, and a driver. A cluster of 30 would be better, but this would need a team of eight people, which, with their luggage, is difficult to fit in a jeep. In each cluster, two or three villages or suburbs may be selected randomly. Once in the village, the interviewer chooses a direction at random by using the "BIC method" (throw a pen in the air and randomly choose a direction from the middle of the village or district). Households are selected progressively, skipping 2 or 3 houses at a time, until five households are interviewed.

11.7 Facility quality surveys

The objective of baseline quality surveys in facilities is to establish the starting point for professional quality of care in the intervention and control areas. The indicators are not exhaustive, but they should provide a good impression of facility quality. In Burundi, CAR, Cameroon and DRC, a questionnaire with 57 composite indicators was used. The same indicators should also be used for the evaluation after 2-3 years to enable comparison.

11.8 Interview with managers of facilities

These "semi-quantitative" surveys are often conducted with provider managers. The objective is to collect additional information on supervision, cost recovery, external support, and providers' financial aspects. The study also provides important information on the presence of qualified personnel relative to the standard and on what would be reasonable to pay staff, including the basic salary and variable incentive bonuses.

12. CHOICE of OUTPUT INDICATORS, TARGETS and SUBSIDIES

Jean Baptist HABAGUHIRWA – Robert SOETERS

Main messages of the module

- The selection of SMART PBF output indicators should be at least 25 and should not exclude any main service but should not exceed 40 to avoid making the (monthly) verification process too complex.
- In low- and middle-income countries, PBF subsidies typically constitute only 10-30% of total provider revenues. In such situations, PBF subsidies should focus on activities with positive externalities and public-good characteristics, with targeted exemptions for vulnerable geographic areas and individuals.
- The PBF subsidies for other – mostly curative - activities remain low and mainly aim at improving quality.
- Understand the differences between output, quality, impact and impact indicators.

12.1 The type of indicators

An *indicator* is a measurement that indicates the degree of achievement (level of fulfilment) of an objective. It highlights progress towards the set target.

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

1. *Specific*: describes exactly what needs to be done, where and by whom, and quantifies the achievement.
2. *Measurable*: the indicator is measurable, undisputed, and recognized as such by the actors.
3. *Acceptable*: it is accepted by the actors and by the beneficiaries
4. *Realistic*: it is realistic to measure, given the available resources (valid).
5. *Timely*: It can be collected within the given time.

In PBF language, the word “indicator” is often used interchangeably with an “activity,” such as a delivery conducted by a qualified person or an outpatient consultation. Strictly speaking, these are not indicators, although this term is often used.

PBF subsidies may be paid for: (a) output (or quantitative) indicators; (b) quality indicators; and (c) equity aspects. **Output indicators** at the health center (minimum health package) and hospital (complementary health package) levels usually range from 20 to 40. Fewer indicators may imply that the PBF system is becoming a vertical program, while more than 40 indicators make the system too complex and difficult to monitor. At school level, there may be as few as 10 main indicators or activities such as “pupil finishing a term”, but in school PBF quality composite indicators may be as many as 200.

Health and education quality indicators may be numerous because they are reviewed at most once per quarter. The quality bonus is also paid every three months based on the summary score across all indicators, not per indicator. This makes it easier to collect and calculate (see also module 6).

Process indicators measure how program services and goods are provided, such as the number of meetings, staff completing courses, and reports produced. Process indicators are intermediate measures toward achieving outputs, quality, and impact. They are therefore less suitable for subsidy payments. They may, in fact, draw attention away from a program's real objectives.

Improving **impact** indicators is obviously important, but it can only be achieved by first improving provider outputs and quality. Measuring those (maternal mortality or death rates) is difficult, expensive,

and not only linked to the intervention but also to other factors that facilities cannot control, so paying subsidies for impact indicators in PBF is not advised.

12.2 **Output indicators and targets**

The choice of output indicators is based on: (a) interventions/activities that are (cost) -effective, known from scientific evidence; (b) corresponding to the policy priorities of the Ministry of Health or other Ministries; (c) the activity has a SMART indicator; and (d) Applicable to the desired level of care (primary-level health facilities, hospital-level, school, tertiary hospital, special programs). One can start with a list of primary- or hospital-level indicators from another country and adapt them to the country's specific realities. With a group of experts, one can make a choice and, if there is a debate, apply the Turning Point voter method. Every 12-18 months, the indicators can be reviewed and adapted to the national experience developed.

The next table contains activities (or indicators) often included in PBF interventions at the provider level. The target for the output indicators is *always* set at 100%, even if the baseline study shows poor performance for the activity. This has the advantage that all stakeholders know what they are supposed to achieve in the long term. However, when costing the activity for the PBF budget, assumptions are made about target achievement during the project to estimate the required budget. Target achievement is expected to improve over time, so the budget will also need to increase.

12.2.1 **Indicators for primary level health facilities (Minimum Package of Activities)**

Code	MPA indicators	Formula target	Description of the Target
1.1	Outpatient Consult - nurse	Pop /12 x 80% x 90%	Population / 12 months x 80% nurse x 90% patient payment
1.2	Outpatient Consult - doctor	Pop /12 x 20% x 90%	Population / 12 months x 20% doctor x 90% patient payment
1.3	Outpatient Consult - indigent	Population /12 x 10%	Population / 12 months x 10% indigents
2.1	In patient days	Population / 1000 x 0.5 x 30 days x 90%	1000 people occupy at any time 0.5 hospital beds x 30 days to calculate the monthly target x 90% patients who pay
2.2	In patient days - indigent	Pop / 1000 x 0.5 x 30 days x 10%	1000 people occupy at any time 0.5 hospital beds x 30 days to calculate the monthly target x 10% indigents
3.1	Minor surgery	Pop / 12 x 7% x 90% x 90%	On average, 7% of the population requires a small surgery each year / 12 months x 90% primary level x 90% patient payment
3.2	Minor surgery - indigent	Pop / 12 x 7% x 90% x 10%	On average, 7% of the population requires a small surgery each year / 12 months x 90% at primary level x 10% indigent
4.1	Referred patient arrived hospital	Pop x 1 / 12 x 1%	Population / 12 months x 1% of the population that requires referral
5.1	STI cases treated according to protocol	Pop x 3% / 12 x 80%	Population x 3% who have a STI / 12 months x 80% primary level
6.1	Completely Vaccinated Child	Pop x 4% / 12	Population / 12 x 4% children 0-12 months
7.1	IPT1 or IPT2 or IPT3	Pop x 4.5% / 12 x 3	Intermittent preventive treatment of malaria in pregnant women
8.1	2 - 5 Tetanus Vaccination of Pregnant Woman	Pop x 4.5% / 12 x 2	Pregnant women (4.5%) / 12 months TT2 or TT3 or TT5 or TT4 on average 2 times
9.1	VIT A Distribution	Pop x 16.5% /12 x 2	Children 6-59 months (= 16.5%) receiving Vit A / 12 months x 2
10.1	ANC1 or ANC2 or ANC3 or ANC4	Pop x 4.5% / 12 x 4 x 90%	Pregnant women (= 4.5%) / 12 months, who will go 4 times during pregnancy for ANC x 90% first level
11.1	Normal delivery	Pop x 4% / 12 x 80% x 70% x 90%	Population x 4% (= total deliveries per year) / 12 months x 80% at the primary level x 70% normal delivery x 90% patients, who pay
11.2	Normal delivery - indigent	Pop x 4% /12 x 80% x 70% x 10%	Population x 4% (= total deliveries per year) / 12 months x 80% at the primary level x 70% normal delivery x 10% indigents
12.1	Complicated delivery	Pop x 4% / 12 x 80% x 30% x 90%	Population x 4% (= total deliveries per year) / 12 months x 80% at the primary level x 30% assisted x 90% assisted delivery, who pay

12.2	Complicated delivery - indigent	Pop x 4% / 12 x 80% x 30% x 10%	Population x 4% (= total deliveries per year) / 12 months x 80% at the primary level x 30% assisted x 10% assisted delivery - indigents
13.1	Manual Vacuum Aspiration (MVA) after spontaneous abortion or therapeutic abortion	Pop x 4.5% x 10% / 12 x 30% x 70%	All pregnancies (= 4.5% of the population per year) x 10% which ends in abortion / 12 months x 30% requiring MVA x 70% at primary level
14.1	Postnatal consultation	Pop x 4% x 2 x 80% / 12	After delivery (= 4%) woman makes 2 postnatal consultation x 80% primary level / 12 months
15.1	FP: New or old acceptance for pills or injectable	Pop x 23% / 12 x 15% x 4 x 90%	Women of reproductive age = 23% / 12 months x 15% of all reproductive age women using pills and injectable (= target) x 4 contacts per year x 90% primary level
16.1	PF: implants or IUDs	Pop x 23% / 12 x 4% x 90%	Women reproductive age = 23% / 12 months x 4% of all reproductive age women, who apply the IUD or implant x 90% primary level
17.1	Voluntary counselling and testing for HIV / AIDS including pregnant women	Pop x 10% / 12 x 70%	Each year 10% of the population is screened for HIV/AIDS voluntary counselling and testing and collected the result (4.5% are pregnant women). 70% at the primary level / 12 months.
18.1	HIV+ Pregnant woman put on ARV prophylaxis protocol	Pop x 4.5% x 4.2% / 12 x 70%	Pregnant women = 4.5% x 4.2% are tested HIV+ and receive ARV / 12 months x 70% primary level
19.1	Treatment of newborn baby from HIV+ mother	Pop x 4% x 4.2% / 12 x 70%	The newborn from pregnant women (= 4% of the population per year) x 4.2% are HIV + and require ARV / 12 months x 70% primary level
20.1	New AAFB+ Pulm TB patient	Pop x (150/100,000) / 12 x 50%	TB incidence = 150 / 100,000 AAFB + PTB detected with x 50% in the primary level / 12 months
21.1	PTB case treated and cured	Pop x (150/100,000) x 2 / 12 x 50%	TB incidence = 150 / 100,000 x 50% primary level x 2 contacts per year / 12 months
22.1	Household visit following the protocol	Pop / 1 yr / 12 / 6 x 2	Each year two household visits / 12 months / 6 people per household
23.1	Cases referred by community and arrived (max 5% OPD)	Pop x 5% / 12	Pop x 5% / 12 months for: (a) Pregnant women referred for delivery; (b) Mother referred for postnatal cons; (c) new FP referred;
24.1	Dropout recovered (max 2% OPD)	Pop x 2% / 12	Population x 2% / 12 months: (a) EPI children 0-11 months; (b) pregnant women; (c) cases of SAM; (d) AAFB+ PTB treatment
25.1	Child 6-59 months treated MAM moderate acute malnutrition	Pop x 16.5% / 12 x 6% x 6 visits	Children 6-59 months (= 16.5%) / 12 months of which 6% requires moderate acute malnutrition standard treatment MAM x 6 visits
26.1	Child 6-59 months managed for severe acute malnutrition (SAM)	Pop x 16.5% / 12 x 1% x 12	Children 6-59 months (= 16.5%) / 12 months of which 1% requires severe acute malnutrition standard treatment x 12 visits per year
29.1	Quality Improvement Bonus QIB	Pop / 10,000 / 12 x 3	A health facility covering a population of 10.000 receives 3 QIB per year of F 600.000 (= USD 1000)

12.2.2 Indicators and targets for CPA level - hospital

Code	CPA indicators	Formula target	Description of the target
51.1	New consultation by doctor	Pop / 12 x 15% x 90%	15% population consult doctor / year / 12 months - 90% paid service
51.2	New consult – indigent or outbreak	Population / 12 x 15% x (7% + 3%)	15% of the population consult doctor x (7% indigents+ 3% outbreak)
52.1	Inpatient days	Pop / 1000 x 0.5 x 30 days x 90%	1000 people occupied at all-time a hospital bed 0.5 x 30 days to calculate the monthly target x 90% payment patients
52.2	Inpatients days - indigents + outbreak cases	Pop / 1000 x 0.5 x 30 days x (7%+3%)	1000 people occupied at all-time a hospital bed 0.5 x 30 days to calculate the monthly target x (7% indigents + 3% outbreak)
53.1	Counter referral arrived at HC	Pop x 1 / 12 x 1%	Pop / 12 months x 1% of the population requires a reference
54.1	STI cases treated to protocol	Pop x 3% / 12 x 20%	Population x 3% who have STI / 12 months x 20% hospital level
55.1	New AAFB+ PTB patient	Pop x (150/100,000) / 12 x 50%	TB incidence = 150 / 100,000 AFB+ detected with x 50% at hospital level / 12 months
56.1	PTB case treated and cured	Pop x (150/100,000) x 2 / 12 x 50%	TB incidence = 150 / 100,000 x 50% at hospital level x 2 contacts per year / 12 months.
57.1	Major surgery (not C Section)	Pop / 12 x 0,5% x 90%	On average, 0.5% of the population requires major surgery every year / 12 months x 90% payment patient

Code	CPA indicators	Formula target	Description of the target
57.2	Major surgery (not C Section) - indigents	$\text{Pop} / 12 \times 0.5\% \times 10\%$	On average, 0.5% of the population requires major surgery every year / 12 months x 10% indigents
58.1	Minor surgery	$\text{Pop} / 12 \times 7\% \times 10\% \times 90\%$	7% of the population requires a small surgery each year / 12 months x 10% at hospital level x 90% payment patient
58.2	Minor surgery - indigent	$\text{Pop} / 12 \times 7\% \times 10\% \times 10\%$	On average, 7% of the population requires a small surgery each year / 12 months x 10% at hospital level x 10% indigents
59.1	Blood transfusion	$\text{Pop} / 12 \times 0.5\%$	0.5% of population each year requires a transfusion in a hospital
60.1	Normal delivery	$\text{Pop} \times 4\% / 12 \times 8\% \times 90\%$	20% of all deliveries are carried out in hospitals. Among them 8% are normal and 12% assisted x 90% payment patient
60.2	Normal delivery - indigent	$\text{Pop} \times 4\% / 12 \times 8\% \times 10\%$	20% of all deliveries are carried out in hospitals. Among them 8% are normal and 12% assisted x 10% indigents
61.1	Caesarean sections	$\text{Pop} \times 4\% / 12 \times 5\% \times 90\%$	80% MPA - 20% hospitals => 8% normal and 12% difficult. Among 12% difficult, 5% are CS and 7% other (non-CS) x 90% fee-paying
61.2	Caesarean sections - indigent	$\text{Pop} \times 4\% / 12 \times 5\% \times 10\%$	80% MPA - 20% hospitals => 8% normal and 12% difficult. Among 12% difficult, 5% CS and 7% other (non-CS) x 10% indigents
62.1	Obstructed childbirth (vacuum, forceps)	$\text{Pop} \times 4\% / 12 \times 12\% \times 7\% \times 90\%$	80% MPA - 20% hospitals => 8% normal and 12% difficult. Amongst 12% difficult 5% CS and 7% others (not CS) x 90% fee-paying
62.2	Obstructed childbirth (vacuum, forceps) - indigents	$\text{Pop} \times 4\% / 12 \times 12\% \times 7\% \times 10\%$	80% MPA - 20% in hospitals => 8% and 12% difficult. Amongst the 12% difficult 5% CS and 7% others (not CS) x 10% indigents
63.1	PF: New or old acceptance pills or injectable	$\text{Pop} \times 23\% / 12 \times 15\% \times 4 \times 10\%$	Women reproductive age = 23% / 12 months x 15% of reproductive women use pills and injectable x 4 contacts / year x 10% hospital level
64.1	FP: implants or IUDs	$\text{Pop} \times 23\% / 12 \times 4\% \times 10\%$	Women reproductive age = 23% / 12 months x 4% of women reproductive age using IUD or implant x 10% hospital level
65.1	FP: permanent methods-vasectomy or tubal ligation	$\text{Pop} \times 23\% / 12 \times 0.5\%$	23% of the population are couples / 12 months x 0.5% of couples using vasectomy or tubal ligation each year (= target)
66.1	Manual Vacuum Aspiration (MVA) after spontaneous abortion or therapeutic abortion	$\text{Pop} \times 4.5\% \times 10\% / 12 \times 30\% \times 30\%$	All pregnancies (= 4.5% of population / year) x 10% ending in abortion / 12 months x 30% requiring curettage x 30% hospital level
67.1	Antenatal Cons (new & old) ANC 1 or ANC2 or ANC3 or ANC4	$\text{Pop} \times 4.5\% / 12 \times 4 \times 10\%$	4.5% pregnancies / 12 months / 4 antenatal contacts per pregnancy x 10% in hospitals
68.1	IPT1 or IPT2 or IPT3	$\text{Pop} \times 4.5\% / 12 \times 3 \times 10\%$	Pregnant women (= 4.5%) who consulted for ANC and take IPT1 or IPT2 or IPT3 - hospital level = 10%
69.1	Voluntary testing for HIV / AIDS including pregnant women	$\text{Pop} \times 10\% / 12 \times 30\%$	Each year 10% of the population is screened (4.5% pregnant women). 30% hospital level / 12 months and who collected the result
70.1	Pregnant woman HIV+ put on ARV prophylaxis protocol	$\text{Pop} \times 4.5\% \times 4.2\% / 12 \times 30\%$	Pregnant women = 4.5% x 4.2% are tested HIV+ and received ARV / 12 months x 30% hospital level
71.1	Treatment of new born from HIV+ mother	$\text{Pop} \times 4.5\% \times 4.2\% / 12 \times 30\%$	New born pregnant women (= 4% of the population per year) x 4.2% HIV + and require ARV / 12 months x 30% level hospitals
72.1	New HIV cases put on ARVs	$\text{Pop} \times 4.2\% \times 30\% \times 50\% / 12$	4.2% of the population is HIV requires x30% x 50% treatment at hospital CPA / 12 months
73.1	Follow up of patients on ARV- twice a year	$\text{Pop} \times 4.2\% \times 30\% \times 50\% / 12 \times 2$	4.2% of the population is HIV+ x 30%, who require treatment x 50% at hospital level / 12 months x 2 contacts per year.
74.1	Treatment children 6-59 months severe acute malnutrition <i>with complication</i>	$\text{Pop} \times 15.5\% \times 3\% / 12$	15.5% are children 6-59 months x 3% who require each year treatment at the hospital level / 12 months
81.1	Quality Improvement Bonus	$\text{Pop} / 12 / 50,000 \times 3$	A hospital that covers 50,000 inhabitants receives 3 BAQ per year of FCFA 1,200,000 (= US \$ 2,000)

12.3 Criteria for establishing the subsidy per activity or indicator

Health center and hospital packages may include 25 to 35 activities or indicators. For each indicator, planners must estimate its subsidy. Unlike insurance systems, PBF does *not* routinely reimburse the full cost of these activities but instead aims to create the right incentives, considering other sources of

income, such as government or partner contributions, user fees, and/or insurance schemes. The subsidy will therefore usually be lower than the cost of producing that activity for the facility. The subsidy per activity is not fixed and can be adjusted every three months; this should be clarified in the contracts signed between the CDV agencies and health facilities.

The following factors may play a role in establishing the subsidy per indicator:

- a) **Availability of funding:** With adequate funding, subsidies may be increased to the desired level, but *not beyond it*, to prevent moral hazard and supplier-induced demand. If, for any reason, the overall budget must be reduced, the subsidy per indicator may also have to be reduced to balance the budget.
- b) **Positive externalities:** Examples are TBC testing & treatment, immunization, and family planning. These justify a higher subsidy because, if left to the market, a TB patient may decide not to take treatment, and this person will then become a risk for the community. The higher subsidy should prevent this undesirable outcome and ensure that the treatment is free. The extra “profit” will also encourage staff to make greater efforts to reach TB patients.
- c) **Public goods** (everyone benefits, but nobody can be excluded), such as social marketing for healthy behavior or activities in the national interest, such as family planning. For such indicators, the subsidy may be at cost price or higher to provide the strongest possible signal to providers concerning its importance.
- d) **Political priorities:** Activities that the government considers priorities will receive higher subsidies than others. For example, in Burundi, the government decided that assisted deliveries and consultations for children under-5 years were national priorities. As a result, the subsidy for these activities also increased, with the government providing the extra funds.
- e) **Level of target achievement** during project implementation. If the target is achieved or surpassed, the subsidy may remain the same or may be reduced. Conversely, for an indicator that performs poorly, the subsidy may be increased.

12.4 Primary Data Collection Tools

All registers for which PBF pays subsidies ought to be legible, with all columns filled in. The column header formats are mandatory. If information is missing and the activity *cannot* be validated, the CDV verification officer must exclude the activity from payment. Also, if the mobile phone number or other contact details are not recorded, the service will not be validated. If the patients do not have a phone, the client may provide a number from a family member, the neighbour, or the village chief.

Name MPA Service	Description	Primary Data Collection Tools	Secondary Data Collection Tools (quality review, etc)
1. New outpatient consultation	Any new curative care visit during the past month	Curative Care Register	OPD quality review.
2. New outpatient consultation of an indigent patient	During the past month, indigents who have been consulted as an outpatient. Indigents are locally identified. Maximum of 10% or 20% of new curative consultations during previous month.	Indigent outpatient register	Proceedings HF indigent committee at health facility or village level.
3. In patient days (1 bed/1000)	Any inpatient day during past month	In patient register	
4. In patient days for vulnerable patient (1 bed/1000) - 20%	During the past month, indigents who were admitted. Indigents are locally identified. Maximum of 20% of all new curative consultations during the previous month.	Indigents inpatient register	Proceedings selection of indigents by committee at health facility and / or village level.

Name MPA Service	Description	Primary Data Collection Tools	Secondary Data Collection Tools (quality review, etc)
5. Minor Surgery and minor surgery indigent patient	Any new minor surgical intervention during the past month. Minor Surgery defined as (i) Suture; (ii) incision and drainage; (iii) minor excisions.	Minor Surgery Register	Hygiene and disposal indicators quality review
6. Referred patient arrived at the General Hospital and referral indigent patient	Counter-referral slip available at the Health Centre. Filled in by the MD. The number of valid counter-referral slips is counted.	Original of counter-referral slip available at the Health Centre.	Copy counter referral slip available at General Hospital. Referred patient registered in the OPD register.
7. Completely Vaccinated Child	Child less than 12 months old which has received all vaccines according to the national protocol (BCG; DTP3; Measles)	Vaccination Register	Vaccination & cold chain indicators quality review
8. Growth monitoring visit Child malnourished and treated	Visit 12-23 months old.	Under-five clinic/Nutrition Register	Under-five card with evidence for visit and actions taken
8. 2 - 5 Tetanus Vaccination of Pregnant Woman	Each second to fifth TT vaccination of a pregnant woman during the past month	ANC register Individual Card kept at the HF	Vaccination register
9. Postnatal consultation	A post-natal consultation 1 st week and 6 th week including check on FP	Postnatal care register	
10. ANC first or standard visit	Any first or standard visit according to the protocol	ANC register	ANC conducted following quality review indicators
11. Assisted delivery	A delivery attended by a qualified staff at the health facility during the past month.	Delivery Register	Delivery conducted following maternity quality indicators including partogramme.
12. FP: total of new and existing users of modern FP methods	Any new or existing user of injectable contraceptive or oral contraceptive pills (OCP), during the past month. An injection represents three month's protection and a FP visit for OCP should provide three months' worth of pills.	FP register	FP visit conducted following quality review indicators.
13. FP: implants and IUDs	Any new user of implant or IUD, during the past month.	FP register	FP visit following quality review indicators.
14. VCT/PMTCT test	Any new VCT or PMTCT test carried out during the past month.	VCT register	
15. PMTCT	Any new HIV+ mother and new-born child treated according to the PMTCT protocol, during the past month.	PMTCT register;	PMTCT register;
16. New AAFB+ PTB patient	A new AAFB sputum positive Pulmonary Tuberculosis patient diagnosed, at the facility, during the past month.	Tuberculosis register	Laboratory register. Slides kept for counter-verification
17. PTB patient completed treatment and cured	A former AAFB+ PTB patient completed DOTS, and cured after treatment proven by negative sputum examinations, during the past month.	Tuberculosis register	Laboratory register. Slides kept for counter-verification
18. 1st, 2nd or 3rd household visit by qualified team following protocol	See explanation in module 8	Household visit register with action plans at HH level	Verification by local NGO the action plans at household level

12.5 Exercise 1

1. What are the 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, reports submitted, IEC sessions, and motorbike trips)?
4. Study the following list of indicators:
 - Maternal mortality rate
 - Malnutrition rate
 - Number of institutional deliveries
 - Operational incinerator (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
 - Number of persons tested for HIV after counseling and informed about the result
 - Number of HIV positive mothers treated following a protocol to prevent transmitting HIV to her child
 - Permanent presence of a qualified nurse in the health facility
 - Quality evaluation done by the health authority supervisors in private facilities following a protocol
 - Disease episodes per person per year
 - Patient satisfaction with waiting time
 - Monthly income of health facility
 - Number of qualified personnel in health facility

Which of the above indicators are output indicators suitable for monthly subsidies?

Which of the above are quality indicators to be reviewed (every three months) by health authorities?

For indicators that are not output or quality indicators, are they important to measure?

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

5. **The indicator ‘serious illness referred’ is important but also poses verification problems. Discuss the following examples and suggest what subsidy could be paid and why?**
Acute Malaria? Cataract? Hernia? Hypertensive 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. **Analyze the following activities (indicators) and suggest what proportion of the production cost should be paid through external subsidies? 0 %, 10 %, 25 %, 50 %, 75 %, 100 % or more?**

Explain your answer by also considering if they are public goods or have externalities.

- TB Patient who correctly receives the DOTS treatment for six months
- An acute pneumonia requiring an antibiotic cure
- An endoscopy in a university hospital.
- Subsidy for a mosquito net sold and used by a household.
- President of the Republic declares free OPD for children
- Adequate latrine constructed in a household
- A fully vaccinated child.

12.6 Exercise 2: The case of Ibo Health Centre

Your health facility's population is 10,000.

Exercise 1: From your target population and formulas in Table 2 below, calculate the monthly PBF indicator targets below.

In column B of the following table, you will find the results of the indicators during the previous quarter.

Exercise 2: Plan the desired coverage for your health area for the following quarter.

Exercise 3: Calculate the expected number of patients for the next quarter.

Exercise 4: Calculate the expected subsidies for the quarter and add 60% for the health facility equity bonus.

Exercise 5: Add the quality bonus (quality score in this example was 75%).

