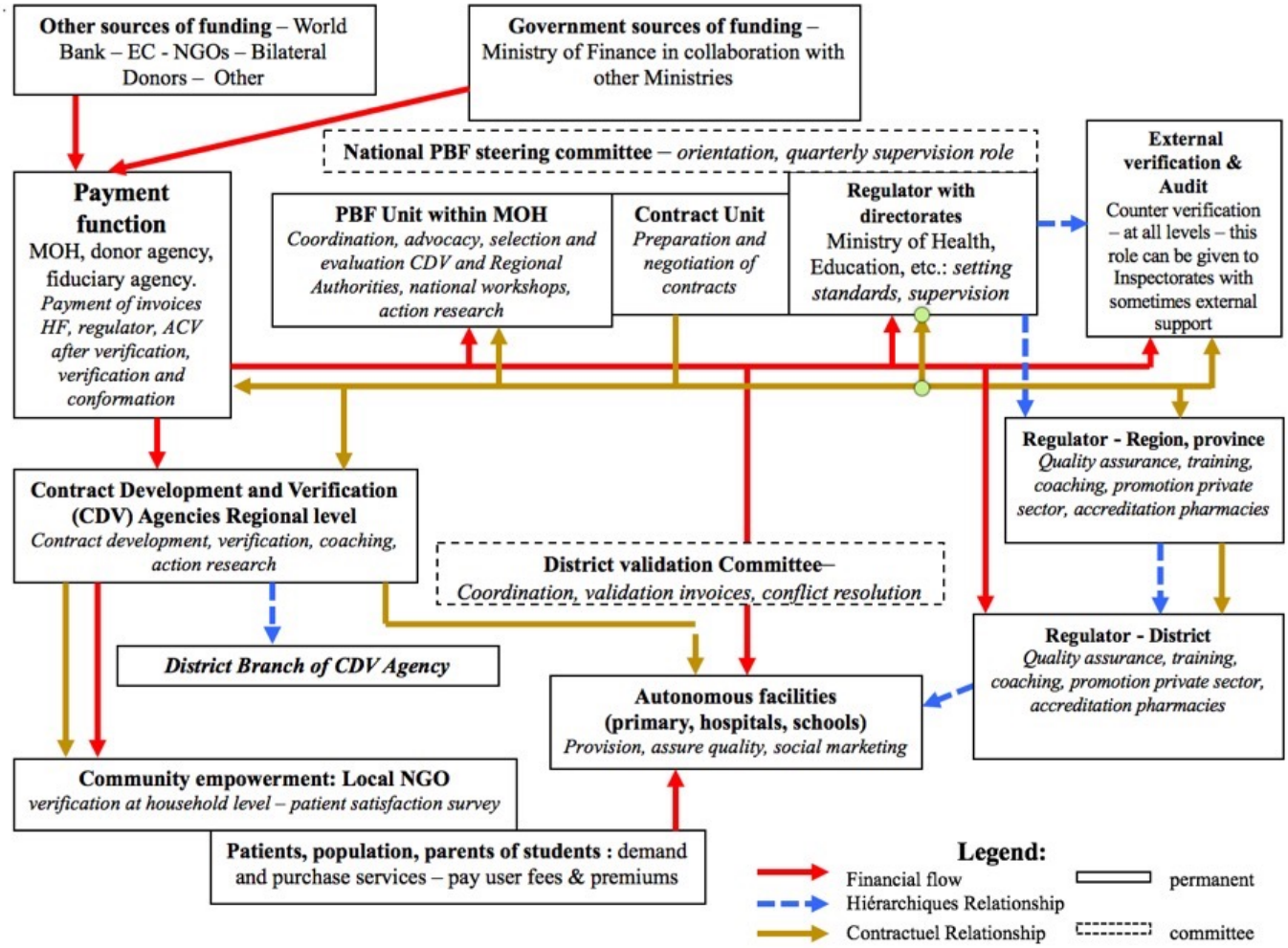
Performance-based financing in Action
Theory and Instruments