N°	Indicators PMA DE BASE	Monthly Target 100% (Volume) (=A)	Base line / Pre Quart (B)	% expected quarter next trim(=C)	Nbr patients expected Quarter (Volume) = A x C x 3 (=D)	Unit Price (=E)	Subsidy expected next quarter = D x E
01	Outpatient Consult - nurse		50%	%		F 150	
02	Outpatient Consult - doctor		80%	%		F 300	
03	Outpatient Consult - indigent		20%	%		F 600	
04	In patient days		30%	%		F 225	
05	In patient days - indigent		15%	%		F 900	
06	Minor surgery		90%	%		F 300	
07	Minor surgery - indigent		25%	%		F 1 200	
08	Referred patient arrived hospital		25%	%		F 450	
09	New AAFB+ PTB patient		50%	%		F 750	
10	PTB case treated and cured		75%	%		F 7500	
11	Completely Vaccinated Child		90%	%		F 1500	
12	2 - 5 Tetanus Vaccination of Pregnant Woman		90%	%		F 150	
13	Household visit following the protocol		50%	%		F 750	
14	VIT A Distribution		80%	%		F 30	
	REPRODUCTIVE HEALTH						
15	Normal delivery		60%	%		F 1500	
16	Normal delivery- indigent		30%	%		F 3000	
17	Assisted delivery		80%	%		F 2250	
18	Assisted delivery - indigent		40%	%		F 3750	
19	Postnatal consultation		50%	%		F 300	
20	FP: New or old acceptance for pills or injectable		20%	%		F 1500	
21	PF: implants or IUDs		80%	%		F 2250	
22	MVA after spontaneous abortion or therapeutic abortion		75%	%		F 600	
23	ANC1 or ANC2 or ANC3 or ANC4		80%	%		F 300	
24	IPT1 or IPT2 or IPT3		50%	%		F 300	
	PMA HIV/AIDS						
25	STI cases treated according to protocol		30%	%		F 300	
26	Voluntary counselling and testing for HIV / AIDS including pregnant women		120%	%		F 300	
27	HIV+ Pregnant woman put on ARV prophylaxis protocol		50%	%		F 3000	
28	Treatment of newborn baby from HIV+ mother		50%	%		F 3000	
29	Quality Improvement Bonus QIB					F 600000	
					SUB-TOTAL 1 :		
					EQUITY BONUS HF:		60%
					SUB TOTAL 2 (= Sub TOTAL 1 + equity bonus) :		
					Quarterly quality bonus = SUB TOTAL 2 x 15% x 75% (example) :		
					TOTAL EXPECTED QUARTER (= Subtotal 2 + quality bonus): :		

Formulas for target calculation

	Minimum Package of Activities	Formula for the calculation of the target
01	Outpatient Consult - nurse	$\text{Population} / 12 \times 80\% \times 90\%$
02	Outpatient Consult - doctor	$\text{Population} / 12 \times 20\% \times 90\%$
03	Outpatient Consult - indigent	$\text{Population} / 12 \times 10\%$
04	In patient days	$\text{Pop} \times 0,5\% \times 30 \times 90\%$
05	In patient days - indigent	$\text{Pop} \times 0.5\% \times 30 \times 10\%$
06	Minor surgery	$\text{Pop} / 12 \times 7\% \times 90\% \times 90\%$
07	Minor surgery - indigent	$\text{Pop} / 12 \times 7\% \times 90\% \times 10\%$
08	Referred patient arrived hospital	$\text{Pop} / 12 \times 1\%$
09	New AAFB+ PTB patient	$\text{Pop} \times (150/100.000) / 12 \times 50\%$
10	PTB case treated and cured	$\text{Pop} \times (150/100.000) \times 2/12 \times 50\%$
11	Completely Vaccinated Child	$\text{Pop} \times 4\% / 12$
12	2 - 5 Tetanus Vaccination of Pregnant Woman	$\text{Pop} \times 4.5\% / 12$
13	Household visit following the protocol	$\text{Pop} / 6 / 12 \times 2$
14	VIT A Distribution	$\text{Pop} \times 16.5\% / 12 \times 2$
15	Normal delivery	$\text{Pop} \times 4\% / 12 \times 80\% \times 70\% \times 90\%$
16	Normal delivery- indigent	$\text{Pop} \times 4\% / 12 \times 80\% \times 70\% \times 10\%$
17	Assisted delivery	$\text{Pop} \times 4\% / 12 \times 80\% \times 30\% \times 90\%$
18	Assisted delivery - indigent	$\text{Pop} \times 4\% / 12 \times 80\% \times 30\% \times 10\%$
19	Postnatal consultation	$\text{Pop} \times 4\% \times 2 \times 80\% / 12$
20	FP: New or old acceptance for pills or injectable	$\text{Pop} \times 23\% / 12 \times 15\% \times 4 \times 90\%$
21	PF: implants or IUDs	$\text{Pop} \times 23\% / 12 \times 4\% \times 90\%$
22	MVA after spontaneous abortion or therapeutic abortion	$\text{Pop} \times 4.5\% \times 10\% / 12 \times 30\% \times 70\%$
23	ANC1 or ANC2 or ANC3 or ANC4	$\text{Pop} \times 4.5\% / 12 \times 4 \times 90\%$
24	IPT1 or IPT2 or IPT3	$\text{Pop} \times 4\% / 12 \times 3 \times 90\%$
25	STI cases treated according to protocol	$\text{Pop} \times 3\% / 12 \times 80\%$
26	Voluntary counselling and testing for HIV / AIDS including pregnant women	$\text{Pop} \times 10\% / 12 \times 70\%$
27	HIV+ Pregnant woman put on ARV prophylaxis protocol	$\text{Pop} \times 4.5\% \times 4.2\% / 12 \times 70\%$
28	Treatment of new born baby from HIV+ mother	$\text{Pop} \times 4\% \times 4.2\% / 12 \times 70\%$
29	Quality Improvement Bonus QIB	$\text{pop} / 10,000 \times 1 \text{ QIB primary level F } 600,000$

Please arrange in groups of 5 to 6 people.

Analyse some indicators. Add Equity and Quality Bonuses

13. PROVIDER MANAGEMENT: the BUSINESS PLAN

Canut NKUNZIMANA – Jean Baptiste HABAGUHIRWA

Main messages of the module

- Providers and other stakeholders in PBF develop business plans in which they develop strategies to deliver the government-determined packages or services of good quality. Facility managers are encouraged to promote teamwork in designing and implementing the plan.
- Provider managers should be innovative and entrepreneurial and be given the autonomy to find local solutions to achieve results. They should feel ownership of their facility but, at the same time, be internally and externally transparent in how they use their resources.
- Providers are responsible for generating enough financial and human resources to assure quality services. Government or other external payment agencies are responsible for generating enough resources for assisting vulnerable areas and individuals.

13.1 Introduction

In PBF, we must identify a different type of manager than in traditional systems. They must be skilled in identifying specific service problems in their catchment area and in finding specific solutions. The “new style” manager should be an innovator and entrepreneur who identifies opportunities and seeks resources to realize service targets or finance improvements. While achieving social objectives, the manager and staff should also feel that they “own” the facility and consider it a source of income. The facility and its staff become a social enterprise.

In systems analysis theory, facility management and strategies should be an internal affair in which CDV Agency - and regulatory authorities - should refrain from interfering. This is also described as “the black box” approach. They are responsible for their decisions, and there are no good or bad decisions if solutions are found and they record what they did. No central planner can make all those millions of small decisions made by thousands of managers in any given country. For this to work, the desired government-determined results should have SMART indicators and standards for quantity, quality, and equity.

However, this autonomy does not imply that managers can do whatever they wish. They must have the knowledge and skills to apply management techniques correctly and use public funds effectively. Black box management instruments were developed for PBF. The first one is the business plan described in this chapter. The second, in the next module, is the “indices” management tool that helps managers analyze revenues, plan expenditures, and calculate individual performance bonuses (see next module). Managers may use these black-box instruments or adapt them as they wish, but they should do so transparently.

One may prefer to use the word “business plan” to clearly distinguish it from “action plan”, commonly used in traditional systems. In *action plans*, there is no direct link between results and rewards, so achieving plans and targets has no consequences. To the contrary, *business plans* have a larger chance of being implemented because the PBF revenues are performance-based and will increase or decrease the staff bonuses as well.

13.2 The business plan management cycle

The management cycle goes through four stages. During the *first stage* of the contracting process, the CDV agency invites the facility managers (with their teams) to develop a « business plan » which explains how to provide the packages of quality care. The *second stage* involves implementing the business plan. During the *third stage*, the CDV agency, local authorities, and community-based organizations strictly verify the results declared by the facility in terms of quantity, quality, and equity. The *fourth stage* of the cycle involves the examination of this feedback, renegotiation, and the renewal of the contracts

13.3 How does the business plan work?

A business plan is a quarterly work plan that proposes the *strategies* required to reach the *targets* set by the government for the minimum package at the health center level, the complementary package of activities at the hospital level, or the school package. The business plan helps managers develop their ideas and innovations. It describes how the subsidized activities will be implemented and is usually made every three months. The business plan results from a process in which provider managers involve as many stakeholders as possible in their catchment area, such as workers, private clinic representatives, and health committee members. The plan identifies problems, such as why service objectives and targets are not achieved, and proposes realistic strategies. The plan serves as the basis for the performance contract, after which activities will be verified monthly so PBF subsidies can be paid. As results increase, the subsidies increase, and so do individual staff bonuses. This should improve quality, increase patient satisfaction, and better motivate staff.

Some argue that preparing business plans every three months is too labour-intensive and propose less regular intervals such as once every 6 or 12 months. However, evidence suggests that preparing a plan every three months allows more flexibility, accelerates improvements, and flags serious problems in a timely fashion. When the provider is poorly managed, the authorities and CDV Agency have an important tool to intervene by renegotiating the contract, delaying the contract, or even cancelling it. Such flexibility is difficult if the contract cycle is one year. Three-monthly contract renewals also allow government and CDV Agencies to flexibly change indicators and the subsidies per indicator, if needed.

The *components* of a business plan are the following:

- To calculate the target per indicator/activity;
- The problem analysis as to why output and quality targets are not achieved;
- The strategies proposed to solve the problems;
- The human resources required and how to motivate staff;
- The infrastructure and equipment requirements;
- The financial planning.

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

The business plan usually contains the following themes:

- How to improve the *quality* of services? Health facility management can be guided through an initial planning process on how to invest a certain amount of money to upgrade the facility and how to respond best to new quality standards. Setting quality standards is demanding, and choosing between competing priorities can be challenging. It is best to leave the priority setting to the health facility management itself. Health facility staff often know best what is needed and what level of effort they can provide. This decentralized approach makes health facility management and the community responsible for maintaining health services and allows them to create local solutions to locally specific problems.
- How can we ensure *geographical* access for the population? Facility managers may sign subcontracts with other collaborating facilities to address geographical access challenges.
- How can we ensure the population's *financial access* to services? Considering production costs, including salaries, drugs, maintenance, and infrastructure, facility managers must analyze the revenue needed to provide quality services with motivated, sufficient staff. The potential to generate revenue from direct user fee payments depends on the population's purchasing power. Managers may set realistic cost-sharing tariffs based on what the population can afford on average. PBF subsidies cover revenues that cannot be met through direct user fee payments. The government and local decision-makers, *not* the facilities, are responsible for finding these external resources. When government or aid agency funding is insufficient, the only solution is to increase user-fee tariffs. Thus, quality should come first over equity considerations.
- How to conduct social marketing strategies to raise awareness about new services or promote desired behaviors? Business Plans explain how social marketing is done, but also who will do it: will it be specially recruited, qualified community development workers supported by community members or the health committee, a local religious group, trainee volunteers, etc.?
- How many qualified staff should each facility catchment area have? The facility must decide whether to increase or decrease *staff* based on criteria such as workload, national standards for qualified staff, and staff willingness to work overtime or, conversely, to have more free time with a lower salary. When recruiting contract employees, clearly define their responsibilities and clarify their rights, as in the standard contract below.

13.4 The contract between a health facility and an employee

Between the undersigned

Health Facility

Represented by

Firstly

And

Born the ... / ... / in

Nationality

Matrimonial Status

Registration card Nr

On the other hand,

This contract is for a limited period and, in addition to the provisions below, will be governed by the performance contract signed between the CDV Agency and the health facility in the context of the Performance Based Financing (PBF) program.

ARTICLE 1: OBJECTIVE OF CONTRACT

The service provider is recruited to serve as within the health facility of, as part of the execution of the Performance Based Financing program (PBF) in the health district of in the Region of

ARTICLE 2: DURATION OF CONTRACT

- This contract is concluded for a period of 12 months, possibly renewable;
- Provider will observe a two (2) month trial period
- It takes effect from the date of signature of this contract.

ARTICLE 3: DESCRIPTION OF TASKS OF SERVICE PROVIDER / CONSULTANT

- Ensure the benefits of all the minimum package of activities, especially within the Health Training;
- Conduct advanced and mobile strategies in the localities of the FOSA's area of responsibility;
- Provide services in night and day training;
- Conduct home visits to households in the localities of the FOSA's area of responsibility;
- Follow the record-keeping within the training;
- Find strategies to increase the production of the FOSA;
- Participate in drawing up the business plan and the index tool;
- Execute all the tasks entrusted to him by the Head of the Center within the limits of his competence.

ARTICLE 4: PLACE OF WORK

The employee is recruited to serve at and is resident at

ARTICLE 5: WORK SCHEDULE

The working hours are 40 hours per week.

ARTICLE 6: INDEMNITIES

The employee will receive a monthly remuneration distributed as follows:

- A fixed part of FCFA
- Another part related to the performance bonus. Payment of this performance bonus, or the variable part, is conditioned by individual performance after the health facility realizes profits, according to the criteria contained in the indices management tool.

ARTICLE 7: TERMINATION OF THE CONTRACT

- The contract terminates in the event of withdrawal, resignation or serious misconduct of the Contractor, or termination of the Project;
- If the Contractor fails to achieve the objectives set after two consecutive months, the contract will terminate automatically.

ARTICLE 8: DISPUTES

- The parties agree to settle disputes amicably and, if necessary, to resort first to arbitration by a third person chosen by mutual agreement.
- The District Validation Committee meeting provides the ideal framework for assessing progress and problems encountered in the execution of activities and can therefore also serve as a forum for resolving disputes.

ARTICLE 9: MISCELLANEOUS

- Both parties will observe a 1-month notice in case of breach of contract;
- The parties each undertake to contribute to the successful implementation of the Performance Based Financing (PBF) Project;
- The parties undertake to settle any dispute amicably;
- Each party acknowledges having received a copy of this duly signed contract.

Done at on

..... ..

For the employee

Name:

For the health facility of

The head of the center:

(read and approved)

13.5 Annex: Example of a business plan for a principal facility contract

Name HF with principal contract.....	Catchment Population:
Region:	District:
Business plan / to 201.....	Sub-Contract (s)? Yes /No
Quality Technical Score past quarter:	Quality technical Score expected for this quarter:
Quality Community Score past quarter:	Quality Community Score expected for this quarter:
Number of qualified personnel:	Number of non-qualified personnel:
Rate qualified personnel (1/1000 inhabitants):	

Name of sub contracted HFs	MPA performed by the subcontracted structure	Technical Quality Score	Previous Community Satisfaction Score
HF 1		.. %	.. %
HF 2		.. %	.. %
HF 3		.. %	.. %

1. Component: CURATIVE INDICATORS

- Calculate and enter in column « 100% Target » the target of nine curative indicators based on the catchment population of the health facility. Apply the formulas in the table.
- Enter in the column « last quarter realization » results achieved during the last quarter (in absolute value and % from the 100% target).

Curative activities (or indicators) at primary level	Target formula per month if 100% achievement	Target 100% (number)	Last Quarter Realization (number and % of target)	Planned target for next quarter (in %)
# of new consultation nurse, physician assistant, midwife - fee paying	pop / 12 x 80% x 85%			
# of new consultation - medical doctor - fee paying	population / 12 x 20% x 85%			
# of consultation – nurse, PA, midwife, medical doctor - vulnerable	population / 12 x 15%			
# of patients receiving mental health or NCD (diabetes, hypertension) consultation	pop / 12 x 10%			
# of patients admitted for short stay (0-72 hours); excluding delivery admission at primary levels - fee paying	pop / 1000 x 0.5 x 30 days x 85%			
# of patients admitted for short-stay - vulnerable	pop / 1000 x 0.5 x 30 days x 15%			
# of cases of minor surgeries conducted	pop / 12 x 7% x 90% x 85%			
# of cases of minor surgery - vulnerable	pop / 12 x 7% x 90% x 15%			
# of cases of referrals reported with referral feedback from hospital obtained - fee paying	pop / 12 x 3% x 85%			
# referral cases reported with referral feedback from hospital obtained - free transport	pop / 12 x 3% x 15%			

- c) What are the problems patients and health facility staff are facing that have hindered the achievement of the indicators in the table above? What are the proposed solutions? Create a realistic plan **in the table above** for your target indicator for the next quarter. You must develop a convincing plan.

General: Analyse the following factors: What is the purchasing power of the population to pay fees? What is the influence of the current tariffs? Is there competition from other health facilities? Quality problems: drug shortages, infrastructure, equipment, lack of hygiene, lighting? Shortage of staff or poor motivation? Are villages/suburbs in catchment area covered? Other problems?

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Consultations for children and adults: Do we need to recruit more qualified personnel (1 per 1000 target population)? Need to open a health post in a remote village (over 5 km)? Need to organize a mobilization campaign? Possibility to sign sub-contracts with other health facilities?

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In patient care: Make an analysis of factors such as hygiene in the health facility, availability of latrines and showers, presence of permanent qualified staff, organization of shifts (night, weekend), in-patient care equipment (beds, mosquito nets, mattresses, sheets, bedside table), hospitalization conditions (separate wards for men-women-child, space, ventilation, clinical examination and monitoring according to flowchart, update of in-patient register, treatment according to protocol.

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Minor surgery - including circumcision: Analyze conditions in the minor surgery room, sterilization procedures, and other hygiene factors.

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Referral with counter-referral received: *Coordinate with hospitals a mechanism to receive feedback on patient referrals. How is emergency transport organized? If transport is through hospital ambulances, which may not be available, ensure a Plan B transport system exists. Determine patients' ability to pay for transport and hospitalization, and thus their willingness to be referred.*

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Identification of indigents and vulnerable - Emergencies: *Analyze how to identify vulnerable people as indigents. Through the village health committee, community relays, or other Community mechanisms? Sometimes indigency is sudden, such as after an accident. In the case of a natural or humanitarian crisis, the CDV Agency must be informed of the extent to which the proportion of exempt patients may be increased to 50%, 75% or 100%*

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2. Component REPRODUCTIVE HEALTH

- Calculate and enter in column « Target 100% » the targets of the twelve reproductive health indicators based on your HF catchment population. Apply the formulas of the table.
- Enter in the column « achievement in number during the last quarter » the results achieved during the past quarter (in absolute value and in % from the 100% target).

12 reproductive health activities (or indicators) at primary level MPA	Target formula per month if 100% achievement	Target 100% (number)	Last Quarter Realization (number and % of target)	Planned target for next quarter (in %)
Pentavalent 3	Pop x 3.04% / 12 x 100%			
Vaccination Measles + yellow fever	Pop x 3.04% / 12 x 100%			
TT 2 or more for pregnant women	Pop x 4% / 12 x 100% x 2			
Ante-natal consultation 1-4	Pop x 4% / 12 x 4 x 80%			
Post-natal Consultation (D6-D8 & W6-W8)	Pop x 3.5% / 12 x 80% x 2			
Normal delivery	Pop x 3.5%/12 x 80% x 70% x 80%			
Normal delivery - indigents	Pop x 3.5%/12 x 80% x 70% x 20%			
Difficult or complicated delivery	Pop x 3.5%/12x 80% x 30% x 80%			
Difficult delivery- indigents	Pop x 3.5%/12x 80% x 30% x 20%			
Manual Vacuum Aspiration post spontaneous abortion or therapeutic abortion	Pop x 4% / 12 x 10% x 30% x 50%			
FP consult (new & existing) - pill or injection	Pop x 24.1% / 12 x 15% x 4 x 90%			
FP (existing and new) - IUD and implant	Pop x 24.1% / 12 x 2% x 90%			

- c) What problems are patients and personnel facing in achieving the indicators in the table above? What are the proposed solutions? Make realistic planning in the table above of your target per indicator for the next quarter. You must develop a convincing plan.

Immunization. *Are there any specific problems concerning the vaccinations? Pentavalent 3, Measles, Yellow Fever, and TT? Support should be adequate to make vaccination free for patients. Identify the problems in achieving the target? Choice of fixed or outreach strategy. Is collaboration with subcontracted structures possible? How to ensure the availability of vaccines and other inputs from UNICEF program or other sources? Is the cold chain adequate?*

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Prenatal and postnatal consultation: *ANC and PNC should preferably not be fee-paying. What are the problems with prenatal and postnatal consultations compared to the target? Are there enough qualified nurses? Does infrastructure assure confidentiality?*

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Normal and difficult or complicated deliveries:

Deliveries for 80% of pregnant women are not free, but 20% can be exempted on the basis of community selection of the indigents or vulnerable. The health facility must plan how to identify the vulnerable.

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Is the qualified personnel adequate to assure 7/7 and 24/24 services? Hygiene and sterilization procedures are assured in the delivery room. Is confidentiality assured?

.....

Is there a need to purchase medical and / or renovate equipment's (delivery table, delivery box, vacuum extractor, aspirator, obstetrical stethoscope, and cordon clamp, suturing wire), hygiene conditions (gloves, plastic apron, and disinfection products), admission conditions (space, ventilation, and mosquito net), existence of partogramme and correct use.

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Ensure staff can manage obstructed labor with a vacuum extractor, Syntocinon, and suture major ruptures. A protocol is also available to determine referral conditions.

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Need for infrastructure rehabilitation?

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Need for staff training?

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Need to open a new maternity, or collaborate with other facilities (private) in the ward area to ensure good geographical coverage with maternities of good quality

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Women attend for Manual Vacuum Aspiration post spontaneous abortion or therapeutic abortion: *What are the problems related to the management of abortions in your catchment area? Are the infrastructure and equipment requirements correct? Is the ability of staff adequate? Need for training or recruiting staff?*

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Family planning short term, medium term: *What are the problems with the spacing of births (oral, injectable, implant and IUD) in your health area? Recruit additional nurses, collaborate with local NGOs, use outreach strategies, private sub-contracts, use community relays, do advocacy among political and administrative authorities, opinion leaders, churches, and explain side effects properly.*

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Where do you expect to purchase FP commodities?

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How can coverage for the pill, injectables, implants, and IUDs be improved in your area? What method do women prefer? Is there a need for a social marketing campaign during household visits?

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What are the strategies for surgical procedures of FP (tubal ligation, vasectomy) in your catchment area in collaboration with referral hospitals?

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3. Component NUTRITION

- Calculate and enter in column « Target 100% » the target of the two nutrition indicators based on the population in your catchment area. Apply the formulas of the table.
- Enter in the column « achievement in number during the last quarter » the results achieved during the past quarter (in absolute value and in % of 100% target).

Nutrition at primary level	Target formula per month if 100% achievement	Target 100% (number)	Last Quarter Realization (number and % of target)	Planned target for next quarter (in %)
Child 6-59 months treated for moderate acute malnutrition (MAM)	pop x 3.04% / 12 x 100%			
Child 6-59 months treated for severe acute malnutrition (SAM) without complications	pop x 3.04% / 12 x 100%			

- What problems are patients and health facility staff facing with the activities? What are the proposed solutions? What target can the HF realistically achieve during the next quarter?

What is the percentage of MAM and SAM in your area? Does the HF apply supplementary feeding? Does the HF receive inputs from any organization, such as the government, UNICEF, or WFP? Or does the system expect the health facility to purchase the inputs?

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4. Component COMMUNITY PBF

- Calculate and enter in column « Target 100% » the targets for the 3 Community PBF indicators based on the population in your catchment area. Apply the formulas of the table.
- Enter in the column « achievement in number during the last quarter » the results achieved during the last quarter (in absolute value and in % for the 100% target).

Community PBF at primary level	Target formula per month if 100% achievement	Target 100% (number)	Last Quarter Realization (number and % of target)	Planned target for next quarter (in %)
Household visit as per protocol	pop / 12 / 5			
Referred cases by community workers and arrived (max of 5% OPD consultation)	pop x 5% / 12			
Recovered drop out cases (max of 2% outpatient consultation)	pop x 2% / 12			

- What problems are patients and health facility staff facing in achieving the indicators **in the table above**? What are the proposed solutions? Make a realistic plan in the table above for your target indicator for the next quarter. Make a convincing plan.

Who in the area conducts social marketing and household visits? Are they qualified persons? Household visit protocol is well known and applied = identification of people to be vaccinated, for ANC, PNC, family planning, TB, malnourished children. Inspect latrines, waste pits, or proper waste disposal.

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5. HIV / AIDS and TUBERCULOSIS

- Calculate and enter in column « Target 100% » the target of the seven indicators HIV / AIDS and tuberculosis based on the population in your catchment area. Apply the formulas of the table.
- Enter in the column « achievement in number during the last quarter » the results achieved during the past quarter (in absolute value and in % for the 100% target).

HIV / AIDS & TB at the primary level (7 indicators)	Target formula per month if 100% achievement	Target 100% (number)	Last Quarter Realization (number and % of target)	Planned target for next quarter (in %)
Voluntary testing HIV / AIDS including pregnant women	pop x 10% / 12 x 70%			
Pregnant women HIV+ put on ARV prophylaxis	pop x 4% x 4.5%/12months x 70%			
Newborn HIV+ mothers put ARV prophylaxis	pop x 3.5% x 4.5%/12 months x 70%			
Patient HIV+ on ARVs followed	pop x 4.9% x 30% x 2 x 50% / 12			
New patient HIV+ put on ARVs	pop x 4.9% x 30% x 50% / 12			
New Positive cases of TB screened per month	pop x (359/100,000) / 12 x 50%			
TB cases treated and cured	Pop x (359/100,000) x 2/12x 50%			

- What problems are patients and health facility staff facing in achieving the above indicators? What are the proposed solutions? Make realistic planning **in the table above** for your target per indicator in the next quarter. Make a convincing plan.

What are the problems associated with counseling and testing for HIV, and testing pregnant women voluntarily in your catchment area? Is there confidentiality in the health facility?

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Do you have the capacity to prevent mother-to-child HIV transmission and follow up patients with HIV? Training needs: hire staff, inputs? Inputs available?

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What are the problems with the detection and treatment of TB in your catchment area? What are the problems in obtaining the inputs?

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6. Component FINANCIAL ANALYSIS OF HUMAN RESOURCES

What were the revenues realized during the last month? What are the planned revenues per month for the next quarter? (see also the indices tool)

Revenues items	Realised revenues per month during past quarter	Planned revenues per month for next quarter
Cost recovery / patients' fees	F	F
Payment from health insurance	F	F
Fixed running cost subsidies from Government	F	F
Cash contribution from partners	F	F
Income generating activities	F	F
PBF Subsidies	F	F
Other revenues	F	F
TOTAL	F	F

What were the expenditures realized during the last month? What are the planned expenditures per month for the next quarter? (See also the indices tool)

Expenditure items	Realised expenditures of last month	Planned expenditures per month for next quarter
Fixed salaries of personnel recruited by the HF	F	F
Drugs and equipment	F	F
Running costs	F	F
Rehabilitation and construction	F	F
Community PBF - Social Marketing	F	F
Put into HF reserve	F	F
SUBTOTAL	F	F
Profit available for performance incentive	F	F
REVENUE= EXPENDITURE in BALANCE	F	F

Were the performance bonuses realized during the last month reasonable to motivate staff?
Yes / No. If not, what incentives are reasonable?

Categories of staff	Current number	Additional staff proposed	Current average performance bonus per month	Planned performance bonuses
Medical Doctor				
SRN, Licence, lab technician / technologist, midwife / nurse midwife				
Enrolled nurse, lab assistant				
Nurse aid / assistant nurse				
Accountant / cashier / office manager / procurement officer				
Support staff				
Other staff.....				
TOTAL				

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7. OTHER RESOURCES

Describe the problems concerning the availability of essential drugs (which includes FP inputs and bed nets). What plans for the next quarter?

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Describe the problems concerning the availability of medical equipment? What plans for the next quarter?

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Describe the problems concerning the availability of furniture and office supplies? What plans for the next quarter?

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Describe the problems concerning the status of buildings and other infrastructure? What plans for the next quarter?

1) Courtyard of the Health Centre? Fence? Building aspects including walls, sidewalks, joinery, plumbing, and lighting?

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2) Incinerator, pits, latrines, showers both internally and externally?

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3) Access to drinking water (including around latrines => hands hygiene)

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How many Quality Improvement Bonus you intend to ask?

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The nurse / doctor in charge

The Manager of CDV Agency

Name and Signature

Name and Signature

.....

.....

Copy: - Health Centre

- CDV Agency

13.6 Exercise 2: Group or Country Business plan

We propose the following content for your group- or individual action plan/business plan during the course. What do you propose to achieve *within 2 weeks, 6 weeks and 6 months*? Write the group's report in Word. Once the group agrees on the report text and action plan, the facilitation team will distribute the report to the relevant people and may post it on the SINA Health website or on other websites, such as ministries or other organizations. The key recommendations will also be published at the PBF community of practice.