Course Guide with 17 modules

The institutional design such as found in many PBF systems



Version October 2019

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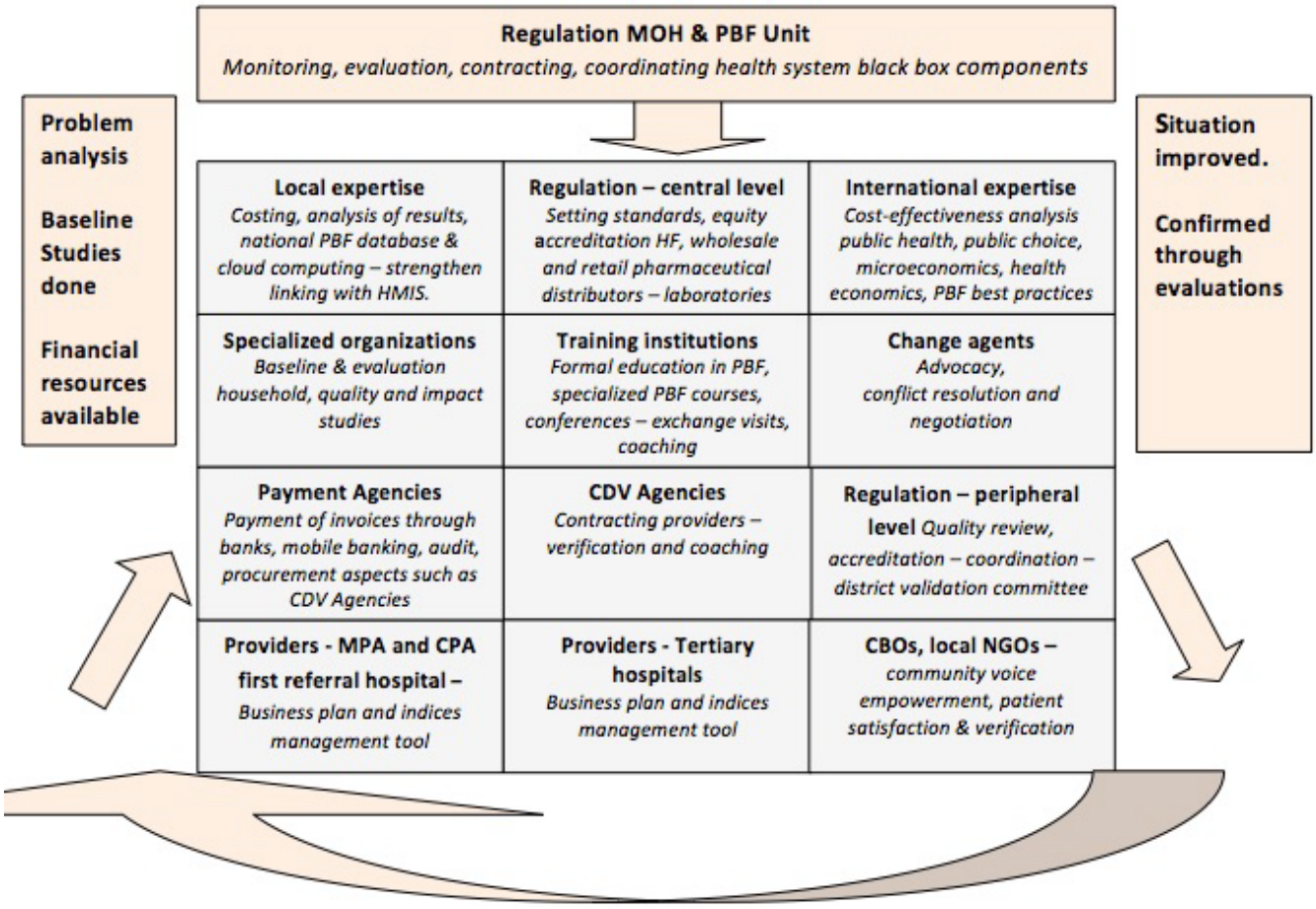
PBF in Action
Theory and Instruments