Outline for the report of the groups or countries:

- Context
- Problem analysis
- Is it possible to solve the problems with PBF? Yes / No
- Feasibility score of the existing or designed PBF program / are there killing assumptions
- Which activities are planned for your group/individuals?
- Recommendations
- Action Plan (what, how, who, when)

14. PROVIDER MANAGEMENT: INDICES MANAGEMENT TOOL

Main messages of the module

- The indices management tool allows any organization to analyze its income, plan essential expenditures, and calculate the profit that can be paid as performance bonuses.
- This tool enhances internal and external transparency in management and creates the right incentives to improve service quality, increase outputs and income, and reduce unnecessary expenses and corruption.
- This module presents an indices management tool for a health facility of between 3 and 150 employees. More complex indices tools also exist for large institutions, whereby each department (such as pediatrics, operating theatre, administration, etc.) applies its own internal indices management tool.
- The indices tool is best applied with maximum transparency among staff. For this, the health facility or department can appoint a committee to manage the indices tool.

14.1 The objectives of the indices management tool

The indices management tool was discovered in DRC - South Kivu in 2005 and has since become an integral part of the PBF management instruments. It was introduced as national policy from 2007 onwards in Rwanda, Burundi, DRC, Cameroon, Nigeria, and several other countries. Cameroon developed the indices management tool for departments in tertiary hospitals.

The objectives of the indices management tool are: (1) To assist facilities to make their own autonomous decisions; (2) To promote transparency and good governance by producing a monthly report accessible to external stakeholders such as health authorities and CDV agencies; (3) To prevent over-expenditure and; (4) To better motivate staff with positive and negative incentives.

In PBF, autonomous management is important for promoting the entrepreneurship and innovation required to solve specific problems and to make use of opportunities. However, autonomy does not mean a lack of transparency. Therefore, the indices management tool has also been developed to promote good governance. All income from the structure is integrated into a “common basket”.

In the following paragraphs, we explain the indices management tool for a health facility with between 3 and 150 employees.

14.2 Health facility revenues or income

In PBF, we consider only revenues received in cash (direct cash or bank transfer). The reception of inputs such as drugs or equipment is not counted as revenue in the indices tool because they cannot be converted into cash.

Internally generated revenues are:

(1) Direct cost-sharing revenues; (2) Income from prepayment schemes or other private or public health insurance schemes; (3) Income-generating activities. In addition, a structure can generate revenues by decreasing its bank reserve.

External revenues may be:

(1) Fixed salaries of civil servants paid by the Government; (2) Fixed subsidies paid by the government for operational expenses; (3) Variable PBF subsidies paid by the government or donor organizations; (4) Fixed subsidies in cash from partners; and (5) Cash donations from individuals or organizations.

The proportion of internal revenue compared to total revenue should ideally be between 40% and 60%. If internal revenue exceeds 60%, this creates problems because tariffs may be too high for many patients. For example, private health facilities without government support depend entirely on direct patient payments, which many may not be able to afford. Private facilities therefore cannot provide desired free services such as positive externalities (immunization, tuberculosis, etc.) and public goods (social marketing of lifestyle changes) or assist vulnerable people who cannot pay. Only public money can finance such services.

However, if internal revenues are less than 40% of total revenues, this often creates problems with the stability of the health facility's income. This creates heavy dependence on external financing, which is often unstable. This income instability often leads to stock-outs of drugs and other consumables, inadequate infrastructure maintenance, and poorly motivated staff, which can lead to strikes. Overall, care quality is poor.

14.3 Example of how the indices tool works in a health facility

In the following example, we present a health facility with a target population of 20,000. External income consists of government salaries, PBF subsidies, and other revenues, which make up 39% of total income. Internal income, or revenues, account for 61% of total revenues and come from cost recovery, income from contracts with companies, and other income-generating activities.

Table 1: Analyzing the income, which is the first step in the indices management tool

Health Facility	May-17			
Population	20,000			
Income Categories	Amount in \$	Amount in FCFA	%	Analysis
	1 USD =	560		
Salaries paid directly by the government*	\$ 286	F 160,000	4%	
PBF Subsidies	\$ 2,143	F 1,200,000	30%	
Cash donations by aid agencies	\$ 214	F 120,000	3%	
Other donations from gifts, etc		F 80,000		
Sub-Total external revenues	\$ 2,786	F 1,560,000	39%	Between 40-60% is OK
Income from direct cost-sharing	\$ 2,679	F 1,500,000	37%	
Income from health insurance	\$ 1,429	F 800,000	20%	
Income for contracts with companies	\$ 179	F 100,000	2%	
Income generating activities (shops, etc)	\$ 107	F 60,000	1%	
Sub-Total internal revenues	\$ 4,393	F 2,460,000	61%	Between 40-60% is OK
Revenue from health facility bank account	\$ 0		0%	
Total income Health Facility:	\$ 7,179	F 4,020,000	100%	\$ 4.31
Target HF income (= \$ 7 / pers in catchment area / yr):	\$ 11,667	F 6,533,333	62%	= target achievement

* For calculating the salaries paid by government to staff, one may use the government salary indices

Total monthly income is FCFA 4.02 million (\$6,756), which corresponds to \$4.05 per person in the catchment area per year (= F 4 million x 12 months / 20,000 / 560 = \$4.31). This income is 62% of the standard \$7.00 a well-functioning health facility should generate per person per year (\$4.31 / \$7.00 = 62%). The health facility has recruited eight qualified staff (see Table 3). The standard is 1 qualified staff per 1000 inhabitants for the primary level and 1 qualified staff per 1000 inhabitants for the hospital level. Therefore, in this example, this primary-level health facility achieves $(8 \times 1000) / 20,000 = 40\%$ of the target for qualified human resources.

In this scenario, health facility management should aim to increase activities (and thereby revenues) and increase the number of qualified staff. This usually requires investments in infrastructure, equipment, and /or human resources. For this purpose, the health facility may ask in its business plan to benefit from a Quality Improvement Bonus (QIB) by explaining for which objective this QIB is necessary.

A health facility without qualified staff can apply for a QIB once it has successfully recruited qualified staff and the person has started working.

14.4 Planning for the expenditures and balancing the budget

The next step in the indices management tool is planning expenditures. In the following table, we note that expenditures are F 4.02 million, which equals the income generated shown in the previous table. This is done by the following calculation: Total income (= FCFA 4.02 million) MINUS the SUB TOTAL of all other expenditure (= F 2.91 million), which is F 1.1 million. This is the monthly “profit” of the health facility that can be paid as performance bonuses to staff, and it is this variable part that balances the health facility's monthly income and expenditures. If income increases while expenses remain the same, the profit also increases. If expenses go down while the income remains the same, the profit increases.

Expenditure Categories	USD	Amount in FCFA	%	Analyse
Government-paid fixed salaries	\$ 286	F 160,000	4%	
Health facility paid fixed salaries	\$ 1,571	F 880,000	22%	
Taxes and Social Contributions	\$ 357	F 200,000	5%	
Operational expenses	\$ 134	F 75,000	2%	
Drugs and medical equipment	\$ 1,161	F 650,000	16%	
Investments	\$ 625	F 350,000	9%	
Payment of sub-contractors	\$ 446	F 250,000	6%	
Social Marketing	\$ 402	F 225,000	6%	
Other expenses	\$ 36	F 20,000	0%	
Transfer of funds into the reserve	\$ 179	F 100,000	2%	
SUB-TOTAL of all expenses LESS bonuses	\$ 5,196	F 2,910,000	72%	
Profits to be paid for performance bonuses	\$ 1,982	F 1,110,000	28%	
TOTAL	\$ 7,179	F 4,020,000	100%	
Total for remuneration (= fixed salaries + social allowances + bonuses):		F 2,350,000	58%	Between 50-60% is OK
Indice value of the month :	F 1,669	= Profits to be paid for the performance bonus / points earned for the month for		

Table: Step 2 in the indices management tool: Planning the health facility expenditures.

The following paragraphs provide a description of the common expenditure items of a health facility

14.4.1 Basic salaries

Table 3 shows that the health center has 12 staff, 8 of whom are qualified.

The first expenditure decision is how much money to set aside for fixed staff salaries, whether paid by the government or by the health facility itself.

The health facility's total income is F 4.02 million FCFA and, in general, around 40-60% of expenditures on staff remuneration (= fixed salaries + performance bonuses) is justified. For the fixed salaries component, usually around 25-40% of the health facility income should be paid.

For the calculation of the salaries, there are two methods:

1. One whereby the salaries are unknown, such as in the private sector or when government facilities have many contractual staff; and
2. When most staff are recruited by the government.

14.4.2 Method 1 for calculation of fixed salary: The in-charge is the standard

The person in charge of the health facility is given the standard fixed salary index value of 100 points. This 100-point standard allows comparison of other staff members with the manager based on their academic rank and seniority. In this example from the Central African Republic, the fixed salary of the physician in charge is F 160,000, which equals the fixed salary paid by the government. However, if this salary is deemed too high or too low, the facility may decide to adjust the reference salary of the in-charge or director up or down, which will affect all staff salaries.

The choice of how many points to give to each employee compared to the in-charge is preferably made as much as possible together with the staff. As shown in the following Table, the health facility proposed 85 points for the assistant manager and the Lab technician; 70 points for the registered nurses; 60 points for the accountant and 40 points for the two health assistants. The cashier and the other three unqualified personnel were given a salary index value of between 20 and 30 points.

Starting from the salary of the in-charge of the health facility of F 160,000, the deputy (paid by the health facility) receives a fixed salary of $F\ 160,000 / 100 \times 85$ points is F 136,000; The accountant $F\ 160,000 / 100 \times 60 = F\ 96,000$; The cashier $F\ 160,000 / 100 \times 30 = F\ 48,000$, etc.

Table 3: Calculation of the fixed salary of the health facility staff.

Categories of staff	Department	Indices value	Fixed salary + seniority paid by government in F CFA	Fixed salary + seniority paid by government in USD	Fixed salary + seniority paid by health facility in F CFA	Fixed salary + seniority paid by health facility in USD
Physician - in charge	General	100	F 160,000	\$ 269		\$ 0
Senior Health Techn	OPD - In-patient	85		\$ 0	F 136,000	\$ 229
Senior Techn - Lab	Lab	85		\$ 0	F 136,000	\$ 229
Accountant	Admin	60		\$ 0	F 96,000	\$ 161
Reg nurse - Midwife	Maternity	70		\$ 0	F 112,000	\$ 188
Registered nurse	OPD - In-patient	70		\$ 0	F 112,000	\$ 188
Cashier	General	30		\$ 0	F 48,000	\$ 81
Health Assistant	Hospitalization	40		\$ 0	F 64,000	\$ 108
Midwife Assistant	Maternity	40		\$ 0	F 64,000	\$ 108
Unqualified staff	Hospitalization	25		\$ 0	F 40,000	\$ 67
Unqualified staff	Maternity	25		\$ 0	F 40,000	\$ 67
Unqualified staff	OPD - In-patient	20		\$ 0	F 32,000	\$ 54
TOTAL		650	F 160,000	\$ 269	F 880,000	\$ 1,479

14.4.3 Method 2 for calculating the fixed salary: Using the government salary indices value

The second approach is to use the government index value for each employee, or the equivalent if staff members are not government employees. Each country has a salary structure for civil servants that specifies: (1) academic or professional level (often expressed in categories) and (2) the number of years worked (expressed in salary increments).

The government salary indices value determines the fixed salary, and it is the same for all employees with the same number of indices points. They may be teachers, health professionals, or police officers. Each point corresponds to a fixed amount of money. In the Central African Republic, the multiplication factor is 102. For example, as shown in the next table, the lowest salary index value is 328, which translates into $328 \times \text{F } 102 = \text{F } 33,456$. The highest is $2421 \times 102 = \text{F } 246,942$. The private sector may use the same salary indices value grid to determine salaries and apply the same multiplication factor of 102, or a higher or lower factor. Each country has a legal framework for establishing the minimum salary levels applicable to both the public and private sectors. With this civil service salary scale, each health facility can calculate civil servants' basic fixed salaries once it knows each staff member's category and increment/step.

Multiplication factor		102											
Categories / Increments	Garde de corps	A1 PLUS 300 pts	A1 PLUS 280 pts	A1 PLUS 250 pts	Cat A1	Cat A2	Cat A3	Cat B1	Cat B2	Cat C1	Cat C2	Cat D1	Cat D2
Exc	2421	2468	2448	2418	2168	1871	1651	1466	1254	951	746	597	499
Base salary	F 246,942	F 251,736	F 249,696	F 246,636	F 221,136	F 190,842	F 168,402	F 149,532	F 127,908	F 97,002	F 76,092	F 60,894	F 50,898
Incram 1/3	2256	2368	2348	2318	2068	1791	1581	1406	1204	921	721	578	484
Base salary	F 230,112	F 241,536	F 239,496	F 236,436	F 210,936	F 182,682	F 161,262	F 143,412	F 122,808	F 93,942	F 73,542	F 58,956	F 49,368
Incram 1/2	2091	2248	2228	2198	1948	1696	1496	1331	1144	888	693	558	468
Base salary	F 213,282	F 229,296	F 227,256	F 224,196	F 198,696	F 172,992	F 152,592	F 135,762	F 116,688	F 90,576	F 70,686	F 56,916	F 47,736
Incram 1/1	1926	2128	2108	2078	1828	1601	1411	1256	1084	855	665	538	452
Base salary	F 196,452	F 217,056	F 215,016	F 211,956	F 186,456	F 163,302	F 143,922	F 128,112	F 110,568	F 87,210	F 67,830	F 54,876	F 46,104
Incram 2/3	1761	2024	2004	1974	1724	1520	1340	1194	1032	824	640	517	436
Base salary	F 179,622	F 206,448	F 204,408	F 201,348	F 175,848	F 155,040	F 136,680	F 121,788	F 105,264	F 84,048	F 65,280	F 52,734	F 44,472
Incram 2/2		1914	1894	1864	1614	1425	1264	1128	977	792	613	497	420
Base salary		F 195,228	F 193,188	F 190,128	F 164,628	F 145,350	F 128,928	F 115,056	F 99,654	F 80,784	F 62,526	F 50,694	F 42,840
Incram 2/1		1804	1784	1754	1504	1330	1188	1062	922	760	586	477	404
Base salary		F 184,008	F 181,968	F 178,908	F 153,408	F 135,660	F 121,176	F 108,324	F 94,044	F 77,520	F 59,772	F 48,654	F 41,208
Incram 3/4		1702	1682	1652	1402	1249	1117	1001	871	729	561	457	386
Base salary		F 173,604	F 171,564	F 168,504	F 143,004	F 127,398	F 113,934	F 102,102	F 88,842	F 74,358	F 57,222	F 46,614	F 39,372
Incram 3/3		1602	1582	1552	1302	1164	1047	941	821	699	536	438	373
Base salary		F 163,404	F 161,364	F 158,304	F 132,804	F 118,728	F 106,794	F 95,982	F 83,742	F 71,298	F 54,672	F 44,676	F 38,046
Incram 3/2		1502	1482	1452	1202	1079	1027	881	771	669	511	419	358
Base salary		F 153,204	F 151,164	F 148,104	F 122,604	F 110,058	F 104,754	F 89,862	F 78,642	F 68,238	F 52,122	F 42,738	F 36,516
Incram 3/1		1402	1382	1352	1102	994	947	821	721	639	486	400	343
Base salary		F 143,004	F 140,964	F 137,904	F 112,404	F 101,388	F 96,594	F 83,742	F 73,542	F 65,178	F 49,572	F 40,800	F 34,986
Stagiaire		1302	1282	1252	1062	964	877	761	671	609	461	381	328
Base salary		F 132,804	F 130,764	F 127,704	F 108,324	F 98,328	F 89,454	F 77,622	F 68,442	F 62,118	F 47,022	F 38,862	F 33,456

The salary indices is the basis for calculating each staff member's performance bonuses by weighting the performance criteria. For example, for one overtime hour, a doctor in category A1, increment 2/1, with an indices value of 1504 receives a bonus that is proportionally higher than a caregiver in category C2, increment 2/1, with an index of 586.

Technical recommendation:

As the following table shows (in the index spreadsheet) the base salary is found by multiplying the index by the value of the index. In Excel, when you enter the indices value 358, the salary is automatically calculated using the LOOKUP function. The corresponding value is F 36,516.

Multiplication factor 102		
Indice	FCFA	USD
328	F 33,456	\$ 60
343	F 34,986	\$ 62
358	F 36,516	\$ 65
373	F 38,046	\$ 68
381	F 38,862	\$ 69

The following example shows a Health Centre with ten staff. In the Health Facility, there are seven civil servants and three employees paid by Health Facility. The person in charge is in category A1, increment 2/1, with index 1504 and a basic salary of F 153,408; the accountant is in A3 3/1, and so on. For personnel directly recruited by the Health Facility, it can either give them a temporary contract of 3 or 6 months, for example, or give them a fixed contract that is negotiable but based on the same civil service wage scale.

Categories of staff	Department	Category - echelon	Indices value	Fixed salary + seniority paid by government in F CFA	Fixed salary + seniority paid by govt in USD	Fixed salary + seniority paid by health facility in F CFA	Fixed salary + seniority paid by health facility USD
Physician - in charge	General	A1 - 2/1	1504	F 153,408	\$ 258		\$ 0
Senior Health Technician	OPD - In-patient	A2 - 1/3	1791		\$ 0	F 182,682	\$ 307
Senior Technician - Labo	Lab	A2 - 1/3	1791		\$ 0	F 182,682	\$ 307
Accountant	Admin	A3 - 3/1	947		\$ 0	F 96,594	\$ 162
Register nurse - Midwife	Maternity	B1- 2/3	1194		\$ 0	F 121,788	\$ 205
Registered nurse	OPD - In-patient	B1-2/3	1194		\$ 0	F 121,788	\$ 205
Cassier	General	D1 - 2/2	497		\$ 0	F 50,694	\$ 85
Health Assistant	Hospitalization	D1- 3/4	457		\$ 0	F 46,614	\$ 78
Midwife Assistant	Maternity	D1-3/4	457		\$ 0	F 46,614	\$ 78
Unqualified staff	Hospitalization	D2-3/3	373		\$ 0	F 38,046	\$ 64
Unqualified staff	Maternity	D2-3/3	373		\$ 0	F 38,046	\$ 64
Unqualified staff	OPD - In-patient	D2- trainee	328		\$ 0	F 33,456	\$ 56
TOTAL				F 153,408	\$ 258	F 959,004	\$ 1,612

14.4.4 Taxes and social contributions

The second expenditure item is taxes and social contributions. This depends on each country's laws and therefore must be specified in the national PBF manuals.

The following table shows an example of the *tax structure* in Cameroon, which is in FCFA (1 \$ = F 595). The tax is calculated based on the Gross Monthly Salary, which is the sum of the basic salary, fixed allowances, and variable performance bonuses.

Explication of tax structure		Calculation based on the Gross Monthly Salary = BMS	
		Taxes on the Revenues of Physical Persons (TRPP)	
Minimum	Maximum	TRPP to pay	Formula
F 0	F 62,000	No tax	
F 62,001	F 310,000	10%	$(\text{Gross Monthly Salary} \times 70\% - \text{BMS} \times 2.8\% - 41.667) \times 10\%$
F 310,001	F 429,000	15%	$16963 + (\text{BMS} - 310.000) \times 70\% \times 15\%$
F 429,001	F 667,000	25%	$29.188 + (\text{BMS} - 429.000) \times 70\% \times 25\%$
F 667,001	and more	35%	$70.830 + (\text{BMS} - 667.000) \times 70\% \times 35\%$

The tax formula can be included in the indices EXCEL spreadsheet, so taxes are calculated automatically and no mistakes are made. This allows autonomous providers, such as hospitals, to calculate the taxes they withhold from employees and pay to the revenue authority.

Social contributions concern pension schemes, insurance schemes and other miscellaneous schemes. These contributions are usually a proportion of gross monthly salary. The social contributions formulas can also be included in the indices spreadsheet so that they are calculated automatically and withdrawn for payment to the respective institutions. The *Net Salary* of an employee is calculated as follows: (a) Basic Salary *plus* the Fixed Salary Allowances *plus* the Variable Performance Bonuses: This is the *Gross Salary*; (b) The *Net Salary* is the Gross Salary *minus* the taxes and *minus* the social contributions.

14.4.5 Supply of medicines, consumables and equipment

The third expenditure item concerns *medicines, laboratory reagents, consumables and small equipment*. This is obviously a priority expenditure for each health facility, and under PBF, the health facility is responsible for their availability. The proportion of expenses for drugs and consumables compared to total expenditures usually ranges from 20% to 30%. When expenditure on these inputs is disproportionately high, it may indicate uncompetitive pricing or another problem in the health facility, such as theft or poor management. In PBF, health facilities can choose any distributor that sells quality medicines, and the regulator must ensure the free market functions efficiently and monitor accredited distributors to ensure they provide quality products. By the end of the month, the pharmacy and laboratory in-charges take inventory. They then calculate the next order and its cost based on the average monthly consumption.

A *15-day security stock* ($= \text{average monthly consumption} / 2$) must be considered, but it may be higher under special circumstances such as if a health facility is difficult to reach due to distance or poor road conditions. The security stock for each drug is calculated by dividing the last 6 months' consumption by 12.

14.4.6 Social marketing expenditures

Social marketing expenses in PBF programs cover promotional and preventive activities and may range from 10% to 20% of total expenditure. They include indicators such as protocol-based household visits, follow-up on dropouts, and identification of new cases. Such social marketing expenses also support identifying the vulnerable, family planning acceptors, vaccination, latrine construction, and promoting the use of mosquito nets. Social marketing expenditures also include incentives for community health workers and skilled health workers involved in the community PBF program.

14.4.7 Current operating expenditures

These include all other current operating expenses of the health facility such as rent, transport, electricity, office equipment, hygiene equipment, communication costs, etc. Based on average consumption over the last six to twelve months, staff estimates the average monthly operating expenses expected for the month. This item also includes expenses not directly related to the health facility's activities, such as contributions to the church activities of a religious health facility. The latter expenditure should not exceed 5% of the health facility revenue.

14.4.8 Investments

Another important expenditure item is investment to maintain the quality of infrastructure, equipment, and furniture. The investment budget may imply new construction or equipment or the rehabilitation or amortization of these items. A health facility must have an amortization plan for all its fixed assets.

Staff must feel they “own” the health facility because it is also their source of income. Therefore, it is important to keep staff stable to promote this feeling of ownership. The health facility must be attractive (garden, flowers, paintings) and surrounded by a fence that prevents unauthorized entry by people or animals. There must be water and electricity. The infrastructure should also be

protected against erosion in hilly, sloping areas. Staff should be involved in investment decisions because this reduces short-term profits that could otherwise be paid out as staff bonuses. It is easy to convince staff to forgo short-term bonuses if, for example, the health facility must be electrified, which will increase activities and subsidies but also improve the working environment. This investment will be quickly recovered so that more attractive performance bonuses can be paid. Similarly, it will be easier to persuade staff to invest in home improvements if staff decide that performance bonuses will be invested in constructing homes that staff can use.

14.4.9 The payment of the subcontracts

This is payment to health facilities in the catchment areas under contract with the main contract holder. This is compulsory and usually constitutes 80% of the invoice generated by the secondary contract holder. The sub-contract payment should be done immediately after receiving the subsidies from the PBF program. The CDV Agency and the regulatory authorities must verify that the payment will indeed be made. The remaining 20% can be kept by the main contract holder to cover supervision and contract administration costs. Subcontracts can also be signed for security and cleaning services of health facilities.

14.5 **Ensure that each facility has a reserve for three months of operation**

An adequate reserve for the operation of the health facility is important to stabilize income and expenditures. Health facility income can be low in one month compared to another. Moreover, unexpected catastrophic expenses may occur, such as a fire or other damage to infrastructure or equipment that requires immediate replacement. Without a reserve, this paralyzes the health facility.

The reserve should cover three months of operations. The indicator to monitor is the number of days a structure can run without revenue. This is calculated as follows: (1) The sum of Cash available by the end of the month + Reserve in the Bank and / or Savings Account + The value of stocks of essential medicines that can be sold; (2) Divide that sum by the average of the monthly expenses and; (3) multiply by 30 days.

14.6 **Criteria for calculating the performance bonuses**

When, after deducting all the above expenditures, money remains, this is the "profit" the health facility produced during the month. This can be paid to staff as performance bonuses. It is the total income MINUS all the other expenses. If the result is negative, staff do not receive a performance bonus. The performance bonus aims to build team spirit. Staff must work together to increase income and spend efficiently. This team spirit should also help avoid theft and the misuse of equipment, motorcycles, or vehicles, and prevent inputs from being bought at uncompetitive costs.

Managers must ensure that the organization generates enough profit to pay for the performance bonuses. From the total remuneration, the ideal proportion between fixed salaries and performance bonuses is 60% and 40%. So, if the fixed salaries are, for example, F 1,000,000, the health facility should generate F 600,000 in performance bonuses. There is no ceiling for the performance bonuses, but their payment should not eliminate other important expenses such as

the purchase of drugs, operating expenses, investments, and the establishment of an adequate bank reserve.

What are the criteria for calculating staff performance bonuses?

The following eight criteria are proposed:

1. Responsibility bonus;
2. Additional hours per month;
3. Non-private practice agreement bonus;
4. Department quality bonus, whereby the health facility must decide for which service(s) each staff member is responsible;
5. Individual performance bonus for each staff member;
6. Achieving department income from cost recovery
7. Hours lost per month
8. Penalty/malus in case of poor individual performance

Table: Example with eight criteria to calculate the performance bonus of employees

Staff members	1. Respon- sibility bonus	2. Overtime hours' bonus	3. Bonus Non- private practice agreement	4. Depart- ment Quality Bonus Score	5. Indivi- dual Perfor- mance Score	6. Bonus for Cost Recovery realised	7. Points lost due to hours Lost	8. Points lost for individual penalty	TOTAL SCORE	Indices value of the month	TOTAL BONUS
Physician - in charge	50	2.7	20	20	27	15	2.7	0	132	F 1,669	F 219,754
Senior Health Technician	35	2.3	17	24	14	15	2.3	0	105	F 1,669	F 175,962
Senior Lab Technician -	20	2.3	17	13	27	11	2.3	0	87	F 1,669	F 145,692
Accountant	20	1.6	12	8	20	9	1.6	0	69	F 1,669	F 115,788
Registered nurse - Midwife	20	1.9	14	19	15	16	1.9	0	84	F 1,669	F 140,337
Registered nurse		1.9	14	20	16	13	1.9	0	63	F 1,669	F 104,592
Cashier	10	0.8	0	6	0	6	0.8	22	0	F 1,669	F 0
Health Assistant		1.1	8	7	12	7	1.1	0	34	F 1,669	F 56,429
Midwife Assistant		1.1	8	11	12	9	1.1	0	40	F 1,669	F 66,681
Unqualified staff		0.7	5	4	4	4	0.7	0	18	F 1,669	F 29,705
Unqualif. staff		0.7	5	7	8	6	0.7	0	25	F 1,669	F 41,676
Unqualif. staff		0.5	2	6	5	4	0.5	9	8	F 1,669	F 13,384
	155	17	122	143	160	115	17	30	665		F 1,110,000
	22%	2.4%	17.1%	20.1%	22.5%	16.1%	3%	5%	Total Points		52%

The above criteria are used in the Central African Republic, but other countries may add or remove certain criteria.

As shown in the following table and explained above, the in-charge of the health facility has a salary indices value of 100 points, and other staff receive their index values and, therefore, a fixed salary relative to the in-charge.

Table: Fixed salary based on indices value and responsibility bonus.

Categories of staff	Department	Indices value	Fixed salary + seniority paid by government in F CFA	Fixed salary + seniority paid by health facility in F CFA	1. Responsibility bonus
Physician - in charge	General	100	F 160,000		50
Senior Health Technician	OPD - In-patient	85		F 136,000	35
Senior Technician - Labo	Lab	85		F 136,000	20
Accountant	Admin	60		F 96,000	20
Registered nurse - Midwife	Maternity	70		F 112,000	20
Registered nurse	OPD - In-patient	70		F 112,000	
Cashier	General	30		F 48,000	10
Health Assistant	Hospitalization	40		F 64,000	
Midwife Assistant	Maternity	40		F 64,000	
Unqualified staff	Hospitalization	25		F 40,000	
Unqualified staff	Maternity	25		F 40,000	
Unqualified staff	OPD - In-patient	20		F 32,000	
TOTAL		650	F 160,000	F 880,000	155

14.6.1 The responsibility bonus

The health facility determines the points for the responsibility bonus. One may propose to use the manager's index value of 100 x 50%. The management committee may determine points for other staff. In this example, points were given for the senior health assistant (35 points), the accountant, the senior lab technician, and the registered nurse midwife (20 points), and the cashier (10 points).

14.6.2 Overtime Bonus

For each additional hour during the day, points may be awarded. This is the indices value of each staff member divided by 100. During the evening, night, or weekend, the value of one additional hour may be increased by dividing the indices value by 60 instead of 100. The following table shows the value of one hour for all staff during the day (column 2b) and overnight or weekend (column 2d). Thus, the salary indices values weight the points per hour, and the in-charge for one hour during the day gets 1 point, and the unqualified staff 0.20-0.3 points.

Table 6: Calculation and weighting for one additional hour worked for each employee.

Categories of staff	Indices value	2a. Overtime hours - during daytime	2b. Points for day overtime / 100	2a. Overtime hours - during evening night - weekend	2b. Points overtime during evening / night / weekend / 60	2. TOTAL overtime hours bonus
Physician - in charge	100	1	1.0	1	1.7	2.7
Senior Health Technician	85	1	0.9	1	1.4	2.3
Senior Technician - Labo	85	1	0.9	1	1.4	2.3
Accountant	60	1	0.6	1	1.0	1.6
Registered nurse - Midwife	70	1	0.7	1	1.2	1.9
Registered nurse	70	1	0.7	1	1.2	1.9
Cassier	30	1	0.3	1	0.5	0.8
Health Assistant	40	1	0.4	1	0.7	1.1
Midwife Assistant	40	1	0.4	1	0.7	1.1
Unqualified staff	25	1	0.3	1	0.4	0.7
Unqualified staff	25	1	0.3	1	0.4	0.7
Unqualified staff	20	1	0.2	1	0.3	0.5
650						17

14.6.3 Non-private practice bonus

This bonus is important in a context where staff of the structures tends to do private practice unofficially and receive money directly from patients. This harms service quality and the health facility's revenue. The bonus for not diverting patients to the private sector compensates for the money staff would otherwise generate through private practice or informal "under the table" payments. Each staff member must agree not to conduct private practice and accept that any violation will result in the loss of this bonus and other penalties. Each health facility must have a protocol explaining which penalties will be imposed when someone engages in private practice. For example, if there is strong suspicion of private practice, one may lose 50% of the bonus for not engaging in private practice. With solid evidence, one loses 100%.

The protocol should also explain the verification mechanisms. For example, a telephone number can be displayed at the health facility reception for patients to call when a health worker asks them to pay informally or to go to their private practice.

Table : Bonus for not doing private practice

Categories of staff	Indices value	3a. Maximum Non-private practice agreement bonus = Indices value / 5	3b. Satisfied = 100%, Doubtful = 50% Solid evidence for infraction = 0%	3. Bonus Non-private practice agreement
Physician - in charge	100	20	100%	20
Senior Health Technician	85	17	100%	17
Senior Technician - Laboratory	85	17	100%	17
Accountant	60	12	100%	12
Registered nurse - Midwife	70	14	100%	14
Registered nurse	70	14	100%	14
Cashier	30	6	0%	0
Health Assistant	40	8	100%	8
Midwife Assistant	40	8	100%	8
Unqualified staff	25	5	100%	5
Unqualified staff	25	5	100%	5
Unqualified staff	20	4	50%	2
	650			122

14.6.4 Department quality score bonus

District health authorities conduct quality assessments at the primary level, and peer group evaluations are conducted at the hospital level.

The quality criterion for the performance bonus may be linked to the quality scores of each department or service. The maximum score for each employee is obtained by dividing the value of the staff indices value by 3. The points for the quality criterion are then obtained by multiplying the maximum value by the quality score of each department obtained. For example,

the physician responsible for the indices value of 100 points / 3 x the overall score of the health facility of 60% = 20 points.

Table: The quality criterion of the department and how this influences the premium.

Categories of staff	Department	Indices value	4a. MAXIMUM QUALITY BONUS = Indices value / 3	4b. Score Quality Bonus Between 0% and 100%	4. Department Quality Bonus Score
Physician - in charge	General	100	33	60%	20
Senior Health Technician	OPD - In-patient	85	28	85%	24
Senior Technician - Laboratory	Lab	85	28	45%	13
Accountant	Admin	60	20	40%	8
Registered nurse - Midwife	Maternity	70	23	80%	19
Registered nurse	OPD - In-patient	70	23	85%	20
Cashier	General	30	10	60%	6
Health Assistant	Hospitalization	40	13	50%	7
Midwife Assistant	Maternity	40	13	80%	11
Unqualified staff	Hospitalization	25	8	50%	4
Unqualified staff	Maternity	25	8	80%	7
Unqualified staff	OPD - In-patient	20	7	85%	6
TOTAL		650	214		143

14.6.5 Individual Performance Criterion

Another criterion is the individual staff performance bonuses. This is assessed by performance reviews, usually every three months.

The criteria for evaluating the individual performance of staff may be:

1. Professional conscience (=> punctuality, availability, workmanship);
2. The spirit of work (=> interpersonal relationships, sense of cooperation and initiatives);
3. Technical skills and adaptability in work (=> organization, quality of work and quantity);
4. Willingness for personal development (=> considering the recommendations of previous internal and external supervisions)

A fifth criterion can also be used to add points for employees who present specific risks, such as working with HIV patients, working in the radiology department, or at the morgue.

There are three methods to conduct the performance assessments through: (1) The in-charge of the health facility; (2) A permanent team; (3) A team that is chosen for a limited period.

However, experience shows that assessments are best done by a team.

Table: Individual employee performance criteria

Categories of staff	Indices value	5a. MAXIMUM Individual Performance Bonus = Indices Value / 3	5b. Individual Performance Score - Between 0% and 100% (average not more than 80%)	5. Individual Performance Score Bonus
Physician - in charge	100	33	80%	27
Senior Health Technician	85	28	50%	14
Senior Technician - Laboratory	85	28	95%	27
Accountant	60	20	100%	20
Registered nurse - Midwife	70	23	65%	15
Registered nurse	70	23	70%	16
Cashier	30	10	0%	0
Health Assistant	40	13	90%	12
Midwife Assistant	40	13	90%	12
Unqualified staff	25	8	50%	4
Unqualified staff	25	8	90%	8
Unqualified staff	20	7	80%	5
	650	214	72%	160

14.6.6 Questionnaire for individual performance evaluation

The evaluation framework is based on work done in the DRC. Each country and provider can adapt the questionnaire to its specific needs.

INDIVIDUAL PERFORMANCE CRITERIA SCORE (quarterly) - circled correct answer	
Professional awareness	
Timeliness	
- Arrived late more than 7 times / month	= 0 points
- Arrived late 4 to 7 times / month	= 3 points
- Arrived late sometimes 1-3 times / month	= 6 points
- Has never arrived late	= 9 points
Availability	
- Absent from his post more than 7 times / month with no known reason	= 0 points
- Was often absent from workstation with no known reason (4 to 7 times / month)	= 3 points
- Was sometimes absent from his workstation with no known reason (1-3 times / month)	= 6 points
- Has never been absent from workstation	= 9 points
Uniform	
- Worn in workplace (less than 4 times / month)	= 0 points
- Worn sometimes in workplace (more than 4 times / month)	= 3 points
- Always worn but neglected (dirty or torn or not ironed)	= 6 points
- Always worn and held always neat (washed, ironed and not torn)	= 9 points
Professional awareness score: / 27 points =%	
Observations on the professional awareness:	
Team spirit	
Interpersonal relationships	
- Was often in conflict with colleagues and reported more than 4 times / quarter to his/her superior	= 0 points
- Was sometimes in conflict with colleagues and reported to his/her superior 2-4 times / quarter	= 3 points

- Was sometimes in conflict with colleagues once per quarter	= 6 points
- Has never been in conflict with colleagues	= 9 points
Collaborative spirit	
- More than 4 times per quarter declined to provide assistance and / or expertise to colleagues	= 0 points
- 2 to 3 times, per quarter declined to provide assistance and / or expertise to colleagues	= 3 points
- Just once, refused to provide assistance and / or expertise to colleagues	= 6 points
- Has never refused to provide assistance and / expertise to colleagues	= 9 points
Initiative	
- Never did any additional work under the argument that he has no time to do so	= 0 points
- Waited for instruction from his / her superior to accomplish at least one additional work	= 3 points
- Began extra work, but without completing it	= 6 points
- Completed at least one additional work without waiting for orders from the hierarchy	= 9 points
Team spirit score: / 27 points =%	
Observations on team spirit:	
Technical competency and flexibility during work	
Organisation	
- Does not have daily work schedule (assessed during internal supervision)	= 0 points
- Has incomplete daily work schedule (assessed during internal supervision)	= 4 points
- Has a daily work schedule, but only followed partially (assessed during internal supervision)	= 8 points
- Has a daily work schedule and always respected it (assessed during internal supervision)	= 12 points
Quality of work	
- Does not respect norms and standards specific to tasks (assessed during internal supervision)	= 0 points
- Does not respect standards specific to its tasks (observation made 2 times / quarter during supervision)	= 4 points
- Does not respect standards specific to its tasks (observation made 1 time / quarter during supervision)	= 8 points
- Always respect standards specific to its tasks	= 12 points
Quantity of work	
- Did not finish 5 times last quarter daily work based on work schedule (assessed during supervision)	= 0 points
- Did not finish 3 times last quarter daily work based on work schedule (assessed during supervision)	= 4 points
- Do not finish only once last quarter his/her daily work schedule (assessed during supervision)	= 8 points
- Did always finish work according to daily work schedule (assessed during supervision)	= 12 points
Technical competency and inflexibility during work: / 36 points =%	
Comments on Technical competency and inflexibility during work:	
Willingness for Personal Development	
Take into account advice and recommendations from previous internal and external supervisory visits	
- Did not follow advice at least 4 times per quarter of internal & external supervision)	= 0 points
- Did not follow advice at least 2-3 times per quarter of internal & external supervision)	= 3 points
- Did not follow advice at least once per quarter of internal & external supervision)	= 6 points
- Always takes into account recommendations of internal and external supervisory visits	= 10 points
Willingness for Personal Development: / 10 points =%	
Observations on the Willingness for Personal Development	
TOTAL POINTS:	
PERFORMANCE SCORE in % (average score of the structure cannot exceed 80%): / 100 points =%	
GENERAL observations on the individual performance assessment:	
Name, date and supervisor: Signature.....	
Name, date and employee: Signature.....	

14.6.7 Increasing the department income

This criterion stimulates the department to increase its revenues. The maximum score is calculated by dividing the indices value by 4. Health facility management then sets the income target for each department. For example, in the following table, the total target for the health facility is F 2.5 million per month. This is subdivided for the in-patient and outpatient department of F 1.4 million, maternity F 700,000, and Lab F 400,000. Next, divide the revenues realized (6d) by the department's income target (6c) to get the realized revenue score (6e). By multiplying the maximum points (6a) by the income score (6e), we obtain the points for the income criterion.

Table: Criteria for the generation of revenues from cost recovery by department.

Categories of staff	6a. Points for Targeted Income from Cost-Sharing = Indices Value / 4	6b. Department	6c. Target Cost Recovery per Department	6d. Cost-Recovery income realised	6e. Cost-Recovery income realised / Department CR Target	6. Bonus for Cost Recovery realised
Physician - in charge	25	General	F 2,500,000	F 1,500,000	60%	15
Senior Health Technician	21	OPD - In-patient	F 1,400,000	F 1,000,000	71%	15
Senior Technician - Lab	21	Lab	F 400,000	F 200,000	50%	11
Accountant	15	Admin	F 2,400,000	F 1,500,000	63%	9
Registered nurse-Midwife	18	Maternity	F 700,000	F 650,000	93%	16
Registered nurse	18	OPD - In-patient	F 1,400,000	F 1,000,000	71%	13
Cashier	8	General	F 2,000,000	F 1,500,000	75%	6
Health Assistant	10	Hospitalization	F 1,400,000	F 1,000,000	71%	7
Midwife Assistant	10	Maternity	F 700,000	F 650,000	93%	9
Unqualified staff	6	Hospitalization	F 1,400,000	F 1,000,000	71%	4
Unqualified staff	6	Maternity	F 700,000	F 650,000	93%	6
Unqualified staff	5	OPD - In-patient	F 1,400,000	F 1,000,000	71%	4
	163					115

In addition to the 6 positive incentive criteria, there are two negative incentives, or penalty criteria.

14.6.8 Hours lost penalty.

This allows employees who work less to lose points, while those who work more to earn more (performance criteria 2 above: extra hours). The scoring system is the same as for overtime hours. Staff generally welcome this system. It tends to solve inter-personnel problems, for example, staff members who are repeatedly sick or absent. It motivates employees to be punctual because managers may simply deduct points from the absent staff member and “give” those points to those who took the shift. In many Rwandan facilities, an employee usually loses points for an hour when they are 10 minutes late. An electronic system with individual badges can track employees' arrival and departure times in the PBF health facility.

Categories of staff	Indices value	7a. Hours Lost during day-time = Indices Value / 100	7b. Points Hours Lost during day-time	7a. Hours Lost during evening - night weekend = Indices Value / 60	7b. Points Hours Lost during evening - night - weekend	7. Points lost due to hours Lost
Physician - in charge	100	1	1.0	1	1.7	2.7
Senior Health Technician	85	1	0.9	1	1.4	2.3
Senior Technician - Labo	85	1	0.9	1	1.4	2.3
Accountant	60	1	0.6	1	1.0	1.6
Registered nurse - Midwife	70	1	0.7	1	1.2	1.9
Registered nurse	70	1	0.7	1	1.2	1.9
Cashier	30	1	0.3	1	0.5	0.8
Health Assistant	40	1	0.4	1	0.7	1.1
Midwife Assistant	40	1	0.4	1	0.7	1.1
Unqualified staff	25	1	0.3	1	0.4	0.7
Unqualified staff	25	1	0.3	1	0.4	0.7
Unqualified staff	20	1	0.2	1	0.3	0.5
	650					17.6

14.6.9 Individual penalties for infringements

Individual sanctions may be based on direct patient complaints or from satisfaction surveys that may be conducted by: (a) Local NGOs contracted by the PBF program; (b) The PBF Unit of the health facility, or (c) Other external evaluation organizations.

The criteria for a penalty may be as follows: Patient complaints => (a) After the first offense: reduction of the performance bonus by 10%; (b) After the second offense: 20% reduction; (c) The third complaint: 40% reduction and initiation of administrative measures.

In the case of more serious offenses such as theft of health facility property, the parallel sales of medicines or asking money directly from patients the following measures may be taken: (a) For the first time the loss of 1 month performance bonus; (b) For the second time, 3 months loss of performance bonuses and administrative measures; (c) For a third time, dismissal.

The calculation is done by multiplying the Sub-Total of the points by 20%, 50%, or 100% to obtain the lost points (8b). This allows calculation of the total points score for the performance bonus.

Table: Individual Penalties for Offenses

Categories of staff	TOTAL SUB SCORE	8a. Individual Penalty of 50% or 100%	8. Points lost for individual penalty	TOTAL SCORE	Indices value of the month	TOTAL BONUS
Physician - in charge	132	0%	0	132	F 1,669	F 219,754
Senior Health Technician	105	0%	0	105	F 1,669	F 175,962
Senior Technician - Labo	87	0%	0	87	F 1,669	F 145,692
Accountant	69	0%	0	69	F 1,669	F 115,788
Registered nurse - Midwife	84	0%	0	84	F 1,669	F 140,337
Registered nurse	63	0%	0	63	F 1,669	F 104,592
Cashier	22	100%	22	0	F 1,669	F 0
Health Assistant	34	0%	0	34	F 1,669	F 56,429
Midwife Assistant	40	0%	0	40	F 1,669	F 66,681
Unqualified staff	18	0%	0	18	F 1,669	F 29,705
Unqualified staff	25	0%	0	25	F 1,669	F 41,676
Unqualified staff	17	50%	9	8	F 1,669	F 13,384
	695		30	665		F 1,110,000

14.7 Calculation of performance bonus per employee

As shown in the table above, the 14 employees earned a total of 665 points. The profits to be paid for the performance bonuses were F 1.1 million; thus, the monthly index value is F 1.669 per point (= F 1,100,000 / 655). Multiply the total points per employee by the monthly index value to obtain each employee's performance bonus.

14.8 The health facility viability indicators

The indicators of viability of each health facility are the following:

1. Balance between income and expenditure

Total expenditure = Total revenue.

2. Proportion of internally generated revenue is between 40% and 60% of total revenue

NB 1. Internal revenues are those generated by cost recovery, health insurance, and income-generating activities

NB 2. If internal revenues are less than 40% => great dependence on external revenues.

If internal revenues are above 60% => there is a risk of health care costs being too high for the population, and preventive and promotional activities are usually absent.

3. Efficiency of human resources: (fixed salary + performance bonus) / total expenditure

The standard is between 40% and 60%. If greater than 60% => This probably means a lack of resources for other expenses such as maintenance, drug purchases, etc. If less than 40%. This probably means it is insufficient to meet staff's basic needs.

4. Variable bonus payment / (fixed salary payment + variable bonus payments)

The variable pay premium for staff must be at least 20% of the total and ideally around 40%.

5. Number of reserve days = (bank reserve + stock value of medicine + cash) X 30 / average monthly expenditure

Ideal => 90 days; Less than 60 days => critical; Less than 30 days => catastrophic

6. Bonus payment form present and complete

The premium amount must match the amount recorded on the summary sheet of receipts/expenses, signed with the staff member's telephone number.

7. Monthly indices report present, with a viability score also conducted

- *Indices management tool report present, including the staff attendance list and their signatures*
- *Report contains recommendations and analysis of the previous month's Indices Tool Report*
- *Interview 2 staff members to show that they participated in the meeting and that they know the income of the facility, the profits for the bonus payments, and the criteria of distribution for the bonuses*
- *Viability score present in the report*

Evaluation criteria	Clarification	Points
1. Equilibrium between income and expenditure - Check the above monthly indices report	- 10 points if good balance and 0 if no balance	10
2. Internally generated income / Total income of health facility	- 20 points if between 40% and 60%; If > 40% or <40%, 0	20
3. Efficiency of the expenditure for staff remuneration - Fixed salaries + bonuses / total revenue	- 10 points if between 40% and 60%; If > 40% or <40%, 0	10
4. Variable bonus payments / fixed salaries + variable bonuses	- 10 points, if greater than 20%; 0 point if <20%	10
5. Number of days in reserve for operational expenses - = (bank reserve + stock value of medicine + cash) X 30 / average monthly expenditure	- 10 points if greater than 60 days, 0 if less than 60 days	10
6. Bonus payment form present and complete	- 10 points if completed and signed form with telephone number, 0 if not otherwise	20
7. Monthly indices report present with also contains the health facility viability score	- 10 points if present, - 0 if absent	20
TOTAL		100

14.9 Indices management tool for hospitals with 150 or more staff

The first pilot PBF experiment began in April 2015 in the Departments of Radiology, Laboratory and Ophthalmology at the HGOPY Hospital in Yaoundé, Cameroon. In January 2016, the PBF was introduced in all hospital departments and, from April 2016, in the administrative departments as well.

14.9.1 The conceptual approach to solving complex problems

One key PBF theory is systems analysis. This theory breaks complex problems into smaller pieces, making them easier for autonomous, specialized teams to solve. A tertiary hospital is also a complex, highly specialized organization with hundreds of employees and beds, 15-20 departments, and millions of dollars in turnover. In line with the systems analysis theory, a tertiary hospital is a black box for the Ministry of Health. Similarly, hospital management may also treat departments as "black boxes" and give managers and specialists in each department autonomy to analyze their problems and plan expenditures, including payments for performance bonuses. Departments and their employees will also be paid on a performance basis. However, this does not mean that there is no transparency. The quarterly business plan and the monthly use of the indices management tool ensure that department managers' decisions are known and documented. The hospital's PBF committee negotiates quarterly business plans proposed by the departments. The monthly indices management tool is documented in reports and made accessible to management, external evaluators, and, preferably, departmental staff.

14.9.2 Performance indicators for tertiary hospitals

The Ministry of Health must develop a tertiary hospital package. To do this, it must develop output, quality, and equity indicators comparable to those of primary referral hospitals. Public money is insufficient to cover all curative activities in tertiary hospitals, and it is less cost-effective than primary interventions such as immunization. The efficiency of public investments in the health sector can be assessed using the DALYs (disability-adjusted life years) system. This is a standard measure for reducing mortality, morbidity, and disability. Preventing 1 DALY through childhood vaccination costs around \$50, while preventing 1 DALY through cardiac surgery costs around \$10,000.

To finance tertiary hospitals, other funding sources should be sought beyond public funds, such as private health insurance receipts and direct cost recovery. This way, people with the means could access highly specialized interventions through an annual contribution of a few hundred USD per person.

However, tertiary hospitals also play important roles in research and training.

14.9.3 Departmental PBF subsidies within hospitals

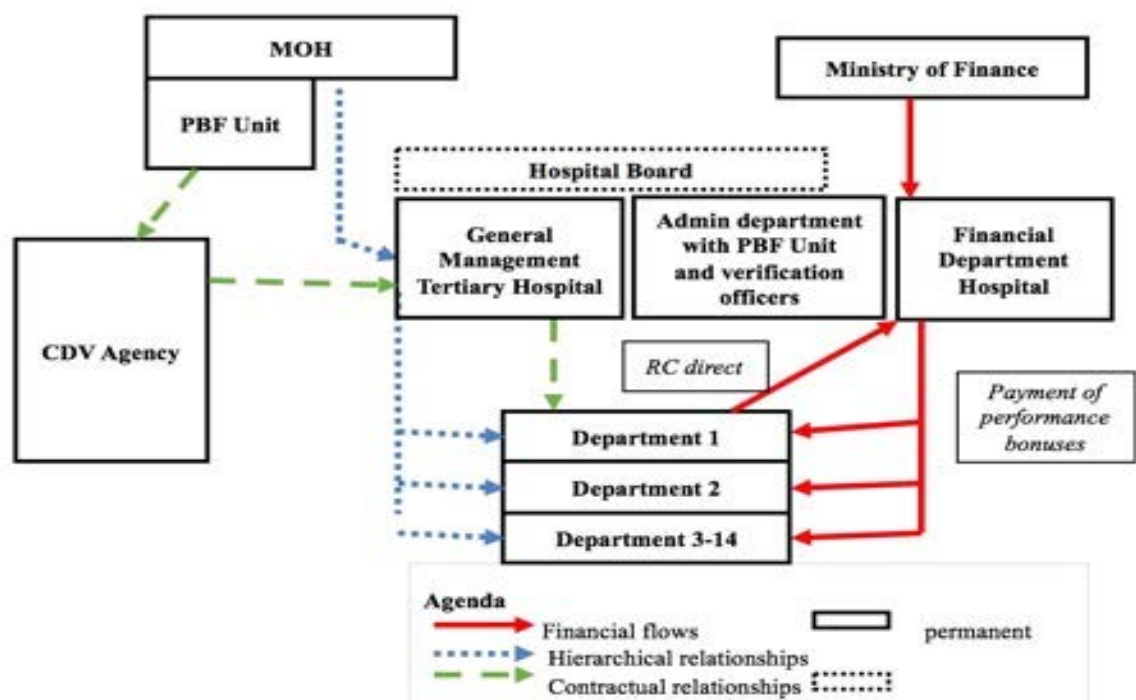
In line with the logic of the PBF system, hospital management can give internal subsidies to each department for the activities carried out. The subsidies will come first from revenues and, to some extent, from public money. For example, in the laboratory, the hospital's internal and variable PBF subsidies constitute 6% of revenues, direct cost recovery 88%, and fixed state operating subsidies 6%. In the table example, total revenue is CFAF 36.3 million per month.

LABORATORY REVENUES	Amount	%
SUBSIDIES PBF PAID BY GENRAL MANAGEMENT	F 2,275,200	6%
Contribution of the STATE (for operating expenses)	F 2,110,370	6%
Contribution of the STATE (for investment)		0%
COST RECOVERY REVENUES	F 31,943,119	88%
Other income		
Contribution from donors (Commune, Community, NGO, ...)		0%
Withdrawal from reserves / depreciation (funds withdrawn from the bank)		0%
TOTAL REVENUE	F 36,328,689	100%
LABORATORY EXPENSES	Amount	%
SALARY PAYMENT	F 9,994,622	28%
REAGENTS - MEDICINES - EXPENSES OPERATION	F 22,546,406	62%
Consumer Pharmacy + Office Supplies	F 310,158	
Purchase reagents	F 9,459,000	
Contribution for the general operation of the Hospital	F 12,777,248	35%
Other expenses		
INVESTMENTS:	F 78,583	0%
Increase in Sustainability Reserve (funds to be added to reserve)	F 2,033,814	6%
(A) SUB TOTAL EXPENSES	F 34,653,425	95%
Amount for Staff Bonus (= profit) (= TOTAL REVENUE –SUBTOTAL)	F 1,675,264	5%
(B) Total EXPENSES = TOTAL REVENUE	F 36,328,689	100%

Department managers first pay fixed wages and salaries, and medicines, equipment, etc. Next, the department contributes a proportion of its revenue to the hospital's general operating expenses. Thus, in the table example, FCFA 10 million (28%) is allocated to staff salaries; FCFA 9.7 million is used to purchase reagents, consume pharmacy supplies, and provide office supplies. The department allocates 35% of revenue to general operations. In addition, they can reserve a portion (for example, 6%) in the department's reserve. This ensures financial stability when revenue for a period decreases or in an emergency, e.g., rehabilitation or the purchase of major equipment.

The profit and the proportion reserved for performance bonuses are calculated as follows: all receipts minus other expenses, which is FCFA 1.7 million, representing 5% of total expenditures.

The following diagram illustrates the relationships between the FBP unit, the management, the departments, and the financial service of the HGOPY hospital.



14.9.4 Departments performance indicators

The hospital management treats the departments as black boxes. The hospital asks the departments for the following performance: (a) Cost-effective use of beds, diagnostic, and treatment capacity. Good utilization of the capacity increases the revenues for the hospital; (b) Good quality of care; (c) Good performance of the staff in terms of punctuality, team spirit, and technical competence; (d) Cost-sharing revenues generated.

14.9.5 List of quantitative indicators

A list of output indicators may be developed for each department. In a hospital with 15 departments, each department may have between 20 and 100 activities or indicators. Each indicator is given a PBF subsidy. For example, a simple laboratory test receives a subsidy of FCFA 300 and is assigned 1 point. A complex surgical procedure such as a mastectomy may be

given 200 points, corresponding to an internal PBF subsidy of $200 \times \text{FCFA } 300 = \text{FCFA } 60,000$. The direct cost recovery rates for the same activities do not match the PBF subsidies. For example, a subsidy of F 300 may have a tariff of FCFA 1500.

The hospital's PBF Unit can quantitatively verify the data using, for example, 10 verification officers from the hospital's general administrative department. Each verification officer may take a few days per month to complete verification.