PBF Course Guide



The components of the PBF black box

SINA – 2019

Ninth edition, 2019

Guide, Performance-based financing, health, health financing

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SINA Health
PBF in Action: Theories and Instruments, PBF Course Guide
The Hague, 2019

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Table of Contents

ABBREVIATIONS **10**

KEY INDICATORS IN PBF **12**

INTRODUCTION AND LE LINKAGE WITH UHC AND THE SDGS **13**

CONTENT OF THE MANUAL 13
ACKNOWLEDGEMENTS 15
THE HIERARCHY OF PRIORITIES IN PBF 15
THE COST TO FINANCE UNIVERSAL HEALTH COVERAGE, AND THE POTENTIAL RESOURCES 15
PBF AND CRISES SUCH AS WAR OR THE EBOLA EPIDEMIC 17
PBF AND EDUCATION 17
THE PBF APPROACH IS RECOGNIZED BY SEVERAL WORLD LEADERS 17

1. WHY THIS PBF COURSE, AIMS, EVIDENCE AND METHODOLOGY **18**

1.1 OVERALL AIM OF THE PBF COURSES AND TRAINING OBJECTIVES 18
1.2 WHY THIS PBF COURSE? 18
1.3 THE HISTORY OF THE PBF COURSES 18
1.4 COURSE METHODOLOGY 19
1.4.1 From the comfort zone towards becoming a change agent *20*
1.4.2 Learning strategies during the PBF course *20*
1.4.3 The participants' action plans per country or theme *20*
1.5 WHY IS PBF EXPANDING? 21
1.6 WHERE AND FOR WHICH SECTORS TO PROPOSE PBF? 21
1.7 THE ACADEMIC EVIDENCE FOR PBF 21
1.8 REFERENCES ON THE ACADEMIC EVIDENCE 23

2. A SIMPLE EXAMPLE OF WHAT IS PBF & CHANGE TOPICS **24**

2.1 HOW DOES PBF FUNCTION: A SIMPLE EXAMPLE OF A HEALTH CENTRE 24
2.2 CHANGE ISSUES IN PBF AND FOR THE PARTICIPANTS 26
2.3 HOW DOES PBF RELATE TO PRIMARY HEALTH CARE AND THE BAMAKO INITIATIVE 26

3. DEFINITION PBF, BEST PRACTICES AND EQUITY INSTRUMENTS **28**

3.1 PBF DEFINITION 28
3.2 HOW DOES PBF WORK: THE 11 BEST PRACTICES 28
3.2.1 Separate the Functions among the Main System Stakeholders *29*
3.2.2 Competition for Contracts *29*
3.2.3 Public-Private Partnerships, Non-Discrimination and Principal & Secondary contracts *30*
3.2.4 Regulators' Role to Define Indicators, Cost Budgets and Assure Quality and Competition *30*
3.2.5 Autonomous Management of Facilities *30*
3.2.6 The Importance of Balancing Facility Revenues and Expenses *31*
3.2.7 CDV Agencies Negotiate Contracts and Coach HF to apply Management Instruments *32*
3.2.8 Local NGOs defend the Consumer Interest & Social Marketing *32*
3.2.9 Seek Efficiency Gains by paying Cash and let Providers Freely Choose their Inputs *32*
3.2.10 Economic Multiplier Effects to stimulate Local Economy and Generate Tax Revenues *33*
3.2.11 Extend Performance Contracting towards other Sectors than Health *34*
3.3 THE PBF EQUITY STRATEGIES TO ATTAIN UNIVERSAL HEALTH COVERAGE 34
3.3.1 Subsidising positive externalities and public goods *34*
3.3.2 Giving market signals to providers to reduce curative care tariffs *34*
3.3.3 Providing an equity bonus to vulnerable regions or districts *35*
3.3.4 Providing extra subsidies to vulnerable health facilities *35*
3.3.5 Exempting the individual vulnerable *36*
3.3.6 PBF response in the event of natural or humanitarian emergencies *36*
3.3.7 How to identify the vulnerable? *37*
3.3.8 Example of an operational manual for targeting the vulnerable from DR of Congo *37*
3.3.9 Proxy means testing tool. Example from Kenya *38*
3.4 TERMS OF REFERENCE FOR THE FIELD VISIT 39