The following table shows an example of laboratory output indicators. The department first declares the number of activities, and the PBF Unit's verification officers then validate it. If the error exceeds 10%, the PBF subsidy may be canceled.

LABORATORY SERVICE		The value of 1 point corresponds with 300 FCFA				
INDICATORS	QTE declared	QTE validated	% of error	Value indicator	Unit Price	Total Prix
SEROLOGY						
HIV	165	200	-17.5%	1	F 300	F 0
CRP	443	443	0	1	F 300	F 132,900
BACTERIOLOGY						
PCV	118	118	0	2	F 600	F 70,800
ECBU	110	110	0	2	F 600	F 66,000
LCR	51	51	0	2	F 600	F 30,600
HEMOCUTURE	93	93	0	2	F 600	F 55,800
SPERMOGRAM	6	6	0	2	F 600	F 3,600
BLOOD BANK						
Blood vouchers served and paid	288	288	0	3	F 900	F 259,200
Package of blood vouchers served	335	335	0	3	F 900	F 301,500
GS HR	8	8	0	3	F 900	F 7,200
HEMATOLOGY						
N.F.S	1019	1019	0	1	F 300	F 305,700
V.S.	60	60	0	1	F 300	F 18,000
BIOCHEMIE UNIT						
GL	215	215	0	1	F 300	F 64,500
Creatinine	66	66	0	1	F 300	F 19,800

14.9.6 Qualitative indicators

Peer evaluations by other tertiary hospitals verify quality.

14.10 Exercise: IBO Health centre

The monthly income of the IBO health centre in August 2016 was \$ 6878 The population in the catchment area is 20,000. Thus, revenue was \$4.13 per person per year. Curative services have improved since the introduction of PBF. However, the latest quality review by DHMT showed that FP, hygiene, and immunization services still need significant improvement through increasing the number of qualified female staff, strengthening health promotion, and improving cold-chain maintenance. The building is in poor condition, and the health facility has no permanent lighting.

Health Facility

May-17

Population

20,000

Income categories	Amount in \$ 1 USD =	Amount in FCFA 595	%	Analysis
Salaries paid directly by the government*	\$ 258	F 153,408	4%	Between 40-60% OK
Salaries paid by the health facility	\$ 1,612	F 959,004	23%	
PBF Subsidies	\$ 2,017	F 1,200,000	29%	
Cash donations by aid agencies	\$ 202	F 120,000	3%	
Other donations from gifts, etc				
Sub-Total external revenues	\$ 4,088	F 2,432,412	59%	Between 40-60% OK
Income from cost-sharing	\$ 2,521	F 1,500,000	37%	
Income for contracts with companies	\$ 168	F 100,000	2%	
Income generating activities (shops, etc)	\$ 101	F 60,000	1%	
Sub-Total internal revenues	\$ 2,790	F 1,660,000	41%	
Income by transfer from health facility account	\$ 0		0%	
Total income Health Facility:	\$ 6,878	F 4,092,412	100%	\$ 4.13
Target HF income (= \$ 7 per person catchment area / year):	\$ 11,667	F 6,941,667	58%	= target achievement

The health center currently has the following staff:

	Staff	Department	Category - increment	Responsibility bonus
1	Physician - in charge	General	A1 - 2/1	300
2	Senior Health Technician	OPD - In-patient	A2 - 1/3	200
3	Senior Technician - Laboratory	Lab	A2 - 1/3	120
5	Accountant	Admin	A3 - 3/1	120
6	Registered nurse - Midwife	Maternity	B1- 2/3	120
4	Registered nurse	OPD - In-patient	B1-2/3	
7	Cashier	General	D1 - 2/2	50
8	Health Assistant	Hospitalization	D1- 3/4	
9	Midwife Assistant	Maternity	D1-3/4	
10	Unqualified staff	Hospitalization	D2-3/3	
11	Unqualified staff	Maternity	D2-3/3	
12	Unqualified staff	OPD - In-patient	D2- trainee	

Exercise 1: Enter the salary indices values in column F of the Excel spreadsheet “BonusStaff”.

Find the value of the salary index by matching the category (A2, A1, B2, etc.) and the increments (2/1, 2/2, 3/4, etc.) of the staff members of the health centre in the "ExplanationSal" form of the

EXCEL document "Mod15GovtEMPTYIndiceHFMoyenV200517". Entering the value in column E of the base salary is automatically displayed, and with this procedure you have learned to use an EXCEL lookup table.

Exercise 2: Enter the points of responsibility in column K of the "PrimesPers" form.

Question 1: *Does the distribution of the Responsibility bonus seem reasonable?*

Exercise 3: Enter the above revenues (only the green fields) from the IBO Health Center in Excel sheet "Revenue & Expenses".

Question 2: *What is the proportion of revenues from the health facility's internal revenue?*

Question 3: *Is this proportion of internal revenue reasonable?*

Exercise 4: Enter overtime or hours not worked in the "BonusStaff" sheet. During the previous month, the doctor worked 1 extra hour during the day, the health assistant worked 10 hours overnight, and the registered nurse worked 5 hours a day. The cashier was absent for his brother's wedding and lost 20 hours of the day, while the Health Assistant was absent for 5 hours.

2	Overtime (columns G and I)	Formula
	Daytime Hours	Hours x Index Value / 100
	Overnight or weekend Hours	Hours x Index Value / 60
6	Hours lost (columns V and X)	Formula
	Hours LOST day	Hours x Index Value / 100
	Hours lost at night	Hours x Index Value / 60

Question 4: *Do you find this system reasonable? Give your opinion and suggestions.*

Exercise 5: There was strong evidence that the Health Assistant conducted private practice. As a result, the Human Resources Committee decided to reduce his bonus by 50% for not doing private practice. In addition, a patient phoned the hotline of the health facility with the complaint that the cashier asked him to pay more money than indicated on the price list of the health centre and he did not receive an invoice. The case was examined and confirmed. The committee decided that the cashier loses 100% of the bonus for NOT doing the private practice. The managers also decided to put a note in her confidential file.

Enter in column R (3b) for the Cashier 0%, for the Health Assistant 50%, and 100% for the rest of the staff. However, according to the protocol, the cashier also loses 100% of her performance bonus. Enter 100% in the AM column (8a) INDIVIDUAL Penalty.

Question 5: *Do you think that the "Non-private practice agreement" bonus and the "individual penalty" negative bonus are reasonable? Give your opinion and suggestions.*

Exercise 6: Supervisors of the District Executive Team conducted a Quality Review of the health centre, which produced a score per department with the following scores (column 5b). Enter the score in the U column of the "BonusStaff" sheet.

	Staff	Department	5b. Quality Score between 0% and 100%	6b. Individual Performance Score Between 0% and 100% (Average not more than 80%)
1	Physician - in charge	General	60%	80%
2	Senior Health Technician	OPD - In-patient	85%	50%
3	Senior Technician - Laboratory	Lab	45%	95%
5	Accountant	Admin	40%	100%
6	Registered nurse - Midwife	Maternity	80%	65%
4	Registered nurse	OPD - In-patient	85%	70%
7	Cashier	General	60%	0%
8	Health Assistant	Hospitalization	50%	90%
9	Midwife Assistant	Maternity	80%	90%
10	Unqualified staff	Hospitalization	50%	50%
11	Unqualified staff	Maternity	80%	90%
12	Unqualified staff	OPD - In-patient	85%	80%
			67%	72%

Question 6: Do you think this quality review system is reasonable? Is it acceptable to link the individual score to the department's overall score?

Exercise 7: Enter individual performance scores for all employees from the above table in column X (5b) from the "BonusStaff" spreadsheet

Question 7: Do you think the system is reasonable? Give your opinion and suggestions. What are the criteria and methods for evaluating staff performance that you would suggest?

Exercise 8: Enter the following expenses in the "Revenue and Expenses" worksheet.

Fixed salary allowances, taxes, social contributions: F 200,000. Operating costs: F 75,000. Drugs and equipment: F 650,000. Investment and amortization: F 350,000. Payments to sub-contractors: F 250,000; Social Marketing: F 225,000. Other expenditure: F 20,000. Increase in bank reserves: F 100,000.

Exercise 9: What is the total amount of performance bonuses (see cell D33), and what is the value of the monthly indices value per point (see C36)?

Exercise 10: Does the total amount of salaries and bonuses exceed 60%?

Exercise 11: What is the total monthly salary (= fixed salary + bonus) for the doctor in charge, the cashier, and the health assistant?

Question 8: Do you think these remunerations are reasonable? If not, what suggestions do you have?

Exercise 12: The IBO Health Centre has a reserve of F 2,000,000 (Reserve in Bank + Treasury + Stock Essential Drugs). Enter this amount in cell C38 in the sheet. "Revenues&Expenses". It corresponds to how many working days of operating expenses.

Question 9: Is the reserve of the facility sufficient?

Question 10: The following table lists the potential criteria for positive and negative incentives and their relative weights. Do you think the criteria and their weighting are valid? Are there any missing criteria?

Criteria for positive incentives	Points in this example	%	Formula for the calculation of the criterion
1. Responsibility bonus	910	12.6%	Per month: absolute value
2. TOTAL overtime hours' bonus	291	4.0%	Per hour daytime = Indices value / 100; Night weekend = Indices / 60
3. Bonus non-private practice agreement	1464	20.3%	Per month: Indices value / 5
4. Department Quality Bonus Score	1447	20.0%	Per month: Indices value / 3
5. Individual Performance Score Bonus	1593	22.1%	Per month: Indices value / 3
6. Bonus for Cost Recovery realised	1520	21.0%	Per month: Indices value / 4
TOTAL:	7225	100%	
Criteria for negative incentives		%	Formula
7. Points lost due to hours Lost	291	4%	Per hour daytime = Indices / 100; Night weekend = Indices value / 60
8. Points lost for individual penalty	278	4%	Per month: - 50% or - 100%

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

15. COSTING in PBF

Gyuri FRITSCHÉ – Robert SOETERS

Main messages of the module

- PBF costing helps articulate the budgets available for performance contracts with providers (including investments), CDV agencies, regulatory authorities, community-based organizations, and payment agencies.
- Well-implemented performance costing improves the efficient usage of public funds
- At least 70% of the total PBF budget should be reserved for health or educational services at the provider and community levels at the primary, secondary, and tertiary levels. Administrative costs for CDV agencies and regulatory authorities should not exceed 30% (and with good economies of scale, less than 20%).
- A basic PBF program may cost USD 4.00 per year per person. Yet, by adding more components such as targeting the vulnerable with demand-side incentives, community PBF & nutrition indicators, and infrastructure & equipment improvement, the cost may rise to USD 5.00 or USD 6.00.
- If governments propose generalized free health care for curative care such as for malaria, reproductive health, delivery care, children, and emergency care, the cost will be much higher than USD 6.00, since free health care indicators will need to be 'covered'. Such policies may also render the system inefficient and of poor quality, thereby making it counterproductive.

15.1 Introduction to costing in PBF

Traditional accounting and budgeting procedures have limitations. They are oriented toward checking paperwork, conducting tender procedures for purchasing inputs, and centralized salary administration. Costing, by contrast, aims to create a framework in which best practices and PBF instruments can be applied. It identifies and analyses the costs required to achieve pre-set social activities and, subsequently, the Sustainable Development Goals and Universal Health Coverage.

For this EXCEL sheets have been developed, in which each of the PBF costs (or cost drivers) is budgeted. These are linked to one summary sheet, allowing calculation of the financial consequences. If changes are made to one of the sub-sheets, the results in the total budget are immediately updated. Many budget lines in the sub-sheets are standard and based on experience in other PBF projects and countries. Therefore, less experienced PBF initiators may also conduct a PBF costing, analyze the likely cost implications, and negotiate changes with relevant stakeholders.

15.2 Seeking efficiency gains

The main components of a PBF program are the variable costs of subsidizing packages of activities at the primary and hospital levels. With a good setup of the PBF program, the subsidies for the two packages account for at least 70% of the PBF budget. If this is less than 70%, there is probably a problem with the program's setup.

The PBF approach, by funding outcomes in output or quality rather than inputs in the traditional approach, is much more "efficient" or "cost-effective". This is because, with this type of funding, the results have already been achieved; It is a refund a posteriori. When funding is ex ante for

wages, building construction, or the purchase of medicines, no quality outputs have been achieved yet, and it is uncertain whether the desired results will ever be achieved.

Further efficiency gains in PBF costing are potentially achieved by:

1. Selecting *health package indicators* with the highest effectiveness related to cost. For example, immunizing children has a lower cost to prevent a death or disability than for cardiac surgery interventions. Opportunity cost analysis may help by determining the value of the best alternative not chosen. The World Bank introduced opportunity cost analysis in the World Development Report 1993, along with the concept of Disability-Adjusted Life Years (DALYs). PBF has further refined the DALYs concept, and today most PBF projects include 30 to 40 cost-effective indicators or activities.
2. Selecting the most cost-effective *providers* in each country. Until a few years ago, governments tended to support only the public system and would build facilities even when private ones already existed. Today, public-private partnerships and the non-discrimination principle for the private sector are better embedded in most countries.
3. Select *optimal subsidy levels for each indicator*, accounting for facility revenues. This means national PBF Units review how increasing or reducing subsidies affects the desired outputs, compare these effects to the targets, and ensure quality standards are met.
4. Ensure that facilities also pay *performance bonuses to staff* to improve efficiency. This is done through the indices management instrument. The government subsidizes providers based on their results, while facility management motivates its staff through variable bonus payments.
5. *Economies of scale*. Assure that health centers, hospitals, and CDV agencies serve the optimum target population. For health centers, the target population is, on average, 10,000; for hospitals, 150,000; and for CDV agencies, between 700,000 and 2-3 million. If the latter, the regional CDV Agency must establish district CDV branches staffed with permanent personnel.
6. *Economies of scope*. Ensure the package is holistic rather than vertical. The full range of health center activities should be incentivized to avoid vertical packages such as only for reproductive health or HIV/AIDS.

Evidence suggests that applying the PBF approach and all the efficiency measures described above to project costing can yield efficiency gains of 4 to 10 times compared to input financing. PBF may achieve a remarkable impact on the Sustainable Development Goals with a budget of \$5.00-10.00 per person per year, while statements from the WHO suggest that achieving the SDGs with input costing requires at least \$34 per capita per year.

15.3 Overhead costs

The administrative costs of a PBF program are for strengthening regulatory activities and implementing CDV Agencies. Regulation costs ensure the quality of health facilities and pharmacies, map PBF catchment areas, and support coordination. CDV Agency costs cover contracting, verification, coaching, and contracts for local NGOs. These "administrative costs" are around \$0.75-\$1.25 per capita per year. However, the costs of carrying out patient surveys by local NGOs are not administrative costs; rather, they are an outcome that benefits the population directly through economic multiplier effects when money is injected into community groups.

15.4 Factors that increase or reduce the budget required for a PBF intervention

The PBF budget increases when the target population for the PBF intervention increases. Yet some costs are fixed, such as those for CDV agencies, and cannot be reduced in proportion to the population. CDV Agencies should therefore not serve populations smaller than 300,000 because the relative cost of putting a fully equipped and qualified team in place becomes too high. The budget for a fully-fledged PBF health program was \$3.00 per person per year, but with the introduction of targeting the vulnerable, nutrition indicators, and community PBF, USD 4.00 to USD 5.00 may be more realistic. This includes support for primary health center and hospital levels and may provide bonuses for disfavoured regions, health facilities, and vulnerable individuals. Therefore, a three-year project for one million people would require a PBF budget of at least \$12 million.

Factors that *increase* the budget are:

- Multi-sector PBF interventions such as for schooling and rural development. It may double the required budget to \$ 8-10 per capita per year;
- Poor condition of the infrastructure and equipment at the start. An additional budget of \$0.50 to \$1.00 per capita per year may then be planned to provide start-up subsidies for infrastructure.
- Non-availability of nationally qualified staff. If it is difficult to find qualified national staff, for example because PBF is new in each country, you may need to recruit international expertise.
- An intervention in a remote, sparsely populated area will increase the cost of output subsidies by 20-40%.
- Free health care or nominal user fees. This reduces health facility revenues from cost sharing. In the selective free health care system, such as in Burundi, it increases the budget by 30%.

Factors that *reduce* the required budget are:

- When facilities have other important revenues, for example from government fixed budgets for salaries, health insurance reimbursements, or cash contributions from aid agencies;
- Low cost of living. For example, a PBF project in Indonesia would be budgeted at a lower per capita cost in US\$ than in a high-cost-of-living country such as Nigeria.

15.5 The costing tool

1. A "proposal" sheet or a summary sheet that relates to links to other sub-sheets. This summary sheet allows you to examine the consequences of all changes made in the other sheets. The summary sheet presents the annual per-capita budget for the entire proposal, which should be at least \$4.00 per person per year. Suppose we have a three-year budget of \$1 million, but the scan shows that the annual budget available is only \$1.00 per capita, so either the duration of the intervention must be reduced or the target population must be reduced. If the budget is already set at a certain amount and you propose increasing one component, you must offset it with a reduction in another component.

The following table shows a proposal. All budget lines come from the other sheets. The total cost for a PBF target population of \$10 million in 2017 is \$4.25 per person per year. The proportional

cost of the budget that directly supports claimants and the population is 81.4%, comprising investment units for beneficiaries, beneficiary subsidies, community audits, and PBF program training.

	Catchment population		350.000				
	Costing for a PBF program (in Euro)		€ 1.921.423				
Budget Details		Budget Year one	Budget Year two	Total project period	Total	%	Per capita expenses
A		DIRECT COSTS					
1	Human Resources				€ 204.301	11,0%	\$ 0,39
1.1	Payment Agency	€ 13.333	€ 13.333	€ 26.665		1,4%	
1.2	CDV Agency	€ 71.818	€ 71.818	€ 143.636		7,7%	
1.3	Technical Assistance	€ 17.000	€ 17.000	€ 34.000		1,8%	
2	Investments				€ 138.511	7,4%	\$ 0,27
2.1	Investment Units	€ 23.702	€ 35.554	€ 59.256		3,2%	
2.2	Contract Development & Verification Agency	€ 31.702	€ 47.553	€ 79.255		4,2%	
3	Subsidies for health facilities, school and rural development				€ 1.283.948	68,8%	\$ 2,48
3.1	Subsidies Basic Health Package + equity & quality	€ 401.458	€ 473.304	€ 874.762		46,9%	\$ 1,69
3.2	Subsidies Hospital Package (+ vulnerable + quality)	€ 166.460	€ 221.986	€ 388.446		20,8%	\$ 0,75
3.3	Improvement of Education	€ 0	€ 0	€ 0		0,0%	\$ 0,00
3.3	Rural development	€ 10.370	€ 10.370	€ 20.740		1,1%	\$ 0,04
4	Regulation - quality assurance				€ 59.552	3,2%	\$ 0,11
4.1	District Health Management Team	€ 17.777	€ 17.777	€ 35.553		1,9%	
4.2	Regional Health Management team	€ 12.000	€ 12.000	€ 23.999		1,3%	
5	Community Verification by community based organisations				€ 46.931	2,5%	\$ 0,09
5.1	Verification & Satisfaction surveys	€ 23.466	€ 23.466	€ 46.931			
6	Running costs of purchasing agency				€ 76.662	4,1%	\$ 0,15
	All components	€ 38.331	€ 38.331	€ 76.662			
7	Training				€ 55.554	3,0%	\$ 0,11
	All components	€ 36.110	€ 19.444	€ 55.554			
				TOTAL:	€ 1.865.459	€ 1.865.459	100%
				INDIRECT COSTS = 3%:	€ 55.964	€ 55.964	
	TOTAL COSTS			€ 1.921.423	€ 1.921.423		\$ 3,71
				Proportional cost for direct support health system:	77,5%		
				Administrative or overhead costs:	22,5%		

Table: Example of summary sheet for the costing of a two-year PBF project.

The proposal sheet also automatically calculates the proportion of the budget that can be considered overheads or administrative costs, which should not exceed 30%. Overheads cover the necessary costs for purchasing agencies and technical assistance.

- The second sheet is the table of exchange rates for the currencies used in the program. EXCEL allows you to work with different currencies, and it takes only one cell to change the exchange rate; it will recalculate all the consequences. Often, the main currency is the currency used by the humanitarian organization, such as the US Dollar (World Bank) or the Euro (European Union).
- The third scaling sheet presents progress in the introduction of PBF in new districts in the next 4 years.
- The fourth sheet contains the equity bonus for health districts.
- Excel also has a sheet for the "minimum package of activities" and another for the "complementary package of activities", which contains activities at the primary and hospital levels. Subsidies for the primary and hospital levels constitute 70% of the total budget.

What information is needed for these two health package sheets?

- a) What indicators should be included in basic and hospital packages? This is often done by selecting from a list of standard output indicators produced by the World Bank, which contains about 50-60 indicators that have already been tested in several countries. A group of experts can then select indicators adapted to the specific needs of a given country or region.
- b) What is the subsidy for each indicator? First, choose the index indicator, usually the "new external consultation," with a value of 1 and, for example, a subsidy of \$0.20.
- c) The next step is to estimate the other subsidies in relation to the index indicator. For example, one can offer 20 times more value for a delivery than for an external consultation: $20 \times \$0.20 = \4.00 .
- d) If the value of index 1 increases from \$0.20 to \$0.30, all indicators will increase.
- e) What will be the bonus given by province and health facility? In Burundi, the difference between the lowest and highest base bonuses was proposed at 80% (the sum of the interprovincial bonus of 0-40%, plus an intra-province bonus or inter-structure bonus of 0-40%). Therefore, the average subsidy (the average between 0% and 80% is 40%), and the budget is calculated based on this consultation for an External Consultation of \$0.28.
- f) At the bottom of the spreadsheet, an additional bonus of 15-25% may be added to the total budget per quarter for all indicators as a quality premium.
- g) The following table shows the monthly subsidy budget needed if the PBF project reaches 100% of the target. However, cost estimates can be used to simulate the effectiveness of health structures.
- h) Calculation of subsidies for each indicator. This makes it possible to compare how reasonable the proportions seem. For example, only for new consultations, which is only one of the indicators, 22% of the budget may be needed.

2.1	Primary-level health facility package							
	Population growth per year:	2.5%						
	Population 3 counties 2020:	5,184,125						
	Quality bonus:	15%						
	Moyen bonus inter-et intra district (entre 0% et 80%):	40%						
	Indicators primary-level health facilities	Description of primary-level indicators	Target PBF Counties	Value indicator	Basic subsidy 0%	Average subsidy = +40%	Monthly costing, if achievement is 100%	Weight of each indicator
1,1	OPD consultation - nurse - fee paying	Population / 12 months x 80% nurse x 85% patient paying	293.767	1,0	\$ 0,35	\$ 0,49	\$ 143.946	6,9%
1,2	OPD consultation - medical doctor - fee paying	Pop / 12 months x 20% medical doctor x 85% patient paying	73.442	2,0	\$ 0,70	\$ 0,98	\$ 71.973	3,4%
1,3	OPD consultation - nurse - free health care	Population / 12 months x 1 OPD copnsultation nurse + doctor x 15% vulnerable	64.802	4,0	\$ 1,40	\$ 1,96	\$ 127.012	6,1%
2,1	In-patient days - fee paying	1000 inhabitants occupy at any time 0.5 hospital bed x 30 days to calculate the monthly target x 85% fee paying	66.098	2,0	\$ 0,70	\$ 0,98	\$ 64.776	3,1%
2,2	In-patient days - free health care	1000 inhabitants occupy at any time 0.5 hospital bed x 30 days to calculate the monthly target x 5% vulnerable	11.664	8,0	\$ 2,80	\$ 3,92	\$ 45.723	2,2%
3,1	Minor surgery	On average, 7% of the population requires minor surgery each year / 12 months x 90% at primary level - 85% patient payment	23.134	4,0	\$ 1,40	\$ 1,96	\$ 45.343	2,2%
3,2	Minor surgery - free health care	On average, 7% of the population requires minor surgery each year / 12 months x 90% at primary level - 15% free health care	4.082	16,0	\$ 5,60	\$ 7,84	\$ 32.003	1,5%
4,1	Referral of patient with feed back from hospital - fee paying	Population / 12 months x 1% of the population, who need a referral x 85%	3.672	3,0	\$ 1,05	\$ 1,47	\$ 5.398	0,3%
4,2	Referral of patient with feed back from hospital - free health care	Population / 12 months x 1% of the population, who need a referral x 15%	648	12,0	\$ 4,20	\$ 5,88	\$ 3.810	0,2%
6,1	Children under 1 year of age fully immunized	Population / 12 x 4% children 0-11 months	17.280	8,0	\$ 2,80	\$ 3,92	\$ 67.738	3,2%
7,1	Intermittent preventive treatment of malaria in pregnant women 1 or IPT2 or IPT3	Intermittent preventive treatment of malaria in pregnant women. Population x pregnant women = 4% / 12 months	17.280	2,0	\$ 0,70	\$ 0,98	\$ 16.934	0,8%
8,1	TT1 or TT2 or TT3 or TT4 or TT5	Prgnant women (4.5%) / 12 months TT 1, TT2 or TT3 or TT4 or TT5, on average 2 times	38.881	3,0	\$ 1,05	\$ 1,47	\$ 57.155	2,7%
9,1	VIT A distribution and deworming of children from 6 to 59 months	Children 6-59 months (= 16.5%) who receive Vit A - deworming / 12 months x 2	142.563	0,2	\$ 0,07	\$ 0,10	\$ 14.256	0,7%
10,1	ANC 1 or ANC 2 or ANC 4 or ANC 4	Pregnant women (= 4.5%) / 12 months, who go 4 times per pregnancy for an ANC - 90% primary level	69.986	2,0	\$ 0,70	\$ 0,98	\$ 68.586	3,3%
11,1	Normal deliveries	Population x 4% (= total deliveries per year) / 12 months - 80% at primary level x 70% normal	9.677	10,0	\$ 3,50	\$ 4,90	\$ 47.417	2,3%
12,1	Complicated delivery	Population x 4% (= total deliveries per year) / 12 months - 80% at primary level x 30% complicated	4.147	15,0	\$ 5,25	\$ 7,35	\$ 30.480	1,5%
13,1	Manual Vacuum Aspiration (MVA) after spontaneous abortion	All pregnancies (= 4.5% of the population per year) x 10% which ends in an abortion / 12 months x 50% which requires curettage x 70% at the first level	680	15,0	\$ 5,25	\$ 7,35	\$ 4.998	0,2%
14,1	Postnatal Consultation	After childbirth (= 4%) woman has 2 postnatal consultations - 80% primary level / 12 months	27.649	4,0	\$ 1,40	\$ 1,96	\$ 54.192	2,6%
15,1	FP: New or old acceptance for pills or injectable	Women reproductive age = 23% / 12 months x 15% of all women reproductive age who use pill or injectable (= target) x 4 contacts per year x 90% first level	53.656	8,0	\$ 2,80	\$ 3,92	\$ 210.332	10,0%
16,1	PF: Intra-Uterine Device or Implant	Women reproductive age = 23% / 12 months x 4% of all women reproductive age who apply the IUD or implant x 90% first level	3.577	15,0	\$ 5,25	\$ 7,35	\$ 26.291	1,3%
17,1	Voluntary counselling and testing for HIV / AIDS including pregnant women	Each year 10% of the population is voluntarily tested and counselled for HIV / AIDS and received the results (4.5% are pregnant women). 70% at primary level / 12 months.	30.241	5,0	\$ 1,75	\$ 2,45	\$ 74.090	3,5%
18,1	HIV+ pregnant woman put on ARV prophylaxis protocol	Pregnant women = 4.5% x 1% are tested for HIV + and receive ARVs / 12 months x 50% primary-level HF	97	40,0	\$ 14,00	\$ 19,60	\$ 1.901	0,1%
19,1	Treatment of new born baby from HIV+ mother	Newborns born to pregnant women (= 4% of the population per year) x 1% who are HIV + and require ARVs / 12 months x 50% primary-level HF	86	40,0	\$ 14,00	\$ 19,60	\$ 1.686	0,1%
20,1	New Acid-Fast Bacillus (AFB)+ Pulmonary TB patient	TB incidence = 150 / 100,000 screened positive with tuberculosis patient management (TPM) x 50% at primary-level / 12 months	324	20,0	\$ 7,00	\$ 9,80	\$ 3.175	0,2%
21,1	PTB case finished treatment cure	TB incidence = 150 / 100,000 x 50% at first level x 6 contacts per treatment of 6 months / 12 months	648	80,0	\$ 28,00	\$ 39,20	\$ 25.402	1,2%
25,1	Child 6-59 months treated for moderate acute malnutrition (MAM)	Children 6-59 months (= 16.5%) / 12 months - 6% require standard treatment for moderate acute malnutrition MAM x 6 visits	25.661	20,0	\$ 7,00	\$ 9,80	\$ 251.478	12,0%
26,1	Child 6-59 months treated for severe acute malnutrition (SAM)	Children 6-59 months (= 16.5%) / 12 months - 1% requires standard treatment for severe acute malnutrition (SAM) x 12 visits per year	8.554	40,0	\$ 14,00	\$ 19,60	\$ 167.658	8,0%
29,1	Quality Imprvmnt Bonus-prim-level	Population / 6,000 x 3 QIBs at primary-level health facilities	216		\$ 2000,00	\$ 2000,00	\$ 432.000	20,6%
	Sub-total						\$ 2.095.753	100,0%
	Quality bonus 15%					Quality bonus 15%	\$ 314.363	
	TOTAL					Maximum per month	\$ 2.410.116	

In the next table, we present the subsidy categories in which each health facility will be selected. Therefore, a facility in the most affluent province may obtain 0% bonus (= \$0.20 for an OPD consultation). To the contrary, the most disfavoured facility in a poor and isolated province and in an isolated area may receive a bonus of 80% (= \$0.28). Each province may be given a starting range of for example 0-50% in an affluent province and 40-50% in a poor province.

Different subsidies at primary level				Correction factor: -28%	Lowest subsidy wealthy province	Lowest subsidy slightly wealthy province	Lowest subsidy poor province	Lowest subsidy very poor province	Lowest subsidy very poor province with also other vulnerabilities				
Primary level activities			Average Subsidy in \$	Rounding factor	0%	10%	20%	30%	40%	50%	60%	70%	80%
1	OPD Consultation (new case)		\$ 0.28	0.02	\$ 0.20	\$ 0.22	\$ 0.24	\$ 0.26	\$ 0.28	\$ 0.30	\$ 0.32	\$ 0.34	\$ 0.36
2	OPD Consultation for vulnerable patient - 20%		\$ 0.56	0.02	\$ 0.40	\$ 0.44	\$ 0.48	\$ 0.52	\$ 0.56	\$ 0.60	\$ 0.64	\$ 0.68	\$ 0.72
3	In patient days (1 bed/1000)		\$ 0.56	0.02	\$ 0.40	\$ 0.44	\$ 0.48	\$ 0.52	\$ 0.56	\$ 0.60	\$ 0.64	\$ 0.68	\$ 0.72
4	In patient days for vulnerable patient (1 bed/1000) - 20%		\$ 0.84	0.02	\$ 0.60	\$ 0.66	\$ 0.72	\$ 0.78	\$ 0.84	\$ 0.90	\$ 0.96	\$ 1.02	\$ 1.08
5	Small surgery (including circumcision)		\$ 0.84	0.02	\$ 0.60	\$ 0.66	\$ 0.72	\$ 0.78	\$ 0.84	\$ 0.90	\$ 0.96	\$ 1.02	\$ 1.08
6	Small surgery (including circumcision) for vulnerable patient - 20%		\$ 1.68	0.1	\$ 1.20	\$ 1.30	\$ 1.40	\$ 1.60	\$ 1.70	\$ 1.80	\$ 1.90	\$ 2.00	\$ 2.20
7	Severe case referred arrived in hospital		\$ 1.40	0.1	\$ 1.00	\$ 1.10	\$ 1.20	\$ 1.30	\$ 1.40	\$ 1.50	\$ 1.60	\$ 1.70	\$ 1.80
8	Children fully immunized		\$ 1.40	0.1	\$ 1.00	\$ 1.10	\$ 1.20	\$ 1.30	\$ 1.40	\$ 1.50	\$ 1.60	\$ 1.70	\$ 1.80
9	Tetanus vaccination of pregnant woman		\$ 0.84	0.02	\$ 0.60	\$ 0.66	\$ 0.72	\$ 0.78	\$ 0.84	\$ 0.90	\$ 0.96	\$ 1.02	\$ 1.08
10	First ANC and standard visits 2-4		\$ 0.56	0.02	\$ 0.40	\$ 0.44	\$ 0.48	\$ 0.52	\$ 0.56	\$ 0.60	\$ 0.64	\$ 0.68	\$ 0.72
11	Postnatal care		\$ 0.56	0.02	\$ 0.40	\$ 0.44	\$ 0.48	\$ 0.52	\$ 0.56	\$ 0.60	\$ 0.64	\$ 0.68	\$ 0.72
12	Assisted delivery		\$ 5.60	0.25	\$ 4.00	\$ 4.50	\$ 4.75	\$ 5.25	\$ 5.50	\$ 6.00	\$ 6.50	\$ 6.75	\$ 7.25
13	PF: Total New and Follow up - oral & inj		\$ 2.24	0.1	\$ 1.60	\$ 1.80	\$ 1.90	\$ 2.10	\$ 2.20	\$ 2.40	\$ 2.60	\$ 2.70	\$ 2.90
14	PF: implant or IUD 2% per year		\$ 4.20	0.1	\$ 3.00	\$ 3.30	\$ 3.60	\$ 3.90	\$ 4.20	\$ 4.50	\$ 4.80	\$ 5.10	\$ 5.40
15	Curretage after spontaneous abortion or on medical indication		\$ 4.20	0.1	\$ 3.00	\$ 3.30	\$ 3.60	\$ 3.90	\$ 4.20	\$ 4.50	\$ 4.80	\$ 5.10	\$ 5.40
16	Distribution Vit A		\$ 0.04	0.01	\$ 0.03	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05
17	Distribution mosquito nets		\$ 1.12	0.1	\$ 0.80	\$ 0.90	\$ 1.00	\$ 1.00	\$ 1.10	\$ 1.20	\$ 1.30	\$ 1.40	\$ 1.40
18	Household inspection: (waste disposal, clean latrine - toilet, bednet used, access to water, FP use, vaccination status)		\$ 1.40	0.1	\$ 1.00	\$ 1.10	\$ 1.20	\$ 1.30	\$ 1.40	\$ 1.50	\$ 1.60	\$ 1.70	\$ 1.80
19	Voluntary Counseling & Test, PMTCT test		\$ 0.84	0.02	\$ 0.60	\$ 0.66	\$ 0.72	\$ 0.78	\$ 0.84	\$ 0.90	\$ 0.96	\$ 1.02	\$ 1.08
20	PMTCT: HIV+ mothers and children treated acc protocol		\$ 1.40	0.02	\$ 1.02	\$ 1.12	\$ 1.22	\$ 1.34	\$ 1.44	\$ 1.54	\$ 1.64	\$ 1.74	\$ 1.84
21	New AFB+ Pulmonary TB patient		\$ 14.00	0.5	\$ 10.00	\$ 11.00	\$ 12.00	\$ 13.00	\$ 14.00	\$ 15.00	\$ 16.00	\$ 17.00	\$ 18.00
22	Pulm TB patient completed treatment and cured		\$ 28.00	1	\$ 20.00	\$ 22.00	\$ 24.00	\$ 26.00	\$ 28.00	\$ 30.00	\$ 32.00	\$ 34.00	\$ 36.00

- Another sheet contains support for the function of regulation at the central level.
- Another sheet contains support for the function of regulation at regional and district level.
This can be divided by a per capita budget by province or health district based on criteria such as distance from the capital and health facilities, cost of living, number of Health Facilities to be supervised, and security. Usually, the rural provinces will receive a larger budget.
- The next sheet may contain indicators in other sectors such as education, water and sanitation and rural development.

15.6 Costing Exercise

Participants can manipulate the Costing software based on the following data:

Information

Target population for the PBF program: 850,000 inhabitants.

Using the EXCEL application of the "Proposal of the Budget" and the elements already filled, the participants practice changing certain parameters, observe the changes of the totals in the summary sheet "Proposal" where only the "population", "Period", targets, quantity and prices may be changed or supplemented by location. (Do not modify the formulas please)

- Study the scaling sheet and give feedback on how the worksheet works.
- Study the "indEquityDist" sheet and give feedback on how the worksheet works.
- Study the "2.1 PMA" sheet and give feedback on how the sheet works.

4. Study the "SubsPMAF" sheet and give feedback on how the worksheet works.
5. Study the sheet "2.2 PCA (Hosp)" and give feedback on how the sheet works.
6. Study the "SubsHosp" sheet and give feedback on how the sheet works.
7. Study the "1. CTN" sheet and give feedback on how the sheet works.
8. Review the "3. RegDistrSan" sheet and give feedback on how the worksheet works.

16. PBF IN EMERGENCY SITUATIONS

Main messages of the module

- During emergencies, local providers, health workers, or schoolteachers are more likely to achieve better results when they receive (financial) resources to respond to the crisis, rather than when external emergency organizations take ownership of the services.
- The national PBF Unit should develop emergency response plans based on standard FBP indicators (MPA and CPA), but during a public health crisis such as the Ebola epidemic, these plans should also include additional indicators for Ebola kits, isolation of suspected cases, etc.
- To finance FBP emergency interventions, the government and partners should allocate a pre-established budget. External emergency assistance is welcome but should focus on technical assistance, training, and coaching, and should avoid centralized, input-oriented interventions.
- In an emergency, health facilities, local health authorities, and regional contract development and contracting (CDV) agencies develop emergency business plans to address the crisis. These plans include :
 - a. Increasing the percentage of patients exempted from care at health facilities, for example, from 10% to 25%, 50%, or 100%, for which PBF subsidies will be paid;
 - b. Requesting one or more PBF quality improvement bonuses ranging from USD 750 to USD 5,000 (depending on the level).
- Local authorities, in collaboration with the regional contract development & verification agency and the health facilities, decide which health facilities will benefit from this emergency approach during district validation committee meetings.
- During a crisis, the government should aim to use accredited national public and private wholesale distributors that compete, from which providers buy their inputs, rather than relying on a single monopolistic central medical store.

16.1 Why a protocol on the role of PBF in emergencies?

The 2014-2015 Ebola epidemic that affected Liberia, Sierra Leone, and Guinea, as well as chronic humanitarian problems such as those in the DRC, CAR, Mali, Cameroon, or Nigeria, showed the need for systemic solutions and better preparedness. However, PBF emergency programs in the DRC, Central African Republic, Cameroon, and Mali have demonstrated that PBF can produce better results than traditional emergency approaches managed by technical and financial partners, which are oriented towards providing “inputs”. Better results can be achieved when local providers, whether health workers or schoolteachers, receive financial resources to *respond to a crisis immediately*, rather than relying on external inputs that often arrive with significant delays.

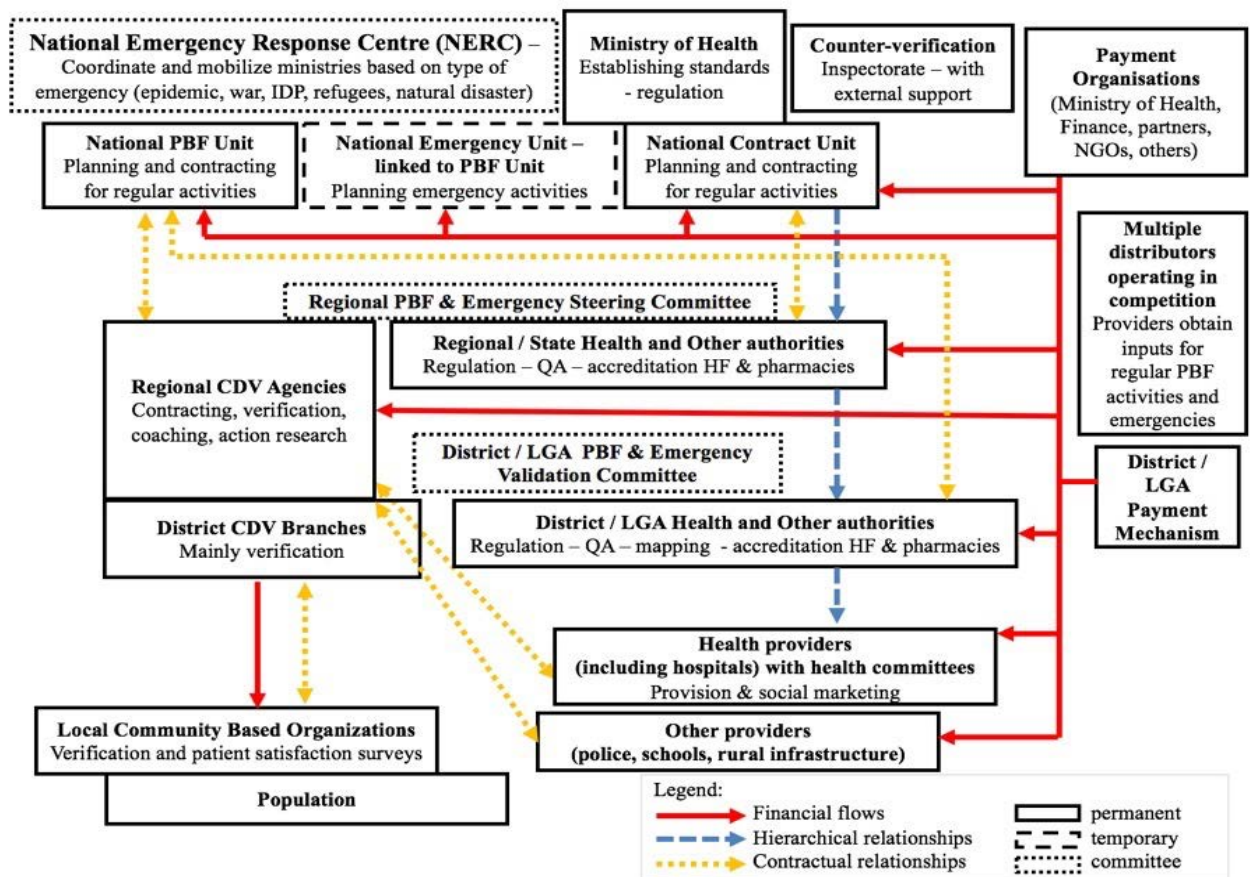
The district management team and the (regional) contract development and verification agency in PBF areas should have the authority to increase the number of QIBs and the number of vulnerable patients exempted to compensate for revenue losses resulting from the emergency and loss of income. The district FBP validation committee can make these decisions.

Therefore, to prepare for emergencies, service providers can include in their business plan the option to receive quality improvement bonuses (QIBs) to strengthen their infrastructure and equipment (for example, for an isolation or treatment center). They can request these QIBs during a crisis or, even better, before a potential crisis. To be ready in a crisis, this infrastructure must be built in advance so it can serve other purposes during non-emergency periods.

Each PBF principal contract holder (serving an average of 6,000 to 12,000 people) should therefore have an emergency preparedness plan. For this to work effectively, providers should also have access to competing distributors. This allows providers to obtain necessary supplies, such as Ebola kits, COVID-19 personal protective equipment, supplemental food, and routine supplies like essential medicines and equipment. The government should accredit wholesale distributors in both the public and private sectors and advise them on which medicines and equipment to stockpile in a crisis.

16.2 Role of stakeholders

The institutional set-up below was developed during the different PBF courses and adapted to Sierra Leone:



What are the roles of the various PBF actors during the response to an emergency such as Ebola? First, during emergencies, one should stay as close as possible to the *institutions already in place*, particularly if a PBF CDV Agency already exists. This saves time by avoiding new institutional setups or waiting for external response teams, which are also not sustainable after the crisis ends.

16.2.1 National PBF & emergency response unit (NPE unit)

In many countries, with or without performance-based financing (PBF), institutions such as national emergency response centers exist. If such a center wants to implement PBF and use PBF elements and contracts, it could develop the range of activities described below.

The output indicators for the National PBF & Emergency Response Unit (NPE) are closely linked to its monitoring work: these include field visits, meetings following a specific protocol and including follow-up on previous recommendations, and integrating new recommendations based on progress. A team comprising relevant ministries, partners, and other stakeholders involved in the Ebola response, or in any other emergency, could evaluate NPE members' performance to determine their compensation.

NATIONAL PBF & EMERGENCY UNIT FBP (NPE UNIT)		
COMPONENTS	ACTIVITIES	INDICATORS
Develop the national policies to integrate Ebola activities and other emergencies in the health system at all levels	▪ Ebola: As soon as there is an alert case confirmed, the National PBF & Emergency Unit (NPE Unit) is activated with multi-sector rapid response teams.	▪ NPE with clear ToR ▪ Telephone directory and list of available recruits
The NPE develops the distribution strategy for stakeholder inputs	▪ Preferably demand-driven by contracted providers with multiple distributors. The emergency program may then: (a) give quality improvement bonuses or (b) integrate the purchasing of inputs in the variable PBF subsidies. (c) increase the number of vulnerable patients who can be exempted from for example 15% to 50% ▪ If the supply-oriented strategy is necessary for the central distribution of "inputs" (for example for Ebola the KIT B "astronaut" KIT), it is indicated who is responsible for it.	▪ Distribution strategy available ▪ Inputs and budget available
The NPE is monitoring the emergency program	▪ The NERC conducts field visits with SMART Terms of Reference; ▪ The NERC organizes the evaluation and coordination of meetings and activities with partners	▪ Site visits conducted with SMART recommendations produced; ▪ Evaluation meetings organized.
NPE develops national case definitions, an emergency guide and a response action plan	▪ Develops definitions adapted to the country ▪ Develop a guide (with data sheets) about the emergency using standard international guidelines (WHO, PBF Toolkit ▪ Develop a response action plan	▪ Case definitions national guide online available ▪ Response action plan available
Ebola: Identify and equip checkpoints	▪ Map the control points (or cordons);	▪ Maps of checkpoints available
Ebola: Identify isolation or holding sites	▪ Determine the number of holding sites/locations in the country (without a crisis used for other aims)	▪ Maps of holding sites available
Ebola: Identify treatment centres	▪ Determine the number of treatment centres in the country (without a crisis used for other aims)	▪ Maps of treatment centres available

16.2.2 Payment agencies at national and/or regional level

The payment agency's principal task is to pay invoices sent to it after verification by the CDV agencies and a quick scan by the NPE Unit. The payment agency can be, for instance, the Ministry of Finance, a Fiduciary Agency, a partner organization, or an (inter) national NGO. It should be a financially competent agency, with its own internal auditing system. To function in the PBF system, these auditors should understand the PBF approach, which focuses on results rather than paper invoices, tendering procedures, etc.

16.2.3 Distributors of inputs

In the PBF system, the government and the NPE Unit negotiate with *distributors* from the public, private, and religious sectors on the quality and price of required inputs, such as essential drugs, equipment, protective gear, supplementary feeding, etc. The Ministry will accredit distributors that can prove their inputs comply with quality standards. Providers buy their inputs and, in an emergency, receive subsidies for new emergency-linked indicators or quality improvement bonuses.

16.2.4 PBF district validation committee (DVC) in case of emergency

The Terms of Reference for the PBF district validation committee in case of emergency are closely linked to monitoring implementation of the standard PBF program and to monitoring any emergency that has occurred in the district. This committee plays an important role in allocating Quality Improvement Bonuses to service providers.

The DVC comprises the district management team from the Ministry of Health and can invite any other relevant authority to address a given crisis. Within the PBF approach, the DVC works with the Contracting Development and Verification (CDV) Agency at the regional level and its district branches.

In emergencies, the DVC's own output indicators and performance payments are linked to its monitoring work. For example, they may conduct field visits and meetings according to a protocol, including following up on recommendations from prior visits and issuing new recommendations if expected results are not met quickly enough.

16.2.5 CDV Agency for PBF and emergencies

The regional CDV may serve a population of up to 2-3 million persons, provided it establishes branches in each district serving no more than 500,000 people. The Regional CDV has a fixed staff complement (related to the general PBF program) and should include at least a director, a deputy director (both preferably with a master's degree in public health or economics), and a PBF portal coordinator. The director mainly handles contract negotiations and external relations, while the deputy mainly coaches the different providers. The PBF portal coordinator, together with the verification officers, submits the invoices to the PBF portal for payment.

Regional CDV agencies may also have architects and/or engineers who verify the construction and rehabilitation of infrastructure and large equipment. District CDV branches will have offices with medical verification officers, community verification officers, and support staff, based on

around 1 medical verification officer per 125.000 people and 1 community verification officer per 250.000 people.

In case of emergencies, additional staff may need to be added.

REGIONAL CDV AGENCY		
COMPONENTS	ACTIVITIES	INDICATORS
Conduct regular tasks of a PBF CDV Agency	- The regional and district CDV Agencies continue their regular work to support the primary, hospital or school packages; - Capacity should be added to deal with an emergency such as political strife, epidemics, failed harvests, a large inflow of refugees, etc	- Regular PBF work continues - Emergency protocol and indicators are prepared
Stimulate the correct application of emergency activities	- Monitoring the allocation of Quality Improvement Bonuses (QIBs) to health facilities affected by natural or humanitarian crises - Monitoring the increase in the percentage of indigent, displaced persons, or refugees who benefit from the equity bonus to make services free for those affected by the crisis	- Number of BAQs equipped - Percentage of vulnerable people who benefit from free services

16.2.6 Health facilities in a human or natural emergency

Components	Health facility activities	Indicator
Quality Improvement Bonus – business plan, medications, equipment, consumables	Invest in equipment, medicines, consumables and personal protective equipment needed to prevent and treat the epidemic or respond to a natural or humanitarian crisis.	Payment of a quality improvement bonus based on: - A convincing business plan developed and verified by the district medical office and the CDV agency - Investments made, invoices from the health facility verified by the CDV agency and inputs received
Infrastructure Quality Improvement Bonus, furniture, means of transport	Carry out minor renovations, purchase furniture, means of transport	- Payment of a BAQ is based on: - Investments made, invoices from FOSA verified by the ACV, and inputs received - Infrastructure verified to be of good quality
Increase the number of patients who receive free health care from for example 15% to 50%	Health facilities identify and assist patients affected by the emergency	Number of patients treated free under the standard PBF indicators, such as OPD consultations, inpatient care, surgery, and referral to hospital

16.2.7 Health facility activities in an Ebola emergency

Health facilities can be paid during an Ebola emergency based on the following indicators.

Health Facilities		
COMPONENTS	ACTIVITIES	INDICATORS
Systematic tracing of suspected cases of ebola based on the standard definition of the disease.	▪ Active tracing of new cases in health facilities, at checkpoints or contact tracing in households. ▪ Making available sampling & tracing materials and individual protection gear in the health facility ▪ Knowing and applying the guiding principles of sampling, packaging, transporting and storing test materials taken from cases suspect of haemorrhagic fever, such as Ebola. ▪ Have available bottles and containers, which guarantee safe transport in triple packaging of test materials taken from cases in which Ebola is suspected.	▪ Days actively spent at check points (cordon) ▪ Number of contacts traced. ▪ Samples collected according to protocol
Quality: Basic hygienic measures	▪ Have basic anti-infectious medical (gloves, masks, blouses) and hygienic material (soap, alcohol, thermometers, etc) at HF. ▪ Apply proper risk management on the waste produced in health service delivery.	▪ HF equipped with protection materials. ▪ HF applies adequate waste management of biomedical materials.
Immediate identification of cases suspect for Ebola	▪ Follow suspicious cases or rumours ▪ Apply basic hygienic measures ▪ Communicate by telephone on suspect cases traced.	▪ Number of cases identified and verified using a questionnaire
Train health facility personnel	▪ Train health agents on the normal precautions for infectious disease prevention in the health facilities.	▪ Quality indicator (for training) identified
Availability of protective equipment	▪ Make sure that basic materials to control infections (such as gloves, masks, blouses) and hygiene products (soap, alcohol etc) are available in the facility.	▪ Quality indicators (for basic hygiene and protective gear) in place

16.2.8 Police in an Ebola emergency

The police take charge of the security around checkpoints, holding centres, and treatment centers.

16.2.9 Community in an Ebola emergency

The health facilities undertake the following community-based Ebola-related activities:

Community level Paid as Health Facility indicator		
COMPONENTS	ACTIVITIES	INDICATORS
Identification household visit teams	- Identify composition of teams, which may include a qualified health worker or social worker and CHWs. - Put under contract teams for household visits and transmit Ebola or other messages to the community according to a protocol.	Household visit teams identified
Ebola: Explanation and raise awareness around the Ebola alert system in the community.	- Identify suspected cases - Mass information campaigns in public places, on radio and television Messages: - Ebola is a very contagious disease. - A suspect case is a person with a high fever, sometimes accompanied by bleedings from all orifices (gums, eyes, nose, vagina etc) => if you see this: inform the staff of the health facility closest to where you are. - To avoid Ebola, wash hands with soap and javal water, before eating, while preparing food, before feeding children and after toilet, clean your children after going to the toilet. - Avoid contact with suspected cases. - Do not touch the linen, underwear or waste produced by anybody who is suspected to carry Ebola. - To disinfect the linen and some waste address yourself at the staff of the health facility, which is closest to you. - Do not touch or eat bush meat - Do not consume fruits at risk of being touched by wild animals - Ensure that sick persons and corpses are not hidden and that all suspected cases are reported to the staff of the health centre.	- Household visit completed - Number of radio and TV broadcasts - Nbr of billboards & advertisements installed - Nbr Ebola posters distributed
Rapid alerts on suspect cases of unexplained deaths, or sick people from abroad, especially cases of people with Ebola symptoms (fever, bleeding).	- Establish focal points in the villages or neighbourhoods to pass on any suspicion or sign of potential Ebola cases to the health authorities. - Focal points report promptly on any suspicion of the disease. - Sending a rapid intervention team to investigate the suspicion - Providing feedback to the focal points on the situation regarding the suspicions	- Focal points established - Suspect cases communicated - Rapid intervention team in place

17. EDUCATION SECTOR

Main messages of the module

- As of 2016, PBF in education has been tested and found successful in 6 countries.
- Educational PBF schemes work with 10-15 output indicators and 125 or more composite quality indicators.
- In low- and middle-income countries, primary schools are generally extremely underfunded. They lack motivated teachers and school materials. Most systems require increases by a factor of 3-4 in public and private funding (up to around USD 100 per pupil per year) to reach the minimum quality standards.
- In most 'free' educational systems, parents already pay substantially in user fees. Parent contributions to improving school quality should therefore not be excluded but openly included in the system's finances. For children from very vulnerable households (for example, 20% of the total), governments may provide extra funds so these children can be exempted from fees.

17.1 Introduction

The positive results of PBF in the health sector since the late 1990s also encouraged education projects to apply PBF since 2008. Education goals are linked to the Millennium Development Goals and the Education for All Goal of the Dakar Action Framework 2000. The assumption is that the theories and most of the best practices of PBF in the health sector are equally applicable to the education sector.

The first pilot PBF education program in 2008 started in Shabunda Territory in the DR of Congo in 104 primary schools. In this remote rainforest area, the project initiated a combined health, education, and rural development approach. By combining activities across sectors through one CDV Agency, the project could achieve better economies of scope. Moreover, reproductive health problems could not be solved without effective schools, while verification visits could not take place when roads and bridges were not accessible. The 2010 evaluation of this multi-sector pilot project showed favorable results. As a result, similar education programs began in 2011 in the Central African Republic (Bouar Prefecture), Cameroon (East Region), Burundi (Bubanza Province), and Malawi (Mangochi District).

Free education tends to produce poor-quality education and demotivated teachers because of low salaries of \$80-100 per month (Burundi, Malawi). Free education services block parents *with resources and willingness* to contribute (financially) to improve school standards.

PBF proposes a hierarchy in which *quality* comes first, *efficiency* second, and *equity* third. Adopting this hierarchy in education implies that schools must develop business plans that explain strategies to meet minimum government quality standards within a grace period of, for example, 1-2 years. Yet achieving national standards often requires schools to substantially increase revenues and staff. The government may contribute some of the required resources by increasing salaries and/or providing operational school budgets. The PBF program may cover about 20% of school revenues, while the remaining financial gap must come from parent contributions. This is less controversial when one considers that, in most theoretically free

education programs, substantial informal teacher fees already exist in practice. So PBF will simply formalize the informal school fees. Yet, when the PBF program encourages parents to contribute (voluntarily), for example, for extra lessons, it also needs a system to support pupils who are orphans or come from vulnerable families.

17.2 The PBF feasibility scan before starting an education program

When starting a new PBF education program, the first step is to conduct a *problem analysis and feasibility scan*, such as presented in module 9.

The following questions may be asked:

1. How much school revenue is generated per pupil?

What is the minimum cost per pupil in terms of money, human resources, equipment, and infrastructure to guarantee the minimum quality standards in a primary school? We estimated that, in Burundi, each primary school pupil must generate at least \$120 per year. Yet current revenue is only \$35 per pupil. In Malawi, these ratios are \$80 and \$28 per pupil per year, respectively. School revenues must triple to meet minimum standards.

2. How much informal teacher income is generated?

Teacher salaries in Malawi are around \$100 per month, which is below the level needed to sustain a family. Teachers must therefore generate additional income, such as through informal teaching. We estimate this at around \$80 per month. We postulate that the minimum remuneration (through increased salary + school-generated performance bonuses) may be around \$200-300 per month to motivate a teacher.

Example: Baseline monthly revenues and expenses in a primary school in Malawi

Exchange rate USD - Mkw:	425			
Nbr of students:	800			
Monthly School Revenues February 2019	FBU	USD	USD per Student	%
Staff salaries - govt	K 743.574	\$ 1.750	\$ 26,24	94%
Other Recurrent Transactions (ORT) - govt	K 50.000	\$ 118	\$ 1,76	6%
Council contributions	K 0	\$ 0	\$ 0,00	0%
External contributions aid agencies - etc	K 0	\$ 0	\$ 0,00	0%
PBF output - quality subsidies	K 0	\$ 0	\$ 0,00	0%
PBF investment Unit subsidies	K 0	\$ 0	\$ 0,00	0%
<i>Subtotal external revenues</i>	<i>K 793.574</i>	<i>\$ 1.867</i>	<i>\$ 28,01</i>	<i>100%</i>
Standards Parent Contributions	K 0	\$ 0	\$ 0,00	0%
Contributions for additional lessons	K 0	\$ 0	\$ 0,00	0%
Other Parent Contributions	K 0	\$ 0	\$ 0,00	0%
Other Income-Generating Activities	K 0	\$ 0	\$ 0,00	0%
<i>Subtotal internal revenues</i>	<i>K 0</i>	<i>\$ 0</i>	<i>\$ 0,00</i>	<i>0%</i>
TOTAL REVENUE	K 793.574	\$ 1.867	\$ 28,01	100%
Expenses		USD	USD per Student	%
Staff fixed salaries - government	K 743.574	\$ 1.750	\$ 26,24	94%
Operational Expenses -	K 25.000	\$ 59	\$ 0,88	3%
Investments	K 25.000	\$ 59	\$ 0,88	3%
<i>Subtotal expenses</i>	<i>K 793.574</i>	<i>\$ 1.867</i>	<i>\$ 28,01</i>	<i>100%</i>
Variable performance bonus	K 0	\$ 0	\$ 0,00	0%
TOTAL EXPENDITURE	K 793.574	\$ 1.867	\$ 28,01	100%

The above revenue of \$28.01 per pupil per year is not enough to provide quality education. Additional revenues may come from: (a) Increased government direct salaries; (b) Increased fixed school operational cash budgets from government or aid agencies; (c) PBF subsidies - this realistically will not exceed \$ 20 per pupil (\$ 4 per capita for the target population in the school catchment area); and (d) parent contributions.

To generate further income for the schools, which guarantees quality education to the children a new program may advocate that the government accepts that:

- Parents pay voluntary contributions for additional lessons for their pupils.
- However, for those children whose parents cannot afford to pay for the additional lessons, the PBF system could introduce a new indicator such as: "5 pupils from vulnerable families provided with two hours of additional lessons" and pay, for example, \$ 10 per session.

What would be desired? Monthly revenues and expenses in a primary school in Malawi:

Exchange rate USD - Mkw:	425			
Nbr of students:	800			
Monthly School Revenues February 2014	MK	USD	USD per Student	%
Staff salaries - govt	K 961.630	\$ 2.263	\$ 33,94	38%
Other Recurrent Transactions (ORT) - govt	K 400.000	\$ 941	\$ 14,12	16%
Council contributions	K 0	\$ 0	\$ 0,00	0%
External contributions aid agencies - etc	K 0	\$ 0	\$ 0,00	0%
PBF output - quality subsidies	K 500.000	\$ 1.176	\$ 17,65	20%
PBF investment Unit subsidies	K 200.000	\$ 471	\$ 7,06	8%
<i>Subtotal external revenues</i>	<i>K 2.061.630</i>	<i>\$ 4.851</i>	<i>\$ 72,76</i>	<i>80%</i>
Standard Parent Contributions	K 0	\$ 0	\$ 0,00	0%
Contributions for additional lessons	K 500.000	\$ 1.176	\$ 17,65	20%
Other Parent Contributions	K 0	\$ 0	\$ 0,00	0%
Other Income-Generating Activities	K 0	\$ 0	\$ 0,00	0%
<i>Subtotal internal revenues</i>	<i>K 500.000</i>	<i>\$ 1.176</i>	<i>\$ 17,65</i>	<i>20%</i>
TOTAL REVENUE	K 2.561.630	\$ 6.027	\$ 90,41	100%
Expenses	MK	USD	USD per Student	%
Staff fixed salaries - government	K 961.630	\$ 2.263	\$ 33,94	38%
Operational Expenses -	K 550.000	\$ 1.294	\$ 19,41	21%
Investments	K 500.000	\$ 1.176	\$ 17,65	20%
<i>Subtotal expenses</i>	<i>K 2.011.630</i>	<i>\$ 4.733</i>	<i>\$ 71,00</i>	<i>79%</i>
Variable performance bonus	K 550.000	\$ 1.294	\$ 19,41	21%
TOTAL EXPENDITURE	K 2.561.630	\$ 6.027	\$ 90,41	100%
Index value of the month	K 819	\$ 1,93		

17.3 Separation of functions in Education

In Education, we also apply the PBF principle of the separation of functions. We may identify the following functions

- The *regulatory function* by the Ministry of Education at all levels: national, provincial and subdivision;
- *Contract development and verification* performed by independent and credible organizations with competent human resources;
- *Payment*: An independent payment agency that pays the PBF invoices to the schools;
- *Provision*: Activities conducted by schools;

- *Strengthening the parent voice* through surveys that verify their satisfaction. Civil society conducts these surveys through local NGOs.

PBF subsidies

PBF subsidies may constitute around 20% of school revenues. Yet, PBF subsidies are like the oil in the (school) machine, stimulating the desired behavior of pupils and teachers. So, while PBF subsidies are a relatively small proportion of school revenues, they play a very important role.

The PBF subsidies may be given for the following components:

- Quantity payments for girls' and boys' schooling, with additional subsidies for a pupil from a vulnerable family;
- Quality bonus: The maximum could be 100% of the quantity PBF payments X the quality score of the school;
- Investment units for infrastructure and equipment.

How to calculate the maximum target population and number of pupils for a program?

For example, if the intervention has an annual budget of \$800.000 and we estimate administrative costs at \$200.000, then the target population can be set at: $\$600.000 / \text{USD } 20 = 30.000$ pupils. If we assume that primary school children constitute 20% of the target population, the target population may be estimated at 150.000.

Autonomy

Based on the important principle of autonomy, school management teams should have the:

- Right to use cash revenues;
- Freedom to generate additional parent revenues;
- Freedom to buy inputs

Choice of school output indicators

The following output indicators were selected for the Malawi school program.

Output Indicators verified by the CDV Agency	Pay-ment index	MKW per child per term	Nr pupils finishing term	MKW	Contribution / child / yr
Boys pre-school 3-5 years	120%	K 1,800	55	K 99,000	\$ 0.70
Boys Infant Standard 1-2	90%	K 1,350	140	K 189,000	\$ 1.34
Boys Junior Standard 3-4	110%	K 1,650	120	K 198,000	\$ 1.40
Boys Senior Standard 5-6	130%	K 1,950	90	K 175,500	\$ 1.25
Boys Senior Standard 7-8	150%	K 2,250	65	K 146,250	\$ 1.04
<i>Subtotal boys</i>			470	K 807,750	\$ 5.73
Girls pre-school 3-5 years	120%	K 1,800	45	K 81,000	\$ 0.57
Girls Infant Standard 1-2	90%	K 1,350	200	K 270,000	\$ 1.92
Girls Junior Standard 3-4	120%	K 1,800	140	K 252,000	\$ 1.79
Girls Senior Standard 5-6	150%	K 2,250	90	K 202,500	\$ 1.44
Girls Senior Standard 7-8	180%	K 2,700	50	K 135,000	\$ 0.96
<i>Subtotal girls</i>			525	K 940,500	\$ 6.67
Girls / boys extra lessons (K 50 per lesson) vulnerable parents - max 20% of all pupils		K 3,000	199	K 597,000	\$ 4.24
21st century skills lessons - reproductive health lessons - Standard 3-8 - parents & mothers groups 10 / term	111	K 1,000		K 111,000	\$ 0.79

Malus after drop out due to child pregnancy		-K 10,000	10	-K 100,000	-\$ 0.71
Grand Total			995	K 2,356,250	\$ 16.72

17.4 **PBF instruments: indices and business plan**

The indices EXCEL tool for the management of the schools analyzes school income, plans for essential expenses and calculates the performance bonuses of the teachers. It is like the health facility indices tool and assures transparency in the schools.

		Cate- gorie	Govt salary index	Gross Salary USD	1. Respon- sibility bonus	2. Points overtime	3. Points for lost hours	4. Points for extra lessons	5. Points for individual performance	Total Points	Indices value USD	Perfor- mance bonus USD	Salary + bonus USD
1	Head teacher	H2	710	\$ 289	50	5,1	-41	5	43	62	\$ 1,93	\$ 120	\$ 409
2	Deputy head teacher	I2	660	\$ 254	30	4,7	-5	5	26	61	\$ 1,93	\$ 118	\$ 372
3	Senior teacher	J3	610	\$ 179		4,4	-4	4	31	35	\$ 1,93	\$ 67	\$ 247
4	Teacher	K2	540	\$ 146		3,9	-31	4	43	20	\$ 1,93	\$ 39	\$ 185
5	Teacher	K2	540	\$ 146		38,6	-4	77	43	155	\$ 1,93	\$ 299	\$ 445
6	Teacher	K2	540	\$ 146		3,9	-39	4	43	12	\$ 1,93	\$ 24	\$ 170
7	Teacher	K2	540	\$ 146		3,9	-4	4	43	47	\$ 1,93	\$ 91	\$ 237
8	Teacher	K2	540	\$ 146		3,9	-4	4	38	42	\$ 1,93	\$ 80	\$ 226
9	Teacher	K2	540	\$ 146	20	3,9	-4	4	16	40	\$ 1,93	\$ 77	\$ 223
10	Teacher	K2	540	\$ 146		3,9	-4	4	32	36	\$ 1,93	\$ 70	\$ 216
11	Teacher	K2	540	\$ 146		3,9	-4	4	32	36	\$ 1,93	\$ 70	\$ 216
12	Teacher	K2	540	\$ 146		3,9	-4	4	54	58	\$ 1,93	\$ 112	\$ 258
13	Teacher	K2	540	\$ 146		3,9	-4	4	32	36	\$ 1,93	\$ 70	\$ 216
14	Administrative staff	O3	300	\$ 80	10	2,1	-2	2	18	30	\$ 1,93	\$ 58	\$ 138
	TOTAL			\$ 2.263	110	90	-152	128	496	671		\$ 1.294	\$ 3.557
				64%	16%	13%	-23%	19%	74%	100%		36%	100%

Business Plan

The Business Plan (BP) is a document in which the school plans its activities for each 3-4 months term. The plan provides strategies to achieve the goals and to improve the quality of teaching by referring to the national standards defined by the Ministry of Education. The planning is done by the school management and is negotiated with the authorities of the education district or division and the CDV Agency. For the first time, CDV Agencies may organise a one-week workshop during which the plan is developed.

Activities of the CDV Agency

- *Advocacy* for and explanation of what PBF is to relevant stakeholders
- *Contract development* with the schools (by manager and assistant manager)
- *School output verification* (by school verification officer). Payment will take place for a pupil present during one term when the pupil was enrolled; the pupil must finish the term and not be absent for more than 10 days.
- *Parent satisfaction survey* (organized through the community verification officer). This officer develops contracts with Community Based Organizations to capture an independent opinion of parents about the school's performance.
- *Infrastructure and equipment verification* (by an architect or engineer). This officer will assist schools with their infrastructure and equipment development plans and ensure any new plan complies with Ministry of Education standards. After finishing (part of) the construction, the CDV Agency may agree that the school is paid a quality improvement bonus of, for example, USD 2000.
- *Coaching of the schools* (all members of the team but mainly the assistant manager). This activity mainly involves helping schools develop their business plans and learning the indices management tool to distribute performance bonuses to teachers and other staff, such as class assistant teachers.
- *Organize at least one PBF workshop* per term, lasting around 2-3 days, with 2-3 key stakeholders from the schools. These workshops may aim to teach participants how to use the PBF tools. Another topic may be for schools to present their results so participants can study the lessons learned and mistakes made. The workshops should preferably take place outside the school curriculum;
- Organize monthly PBF district steering committee meetings with the district authorities, zone advisor, and a representative of the schools and the community-based organizations. This meeting is important to determine the monthly PBF payments to the schools. We suggest that each school receives a monthly advance that will be adjusted by the end of the term based on the performance of the schools in terms of outputs (1000), quality (2000-8000), and achievement in infrastructure improvements;
- Organizing the CBOs to conduct parent interviews.

Measuring the performance of the CDV Agency

A team from the Ministry of Education - PBF Unit and (if applicable) partner organizations will conduct a monitoring visit every term (3-4 months) to each CDV Agency. They will assess the CDV Agency's level of achievement and may reduce payments when certain activities did not take place or were of poor quality.

17.5.2 Terms of reference of the CDV Agency staff

The director of the CDV Agency

This could be a person with a master's degree and good management skills, as well as advocacy and conflict resolution skills. He or she is mainly based in the project area but may, for coordination, advocacy, and meeting attendance, spend 30% of working days in the capital or other locations.

The responsibilities are the following:

- *Overall responsibility for the achievement of PBF objectives and delegation of tasks* to the CDV Agency staff. This implies that the manager will plan the above activities and financial aspects of the PBF program;
- *Advocacy for PBF*. This means conducting advocacy at all levels, which requires a person with leadership talents who should not accept “no” as an answer. At the same time, this person should be diplomatic enough to prevent avoidable conflicts. Yet in PBF, conflicts are sometimes unavoidable. For more details, see Module 10 “conflict resolution”;
- *Checking the payment schedules*. Ensuring that the school and regulatory monthly invoices arrive in time at the relevant offices and not later than 4 weeks after the end of the month over which the invoices are paid;

TOR CDV Assistant Manager

Conducts at least 15 coaching visits per month in the schools and pre-schools. The officer may have a teaching background with a diploma-level qualification, a good understanding of the objectives and instruments of PBF, and a proactive approach.

The responsibilities of the Assistant Manager are the following:

- Replacing the CDV manager in case of absence;
- Coaching schools in mastering the business plans and the indices management tool;
- Assisting with the organization of workshops with the schools.

TOR school output verification officer

Conducts output verification in the schools (and pre-schools). The officer may have a teaching background, a good understanding of the objectives and instruments of PBF and be proactive.

The responsibilities of the School Verification Officer are the following:

- Verification of school registers and absenteeism lists of learners
- After verification, sign the invoice with the head teacher. For payment to take place, a pupil must be enrolled, finish the term, and not be absent for more than 10 days.
- Analyzing the invoice and submitting the invoice using the internet or cloud computing

TOR community verification officer

Organizes each term verification surveys in the catchment area of the schools with the parents of the pupils. The officer may have a community development background with a good understanding of the objectives and instruments of PBF and be proactive.

The content of the parent survey may be the following:

- Parent and mother group satisfaction surveys which cover topics such as the PTA meetings, the potential for assisting the school with school development and how school parent contributions are being used, extra lessons, with hygiene and infrastructure;
- The CBO questionnaire may contain a question about teacher behavior – sexual misconduct, corporal punishment, repeated absence of teachers;
- Problems with learner behavior such as bullying, verbal and sexual harassments
- The CBOs may also follow up on the reasons for dropouts;
- Satisfaction with pre-school caregiving, the demand and satisfaction with performance.

The responsibilities of the CBO officer are the following:

- Organizing the CBO surveys according to the schedule;
- Analyzing the data of the CBO survey in EXCEL or on the Internet or cloud computing. An iPad solution for conducting the survey is also being studied.

TOR infrastructure & equipment verification officer

The officer visits schools with infrastructure and equipment development plans and should be an architect or engineer who can interpret ministry guidelines, help schools develop their plans, and calculate required resources. A strong understanding of PBF objectives and instruments is an advantage, and the person should be proactive. The verification officer may preferably use a motorbike to visit the schools and can operate autonomously. The candidate should therefore have motorbike-driving skills and be willing to use the motorbike.

The responsibilities of the infrastructure officer are the following:

- Preparing, with schools, their infrastructure and equipment improvement plans
- Verification of the quality of the infrastructure and equipment
- The Payment Agency will forward a quality improvement bonus to schools based on work already completed, after verification by the CDV agency engineer.

17.6 Quality review questionnaire

The following table shows the total scores potentially available for each of the 20 groups of the quality review instrument. It is organized in groups 2000 to 8000. The group 1000 concerns the quantitative output indicators. However, the groups are weighted differently: “Activity Planning,” “Teacher and Pupil (or learner) performance,” and “Infrastructure and Equipment items” receive 46, 53, and 80 points, respectively. A much lower number of points was given to “headmaster supervision”, “school–community relationships” and “extra curriculum lessons”. If necessary, the group weights may be changed.

Groups	Description	Indicators	Points	
2000	Background information for activity planning	15	20	
2000	Record keeping for activity planning	6	8	
2000	Meetings for activity planning	5	13	
2000	Punctuality & absenteeism	3	5	46
3000	Head Master Supervision & Financial Implementation	6	9	9
5000	Teacher Performance – <i>Infant section</i>	6	11	
5000	Teacher Performance – <i>Junior section</i>	6	11	
5000	Teacher Performance – <i>Senior section</i>	6	11	
5000	Teacher Performance – <i>Pre-school / ECD</i>	5	10	
5000	Learner Performance	3	10	53
7000	School – community relationship	2	4	4
8000	Business plan	7	20	20
6000	School improvement, part time extra-curriculum lessons, standardized tests & other income generating activities	5	11	11
4000	Head master’s office	4	8	
4000	Staff room, store room and library	5	7	
4000	Class room	11	15	
4000	Pupils text books	16	18	
4000	Pupils exercise books & other	8	8	
4000	Hygiene & sanitation	6	12	
4000	Court yard, sports facilities & school boundary	8	12	80
	Nbr of INDICATORS & MAXIMUM SCORE	133	223	

ECD & PRIMARY SCHOOLS

Inspector's team explains the purpose of the visit. Asks that at least 1 teacher from ECD, infant, junior, and senior sections attend the session. Make available keys to the headmaster's room, storerooms, teachers' room and classrooms

Date: ... / ... / 201....	Name Inspector 1 :	Name Inspector 2 :
Educational District:	School: public / religious / private	Name School:
Population Catchment area: ...	How many ECD in area:	Area school: very poor / average / wealthy
MOE / MOG paid Teachers: ...	School paid Teachers:	Watchmen:
Cleaners:	Gardener:	School assistants:
Nbr learners ECD:	Nbr learners Infant section:	Nbr learners Junior section:
Nbr learners Senior section: ...	Name main respondent:	Telephone main respondent:

2000 Background information for activity planning		Protocol Respected	NOT Respected
Ratio's	Actual Nbr		
1. Teacher – learner ratio ECD section: <i>1 teacher per 25</i>		1	0
2. Teacher – learner ratio Infant section: <i>1 teacher per 48</i>		1	0
3. Teacher – learner ratio Junior section: <i>1 teacher per 48</i>		1	0
4. Teacher – learner ratio Senior section: <i>1 teacher per 48</i>		1	0
5. Security staff: <i>At least 2 per school</i>		1	0
6. Cleaners: <i>At least 2 per school</i>		1	0
7. Gardener: <i>At least 1 per school for maintaining the garden (flowers, grass), fence and terracing and school vegetable garden, poultry, other ..</i>		1	0
8. Assistant teachers - <i>At least 1 per class – has at least Junior Certificate Form 2</i> <i>a. Maintain punctuality and absenteeism registers</i> <i>b. Conduct home visits for absent pupils</i> <i>c. Assist with Morning Assembly</i> <i>d. Distribute textbooks and organise group work</i> <i>e. Serve food in feeding programme</i> <i>f. Assist with marking of exercises</i>		3	0
9. Map of school catchment area. <i>a. Map available and displayed in head teachers' office;</i> <i>b. Map shows villages, main roads, natural barriers, special points and distances;</i> <i>c. Shows total population and per village.</i>		1	0
10. School feeding program is in place <i>If yes: WFP / WFP / Another donor / Effective home-grown school feeding program</i>		1	0
11. Feeding programme does not interfere with teaching & learning programme <i>a.</i> <i>If not sure check lesson plan Master Timetable with teachers' lesson plan</i>		1	0
12. Male teachers well dressed. <i>a. Long or short clean sleeves, polished shoes, no jeans, no slippers</i>		1	0
13. Female teachers well dressed. <i>a. No bare backs, flashing & slippers. Dress does not show armpits and over knees</i>		1	0
14. School has electricity <i>a. On grid, or solar able to power computers and allow evening classes</i>		2	0
15. School has computers <i>a. School has at least 3 computers for schedule and record of work, lessons plans</i>		3	0
TOTAL		20	....

2000 Record keeping for activity planning	Protocol Respected	NOT Respected
1. Effective school record keeping. <i>a. Documents in cupboard, well stored or in box files – accessible within 10 minutes</i> <i>b. At least available: Business plan, Calendar of events for term, minutes of SMC-, PTA & Mother group meetings, Logbook, Time book</i>	2	0
2. Calendar of Ministry of Education displayed <i>a. School has MOE calendar displayed in headmaster's office</i>	1	0
3. Master Timetable displayed. <i>a. Current weekly master timetable contains subjects offered per class;</i> <i>b. Shows responsible teachers;</i> <i>c. Displayed at head teacher's office and / or staff room</i>	1	0
4. Primary School Calendar of Events for the term. Calendar reflects at least: <i>a. Examination days, Sport events, School management-, PTA and staff meetings;</i> <i>b. Mother support group, learner's council's meetings;</i> <i>c. Business plan meetings & indices management including determination of performance bonuses;</i> <i>d. Days of submission for teacher's scheme and records of work.</i>	1	0
5. Time book updated <i>a. Head teacher and / or deputy head teacher verifies presence of teachers in class;</i> <i>b. Time book contains names of teachers, arrival time and departure</i> <i>c. Time book is signed by teachers;</i> <i>d. Absent teachers are recorded in logbook and indicate the measure that was taken</i>	1	0
6. ECD calendar of events for the term. Calendar reflects at least: <i>a. Sport events, School management-, PTA and staff meetings;</i> <i>b. Parent groups meetings;</i> <i>c. Business plan meetings & indices management including determination of performance bonuses.</i> <i>d. Days of submission for teacher's scheme and records of work.</i>	1	0
TOTAL	7	....

2000. Meetings for activity planning	Protocol Respected	NOT Respected
1. School Management Committee (SMC) operational: <i>a. Members were elected or re-elected at PTA level not more than 2 years ago;</i> <i>b. At least three meetings per term were conducted (during last 3-4 months);</i> <i>c. Minutes of last meeting are accessible within 10 minutes;</i> <i>d. At least 70% of 10 members were present during last meeting;</i> <i>e. Minutes explain how recommendations of previous meeting were acted upon and of which there is evidence;</i> <i>f. Minutes contain new recommendations.</i>	3	0
2. ECD school management sub-committee effective: <i>a. Members were elected or re-elected at PTA level not more than 2 years ago;</i> <i>b. At least three meetings per term were conducted (during last 3-4 months);</i> <i>c. Minutes of last meeting are accessible within 10 minutes;</i> <i>d. At least 70% of the 10 members were present during last meeting;</i> <i>e. Minutes explain how recommendations of previous meeting were acted upon and of which there is evidence;</i> <i>f. Minutes contain new recommendations.</i>	2	0

2000. Meetings for activity planning	Protocol Respected	NOT Respected
3. Staff Meetings operational: <i>a. At least three meetings per term were conducted;</i> <i>b. Minutes of last meeting are accessible within 10 minutes;</i> <i>c. At least 70% of teachers were present;</i> <i>d. Minutes of last meeting explain how recommendations of previous meeting were acted upon and of which there is evidence;</i> <i>e. Minutes contain new recommendations.</i>	3	0
4. ECD Staff meetings operational: <i>a. At least three meetings per term were conducted;</i> <i>b. Minutes of last meeting are accessible within 10 minutes;</i> <i>c. At least 70% of teachers were present;</i> <i>d. Minutes of last meeting explain how recommendations of previous meeting were acted upon and of which there is evidence;</i> <i>e. Minutes contain new recommendations.</i>	2	0
5. Parent Teacher Association Meeting (for primary and ECD): <i>a. At least two meetings per term;</i> <i>b. Minutes of last meeting are accessible within 10 minutes;</i> <i>c. Minutes follow format with at least number of parents present, reporting back on previous proposals and recommendations and parent contributions</i> <i>d. Quorum is 25% of the total number of learners enrolled;</i> <i>e. Parents were informed about activities during the term and included explanations about parent contribution mechanism;</i> <i>f. Meeting produced recommendations.</i>	3	0
TOTAL	13	

2000 Punctuality and Absenteeism	Protocol Respected	NOT Respected
1. Headmaster learner discipline. <i>a. School has a list of rules, regulations and corrective measures;</i> <i>b. School has a headmaster's discipline file & punishment book;</i> <i>c. Discipline file & punishment book contains description of offenses and actions taken (counselling, rustication, suspension, internal punishment, exclusion).</i> <i>d. Should contain at least 4 cases per month</i>	1	0
2. Learner punctuality and absenteeism monitored by class assistant teacher. <i>a. Each class has a daily attendance register for monitoring learner punctuality and absenteeism;</i> <i>b. Punctuality is checked at early morning time and after break according to school timetable;</i> <i>c. Class assistant maintains the list</i> <i>d. Person responsible will produce after break time a list of learners absent for the day and distinguish between explained and non-explained absenteeism;</i>	2	0
3. Effective follow-up on learner punctuality & absenteeism. <i>a. Learners with non-justified absenteeism and repeated late coming will be counselled by teachers and given small punishments such as staying longer to finish assignments, cleaning, other;</i> <i>b. Learners absent more than a week visited at home by class assistant teacher.</i> <i>c. Effective follow-up will be monitored from punctuality & absenteeism book</i>	2	0
TOTAL	5	

3000 Headmaster Supervision & Financial Implementation	Protocol Respected	NOT Respected
1. Checklist of schemes and records of work available. a. Head teacher and / or deputy head teacher verifies schemes and records of work every 14 days b. Checklist of schemes and records of work is displayed in head teacher's office	1	0
2. Staff responsibilities list displayed a. Contains main duty each teacher and name	1	0
3. Check list of lesson plans submission a. Section heads (ECD, infant, junior, senior) verify lesson plans of teachers; b. Checklist of lesson plans is kept in file.	1	0
4. Financial analysis through indices management tool a. Document available to show that monthly calculation of incomes, current expenditures, investments and variable performance bonuses are done b. Document presents the current school expenditures: = Fixed remunerations, purchase of books, stationery, equipment, ECD subcontracts, petty cash for small expenditures, maintenance and rehabilitation. c. School calculates the teacher performance bonus according to the formula: $\text{performance bonuses} = \text{income of the month} - \text{current school expenditures}$	3	0
5. Monthly performance bonus system is known by staff - Established criteria for the performance bonus calculation through: $\text{Responsibility} + \text{Overtime hours} - \text{Hours lost} + \text{Extra lessons given}$	3	0
TOTAL	9	

5000 Teacher Performance – Infant section (interview selected teacher)	Protocol Respected	NOT Respected
1. Infant section teachers are available for teaching: a. School has list of MoE & school employed teachers accessible < 10 minutes; b. At least 80% of teacher's infant section available for teaching at day inspection; c. Inspector will verify the presence of at least 1 teacher from the presence list of the school chosen from infant section (= std 1-2)	2	0
2. Infant section. Preparation for teaching (= "What"): "Scheme of work" a. Inspector calls randomly a teacher to check scheme of work; b. Teacher presents scheme and record of work for each subject for term with date stamp of head teacher; c. Teacher presents MoE teaching syllabus; d. Teacher presents scheme of work in standard 1 and 2; e. Teacher presents schemes of work for all subjects (Chichewa, English, Mathematics, Expressive Arts with sports & dancing, Religious Education, Orientation to school life Std 1 term 1)	2	0
3. Infant section. Evaluation of teaching – Records of work = "Outcome" a. Record of work contains at least 1 success and 1 challenge; b. Record of work includes follow-up done to recommendations of previous week; c. Last week's record of work contains at least 1 new realistic recommendation.	2	0
4. Infant section. Lesson Planning = "How" to teach a. Lessons plans of randomly chosen day of last week: b. Inspector checks that teacher has Teacher's Guide c. Lesson plan indicates which standard, subject, time allocation and topic; d. Success criteria for topic; e. Required teaching and learning resources; f. Teacher and learner activities – methodology	1	0
5. Infant Section: Quality of lesson plan	2	0

5000 Teacher Performance – Infant section (interview selected teacher)	Protocol Respected	NOT Respected
a. Inspector checks 2 subjects Lesson Plan and verifies quality with Teacher Guide b. Inspector checks that Lesson Plan is in accordance with Master Timetable		
6. Infant section. Learner punctuality & absenteeism. Learner punctuality and presence of at least 90% at early morning time as a proportion of all learners enrolled at class.	2	0
TOTAL INFANT SECTION	11	

5000 Teacher Performance – Junior section (interview selected teacher)	Protocol Respected	NOT Respected
1. Junior section teachers are available for teaching: a. School has list of MoE & school employed teachers accessible < 10 minutes; b. At least 80% of teacher's junior section available for teaching at day inspection; Inspector will verify the presence of at least 1 teacher from the presence list of the school chosen from junior section (= std 3-4)	2	0
2. Junior section. Preparation for teaching (= "What"): "Scheme of work" a. Inspector calls randomly a teacher to check scheme and records of work; b. Teacher presents scheme of work for each subject with date stamp head teacher; c. Teacher presents MoE teaching syllabus d. Teacher presents schemes of work for all subjects (Chichewa, English, Mathematics, Expressive Arts with sports & dancing, Life Skills, Social & Environmental Sciences, Agriculture Science & Technology, Religious Education)	2	0
3. Junior section. Evaluation of teaching – Records of work = "Outcome" a. Record of work contains at least 1 success and 1 challenge; b. Record of work includes follow-up done to recommendations of previous week; c. Last week's record of work contains at least 1 new realistic recommendation	2	0
4. Junior section. Effective Lesson Planning = "How" to teach a. Lessons plans of randomly chosen day of last week; b. Inspector checks that teacher has Teacher's Guide c. Lesson plan indicates which standard, subject, time allocation and topic; d. Success criteria for topic; e. Required teaching and learning resources; f. Teacher and learner activities – methodology	1	0
5. Junior section. Quality of lesson plan a. Inspector checks 2 subjects Lesson Plan and verifies quality with Teacher Guide b. Inspector checks that Lesson Plan is in accordance with Master Timetable	2	0
6. Junior section. Learner punctuality & absenteeism. Learner punctuality and presence of at least 90% at early morning time as a proportion of all learners enrolled at the class.	2	0
TOTAL JUNIOR SECTION	11	

5000 Teacher Performance – Senior section (interview selected teacher)	Protocol Respected	NOT Respected
1. Senior section teachers are available for teaching: <i>a. School has list of MoE & school employed teachers accessible < 10 minutes;</i> <i>c. At least 80% of teacher's senior section available for teaching at day inspection; Inspector will verify the presence of at least 1 teacher from the presence list of the school chosen from senior section (= std 5-8)</i>	2	0
2. Senior section. Preparation for teaching (= “What”): “Scheme of work” <i>a. Inspector calls randomly a teacher to check scheme and records of work;</i> <i>b. Teacher presents scheme of work for each subject with date stamp head teacher;</i> <i>c. Teacher presents MoE teaching syllabus</i> <i>d. Teacher presents scheme of work for subjects (Chichewa, English, Mathematics, Expressive Arts with sports & dancing, Life Skills, Social & Environmental Sciences, Agriculture Science & Technology, Religious Education)</i>	2	0
3. Senior section. Effective evaluation – Records of work = “Outcome” <i>a. Record of work contains at least 1 success and 1 challenge;</i> <i>b. Record of work includes follow-up done to recommendations of previous week;</i> <i>c. Last week's record of work contains at least 1 new realistic recommendation</i>	2	0
4. Senior section. Effective Lesson Planning = “How” to teach <i>a. Check lesson plans of randomly chosen day of last week;</i> <i>b. Inspector checks that teacher has Teacher's Guide</i> <i>c. Lesson plan indicates which standard, subject, time allocation and topic;</i> <i>d. Success criteria for topic;</i> <i>e. Required teaching and learning resources;</i> <i>f. Teacher and learner activities – methodology</i>	1	0
5. Senior section. Quality of lesson plan <i>a. Inspector checks 2 subjects Lesson Plan and verifies quality with Teacher Guide</i> <i>b. Inspector checks that Lesson Plan is in accordance with Master Timetable</i>	2	0
6. Senior section. Learner punctuality & absenteeism. <i>Learner punctuality and presence of at least 90% at early morning time as a proportion of all learners enrolled at the class.</i>	2	0
TOTAL SENIOR SECTION	11	

5000 Teacher Performance Interviews – Pre-school / ECD	Protocol Respected	NOT Respected
1. ECD care givers are available for teaching: <i>a. School has list of employed caregivers accessible within 10 minutes;</i> <i>b. At least 70% of caregivers are available for teaching at the day of inspection;</i> <i>c. Inspector will verify the presence of at least 1 caregiver from the presence list of the pre-school</i>	2	0
2. Pre-School Section. Preparation teaching (= “What”): “Scheme of work” <i>a. Inspector calls randomly a caregiver to check scheme of work;</i> <i>b. Caregiver presents scheme and records of work for each subject for term;</i> <i>c. Caregiver presents ECD syllabus</i> <i>d. Caregiver presents schemes of work for 3-year-olds, 4-year-olds and 5-year-olds</i>	2	0
3. Pre-School section. Effective evaluation – Records of work = “Outcome” <i>e. Record of work contains at least 1 success and 1 challenge;</i> <i>f. Record of work includes follow-up done to recommendations of previous week;</i> <i>g. Last week's record of work contains at least 1 new realistic recommendation</i>	2	0
4. Pre-School section. Effective Lesson Planning = “How” to teach <i>a. Check lesson plans of randomly chosen day of last week;</i> <i>b. Inspector checks that caregiver has Caregiver's Guide</i> <i>c. Lesson plan indicates which standard, subject, time allocation and topic;</i> <i>d. Success criteria for topic;</i>	2	0

5000 Teacher Performance Interviews – Pre-school / ECD	Protocol Respected	NOT Respected
e. <i>Required teaching and learning resources;</i> f. <i>Teacher and learner activities – methodology</i>		
5. Pre-school section. Quality of the lesson plan a. <i>Inspector checks 2 subjects Lesson Plan & verifies quality with Caregiver Guide</i> b. <i>Inspector checks that Lesson Plan is in accordance with Master Timetable</i>	2	0
TOTAL	10	

5000 Learner performance	Protocol Respected	NOT Respected
Infant section <i>At least 80% of enrolled learners in standard 2 write exam and pass</i>	1	0
Junior section <i>At least 80% of enrolled learners in standard 4 write exam and pass</i>	3	0
Senior section <i>At least 80% of enrolled learners in standard 8 write exam and pass</i>	6	0
TOTAL	10	

7000 School community relationships	Protocol Respected	NOT Respected
1. Feedback from CBOs communicated to schools and acted upon	1	0
2. Mother group effective: a. <i>At least three meetings per term;</i> b. <i>Minutes of last meeting are accessible within 10 minutes;</i> c. <i>At least 50% of members were present;</i> d. <i>Mother group involved in development of term school business plan including in resource mobilisation for voluntary extra lessons;</i> e. <i>Minutes explain how recommendations of previous meeting were acted upon and of which there is evidence;</i> f. <i>Minutes contain new recommendations.</i>	3	0
TOTAL	4	

8000 Business plan	Protocol Respected	NOT Respected
1. Knowledge about current revenues. a. <i>School management knows their current cash budget per pupil per year</i>	1	0
2. Effective plan for generation of revenues. a. <i>School management has a plan to increase revenues to achieve MK 30.000 per pupil per year within 2 years;</i> b. <i>Business plan indicates sources of planned revenues (government budget lines, PBF subsidies, parent contribution, extra lessons, exam fees, aid agencies, donations);</i> c. <i>Business plan explains strategies to increase revenues</i>	5	0
3. Effective teacher human resource management plan. a. <i>School management has a plan to achieve the standard of 1 available teacher per 48 pupils within 2 years;</i> b. <i>Business plan indicates how additional teachers will be recruited;</i> c. <i>Business plan explains how school will offer a motivating environment for teachers (housing, school infrastructure).</i>	5	0
4. Effective support staffs plan. a. <i>Plan for security staff, cleaners, gardener and class assistant teachers</i>	2	0

8000 Business plan	Protocol Respected	NOT Respected
<i>b. Plan should explain remuneration strategy such as using volunteers, small incentives, fixed remuneration, performance-based bonuses</i>		
5. Teacher motivation plan. <i>a. School management has a plan to increase the teacher performance bonuses to on average at least MK 40.000;</i> <i>b. School applies indices tool;</i> <i>c. Business plan shows the criteria for calculating the performance bonuses;</i> <i>d. Business plan explains how the school will distribute the performance bonus in a transparent fashion such as through a committee.</i>	3	0
6. Infrastructure development plan. <i>a. School has an infrastructure development plan;</i> <i>b. Plan uses Ministry infrastructure standards;</i> <i>c. Plan proposes rehabilitation activities to be implemented for next school term;</i> <i>d. Plan explains funding sources for rehabilitation (PBF investment units, own school resources, donations, community contributions or aid agencies.</i>	2	0
7. Equipment, furniture & school materials improvement plan. <i>a. School has an equipment & furniture development plan;</i> <i>b. Plan uses Ministry equipment, furniture & school materials standards;</i> <i>c. Plan proposes which equipment, furniture & school materials to buy next term;</i> <i>d. Plan explains the funding sources for equipment, furniture and school materials such as PBF investment units, own school resources, donations, community contributions or aid agencies.</i>	2	0
TOTAL	20	

6000 School improvement, part-time extra-curriculum lessons, standardized tests & other income generating activities	Protocol Respected	NOT Respected
1. School improvement contribution. <i>a. School has for each term a school improvement plan</i> <i>b. School generate on average at least MK 200 per pupil per term.</i>	2	0
2. Extra lessons program. <i>a. School organises part-time lessons at infant, junior & senior level</i> <i>b. At least 50% of pupils are included</i> <i>c. School generates at least MK 500 per pupil per month</i> <i>d. School may exempt up till 20% of pupils of paying fee if parents are vulnerable</i>	3	0
3. Non-private teaching agreement. <i>a. Teachers accept non-private education agreement</i> <i>b. School monitors non-private education agreement</i>	2	0
4. Standardized test standard 5-8. <i>a. Parents pay examination fee of MK 1000 for end-of-year exam;</i> <i>b. School may exempt up till 20% of pupils of paying fee if parents are vulnerable</i>	3	0
5. Other Income Generation. <i>a. School has at least 1 other Parent Contribution or income generating activity</i> <i>b. School generates at least MK 100 per pupil per term</i>	1	0
TOTAL	11	

4000 Infrastructure, equipment, LTM <i>Disability & gender sensitive and locally produced as much as possible</i>		
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4000. Head Master's Office	Protocol Respected	NOT Respected
1. Office Head Teacher & Staff Rooms <i>a. At least one head teacher, one staff room and one storeroom per school</i>	1	0
2. Head teacher room with space for meetings up till 6 persons <i>a. Size: At least 16 m²</i> <i>b. Windows opening surface is at least 20% of the floor space;</i> <i>c. At least 50% of the window area is used for ventilation;</i> <i>d. Roof should be at least at 2m60 from the floor;</i> <i>e. Door has lock and can be closed;</i> <i>f. Outside burglar bar protector with heavy lock.</i>	2	0
3. Head teacher room. <i>a. At least 7 chairs,</i> <i>b. One desk,</i> <i>c. One conference table at least 1 x 2 m</i> <i>d. Lockable cupboard or small storeroom</i> <i>e. Soft board</i>	1	0
2. Safe record keeping. <i>a. School has safe cupboard (at least 1.20 m x 0.60 m x 0.40 m) for documents;</i> <i>b. Cupboard can be closed with a key for storing confidential files such as personal financial files, disciplinary files, examination papers</i>	2	0
3. Safe keeping of valuables <i>a. School has safe (at least 0.40 m x 0.25 m x 0.25 m) for money and valuables;</i> <i>b. Safe that can be closed with a key.</i>	1	0
4. First aid kit <i>a. Contains bandages, disinfectant, pain killers, 1 scissor, gloves</i>	1	0
TOTAL	8	

4000. Staff room, Storeroom and Library	Protocol Respected	NOT Respected
1. Staff room infrastructure <i>a. At least 2 m² per teacher (1 teacher per 60 pupils)</i>	1	0
2. Teacher lockers. <i>a. At least 1 locker for all teachers at school (including those on leave)</i> <i>b. Lockers can be closed and locked;</i> <i>c. Verify at random that teachers have keys (check during teacher's interviews)</i>	2	0
3. Staff room furniture. <i>a. 1 desk with chair per teacher</i> <i>b. 1 conference table 1.40 x 2.40</i> <i>c. Soft board.</i>	1	0
4. Storage room for school equipment and toys <i>a. Minimum of 1 room per 4 classrooms</i> <i>b. At least 20 m²</i> <i>c. Door with lock;</i> <i>d. Outside burglar bar protector with heavy lock.</i>	1	0
5. Storeroom <i>a. Shelves</i> <i>b. Up-to-date stores ledger</i>	1	0
5. Library for learners <i>a. At least 58 m²;</i> <i>b. With at least 20 chairs and desks</i> <i>c. With shelves for books</i>	1	0
TOTAL	7	

4000. Classrooms	Protocol Respected	NOT Respected
1. Classrooms infrastructure <i>a. Have an area of 1.4 m² for each child for a maximum of 60 children;</i> <i>b. Windows opening surface is at least 20% of the floor space;</i> <i>c. At least 50% of the window area is used for ventilation;</i> <i>d. Ceiling should be at least at 2m59 from the floor;</i> <i>e. Blackboard 3 x 1.2 meters at the wall at the entrance with rail bar at bottom for chalk and at the top for hanging teaching materials.</i>	2	0
2. Rules and regulations list. <i>a. List is displayed in classroom</i>		
2. Disability friendliness. <i>a. Classroom should be accessible by ramps</i>	1	0
3. Classroom maintenance <i>a. No cracks in the floor & no fissures in the wall</i> <i>b. Roof – no leaks when raining – properly nailed - floor to top of wall = 3 m</i> <i>c. No broken glass panes & window can be opened</i> <i>d. Room painted</i> <i>e. Doors in good condition and can be locked</i>	2	0
4. Teacher desk 140 cm x 90 cm <i>a. Teacher's desk with lockable drawers</i>	1	0
5. Class bin <i>a. Each classroom should have a bin</i>	1	0
6. Learner's desks: infant section <i>a. Two-seater learners' desk for infant section height of table 48 cm height of bench 29 cm, depth 35 cm, width 100 cm</i> <i>b. Iron round bars</i> <i>c. Desks contains shelves</i>	2	0
7. Learner's desks: junior & senior section <i>a. Two-seater learners' desk for junior & senior section height of table 54 cm height of bench 33 cm, depth 38 cm, width 110</i> <i>b. Iron round bars</i> <i>c. Desks contains shelves</i>	2	0
8. Pre-school indoor has 6 areas: <i>a. Reading corner with books, story books;</i> <i>b. Block & building corner with blocks, tins;</i> <i>c. Nature corner with pictures of animals, plants;</i> <i>d. Manipulative area with puzzles, etc;</i> <i>e. Dolls & Toys corner;</i> <i>f. Music corner with instruments</i>	1	0
9. Pre-school outdoor area contains: <i>a. Sand pit</i> <i>b. Monkey climber, see-saw & sliding facility</i> <i>c. Football and netball ground</i>	1	0
10. Pre-school sitting, hygiene & first aid kit <i>a. Pre-school has small chairs and tables</i> <i>b. Pre-school areas are hygienic and regularly cleaned</i> <i>c. Pre-school has first aid kit</i>	1	0
11. Pre-school has hangers or lockers. <i>a. For storing learner bags with personal belongings</i>	1	0
TOTAL	13	

4000. Pupils textbooks = 1 book per learner <i>Inspector checks with two pupils per section availability of books</i>	Protocol Respected	NOT Respected
1. Infant: Chichewa	1	0
2. Infant: English	1	0
3. Infant: Mathematics	1	0
4. Junior: Chichewa	1	0
5. Junior: English	1	0
6. Junior: Mathematics	1	0
7. Junior: Life Skills	2	0
8. Junior: Social & Environmental Sciences	1	0
9. Junior: Agriculture Science & Technology	1	0
10. Senior: Chichewa	1	0
11. Senior: English	1	0
12. Senior: Mathematics	1	0
13. Senior: Expressive Arts with sports & dancing	1	0
14. Senior: Life Skills	2	0
15. Senior: Social & Environmental Sciences	1	0
16. Senior: Agriculture	1	0
TOTAL	18	

4000. Pupils exercise books = 1 notebook / subject / learner <i>Inspector checks with two pupils per section availability</i>	Protocol Respected	NOT Respected
1. Pre-school: Drawing paper, workbook	1	0
2. Infant exercise books 5 x	1	0
3. Junior exercise 8 x	1	0
4. Senior exercise 10 x	1	0
5. Pre-school: pencils, pen, crayons, sharpener	1	0
6. Infant: pencils, pen, crayons, sharpener, slates	1	0
7. Junior: rulers, mathematical instrument, pencils, pen, sharpener, rubber	1	0
8. Senior: rulers, mathematical instrument, pencils, pen, sharpener, rubber	1	0
TOTAL	8	

4000. Hygiene & sanitation	Protocol Respected	NOT Respected
1. School has running water supply. <i>a. Should at least supply urinals, washrooms and teacher toilets</i>	3	0
2. At least 1 toilet for female teachers and 1 toilet for male teachers <i>a. Flushing toilet or pit latrine</i> <i>b. Floor without fissures with single hole and lid</i> <i>c. Closing doors, super structure with roofing – without flies or smell</i> <i>d. Recently cleaned without visible fecal subjects</i> <i>e. Running water and hand washing</i> <i>f. Evacuation wastewater in a sanitation pit.</i>	1	0
3. School has at least one toilet for the disabled <i>a. Toilet and washrooms have wide enough doors and extra seat and grips</i>	1	0
4. Presence of sufficient latrines/toilets and well maintained <i>a. One toilet – latrine per 30 pupils;</i> <i>b. Latrines at least 12 meters from other building and on the windward side;</i> <i>c. Floor without fissures with single hole and lid;</i> <i>d. Closing doors, super structure with roofing – without flies or smell;</i> <i>e. Recently cleaned without visible fecal subjects.</i>	4	0

4000. Hygiene & sanitation	Protocol Respected	NOT Respected
5. Urinals <i>a. 1 urinal for boys and 1 for girls</i> <i>b. Should have running water and sanitation pit</i>	1	0
6. Presence of washroom for girls. <i>a. Shower with running water, or container with at least 20 litres;</i> <i>b. Evacuation of the wastewater in a sanitation pit.</i>	2	0
TOTAL	12	

4000. Courtyard, sports facilities and school boundary	Protocol Respected	NOT Respected
1. Courtyard <i>a. Size at least 2 m2 per child;</i> <i>b. Courtyard should not have dangerous objects of wood, glass, metal, deep holes;</i> <i>c. Swings, see-saw, place for ground games</i>	1	0
2. Maintenance of the school grounds <i>a. Grass cut;</i> <i>b. Flowers well maintained.</i>	1	0
3. Garbage bins in courtyard and cleanliness <i>d. Bin with lid accessible to pupils – not full;</i> <i>e. At least 4 bin per school</i> <i>f. No paper, plastics or other litter in the yard</i>	3	0
4. Waste pit available <i>a. Hole of minimum 3 metres depth and fenced;</i> <i>b. Does not contain infected non decomposable objects</i>	1	0
5. Football facility <i>a. Football – School has access to standard pitch 90 x 45 m with goal posts</i> <i>b. At maximum 1 km and has at least 5 balls</i> <i>c. Grass is well kept without tall grass, dangerous objects</i>	1	0
6. Netball facility <i>a. Netball - School should have a standard pitch of 25 x 15 m</i> <i>b. Has at least 2 balls and with (removable) goals posts</i>	1	0
7. Athletic facilities <i>a. Running track available</i> <i>b. Long jump facility</i>	1	0
8. School boundary fenced <i>a. Brick wall fence with 2-meter height / or</i> <i>b. Well-constructed non penetrable hedge fences</i> <i>c. Fence has gate which can be closed with lock and key</i>	3	0
TOTAL	12	

OVERALL SCORE SCHOOL POINTS	223	.....
Percentage	... %	

Inspector thanks school management, teachers and other stakeholders for the interview

AUTHOR BIOGRAPHIES

Batundi Tsuba Freddy, with DRC nationality has a university degree in community development and peace building from Kenya. He is a humanitarian advocate in the East of DRC, adult learning specialist and consultant. He is one of the main facilitators of the PBF courses in Africa.
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Van der Wijk Jannes, is a public health doctor, who worked in Niger and in the Democratic Republic of Congo for MSF -Holland, ASRAMES, CIF-Health and HealthNet-TPO, where he was involved in improving access to quality health care. Currently he is trainer-consultant for MDF-Africa and conducts household studies, project evaluations and facilitates training courses.
Van Heteren Godelieve, is a medical doctor, health systems and social policies specialist, who was from 2002 to 2006 a Member of the Dutch parliament and chair of its European Affairs committee. From 2008 to 2009 she was director of Cordaid. She conducts consultancies and training in international health including PBF.
Verinumbe Fanen is a medical doctor and health economist who has worked in PBF implementation since its inception in Adamawa State of Nigeria in various capacities – most recently as training lead. She is currently a consultant supporting the National PBF unit in Nigeria as the country scales up PBF in additional states.

Zabiti Michel, is a medical doctor and medical coordinator of Cordaid's program in South Kivu in the DRC. He mainly works in PBF for the Administration Sector.

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.

Best practice. Is a technique, process or activity that is believed to be more effective at delivering a particular outcome than any other technique, process, etc. PBF programs base their approach on best practices for which there is scientific evidence and, which are continuously improved and adapted based on new evidence.

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 is a quarterly work plan developed by facilities (or other organizations such as schools, local NGOs, health authorities). In PBF they are submitted to contract development and verification agencies 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. It was done this way 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.

Contract Development and Verification Agency – previously also called purchaser – is the organisation that develops the contracts with the providers (health facilities, schools, etc), conducts the verification of outputs, and coaches in the use of the management instruments.

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 producers and consumers acting in their own best interest without central direction.

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

Health facility: A structure whose mission it is to provide care to the sick as well as preventive and promotive care in hospitals, health centres, 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 or education seeking behaviour of the population.

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 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 facilities.

Lobbying is a method of putting pressure 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.

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 providers and their catchment areas, intended to cover the main basic problems in a fair and efficient manner. It enables better planning and facilitates resources management. Its determination must consider 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 facility and the director of the CDV Agency. Based on this document the facility receives its monthly subsidy.

Opportunity cost is the value of the best alternative that was not chosen to pursue the current endeavour - i.e., what could have been accomplished with the resources expended in the undertaking. It represents opportunities forgone.

Output indicators (also called quantitative indicator): It is a quantitative measure of the results produced by facilities. They directly influence the monthly payment of subsidies by CDV organizations. Output indicators are few (20-30 for a health centre, equally 20-30 for hospitals and some 5-6 for primary schools).

Output subsidies. This is the (usually monthly) payment from the fund holder linked to the quantitative activities or “production” of the 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): *“Performance-based financing is a system approach with an orientation on results defined as quantity and quality of service outputs. This approach entails making facilities autonomous agencies that work for the benefit of health or education related goals and their staff. It is also characterized by multiple performance frameworks for the regulatory functions, the contract development & verification (CDV) agency and community empowerment. Performance-based financing applies market forces but seeks to correct market failures to attain health or other sector gains. PBF at the same time aims at cost-containment and a sustainable mix of revenues from cost-recovery, government and international contributions. PBF is a flexible approach that continuously seeks to improve through empirical research and rigorous impact evaluations which lead to best practices*

Providers. This is a general term for any person or facility, which provider services such as health care and education.

Quality bonus. This is a bonus assigned quarterly to providers based on several 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 improvement bonus. This bonus ranges from \$750 to \$5,000 (depending on the level) and covers infrastructure improvements, equipment purchases, transportation, recruitment of qualified staff, and emergencies. The principle is that payment occurs after the activity, like the other PBF indicators.

Quality indicators: It is a qualitative measure of the results produced by facilities. One quality indicator is usually based on several composite criteria. Quality indicators (between 120-200) are more numerous than output indicators (around 20). Quality indicators are usually evaluated

once per quarter. The facility quality reviews usually contribute to the three-monthly payment of a quality bonus.

Quality surveys: Enables to establish the quality of care in 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 authorities.

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

Separation of functions is a PBF best practice to create checks and balances and transparency at different levels of systems (health, education, etc). At peripheral level PBF usually identifies the regulator, the financing agency, the contract development and verification agency, the providers and local community groups (or NGOs) that collect the community voice.

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

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

Standard register. A document that contains the daily output activities of a provider. There is usually one register per output indicator (OPD consultancy, delivery, etc.). It has a standard format and provides the basis for the Health Management Information System as well as for the subsidy payments.