4. THEORIES UNDERLYING PBF AND GOOD GOVERNANCE 40
4.1 SYSTEMS ANALYSIS 40
4.2 THE MOTIVATION OF STAKEHOLDERS AND PUBLIC CHOICE THEORY 43
4.2.1 How to motivate PBF actors in the context of public choice 44
4.2.2 Positive public choice incentives to motivate workers 44
4.2.3 Negative public choice incentives 45
4.2.4 Avoid perverse incentives 45
4.3 NEW PUBLIC MANAGEMENT AND CONTRACT THEORY 45
4.3.1 Classical contracts 46
4.3.2 Relational contracts 47
4.3.3 From relational to classical contracts 47
4.4 REFERENCES TO CONTRACT THEORY 47
4.5 MICRO-ECONOMICS AND FREE MARKET PRINCIPLES 48
4.6 HEALTH ECONOMICS AND PUBLIC HEALTH 48
4.7 DECENTRALISATION 48
4.8 GOOD GOVERNANCE 49
5. MICRO-ECONOMICS AND HEALTH ECONOMICS 50
5.1 MICRO-ECONOMICS 50
5.1.1 Some concepts and definitions in economics 50
5.1.2 The economist toolbox 51
5.1.3 Scarcity, central planning and the market economy 51
5.1.4 Demand for goods in microeconomics 53
5.1.5 Elasticity of demand 54
5.1.6 Supply of goods in microeconomics 55
5.1.7 Equilibrium in microeconomics 56
5.1.8 Perfect competition 56
5.1.9 Ceiling and bottom prices and The Invisible Hand of Adam Smith 57
5.1.10 How to use market instruments to enhance social aims 58
5.2 HEALTH ECONOMICS & PROVIDER PAYMENT SYSTEMS 60
5.2.1 What is health economics? 60
5.2.2 Demand for health care 62
5.2.3 Health service supply 63
5.3 HEALTH MARKET FAILURES 63
5.3.1 Asymmetry of information 63
5.3.2 Positive and negative externalities 64
5.3.3 Under Provision of Public Goods 64
5.3.4 Health Insurance Market failures 64
5.4 PROVIDER PAYMENT SYSTEMS 65
5.4.1 Tax based national health system & free health care 65
5.4.2 Compulsory Health Insurance 66
5.4.3 Voluntary community based health insurance or 'mutuelle' 66
5.4.4 Direct User Fee Payments 67
5.4.5 Voucher systems or conditional cash transfers 67
5.4.6 Which provider payment system is the best? 68
5.4.7 The cost of quality care or education 68
5.5 EXERCISES 69
5.6 SUMMARY OF IMPORTANT CONCEPTS IN MICROECONOMICS 69
5.7 SUMMARY OF IMPORTANT CONCEPTS IN HEALTH ECONOMICS 70
6. NATIONAL POLICIES, REGULATION & QUALITY ASSURANCE 71
6.1 DEFINITIONS 71
6.2 THE SOCIO-ECONOMIC AIMS OF THE STATE 72
6.3 THE HEALTH GOALS OF THE MINISTRY OF HEALTH 72
6.4 HOW TO PREVENT CONFLICTS OF INTEREST AND TO MOVE TO RATIONAL HEALTH POLICIES 73
6.5 ROLE OF THE NATIONAL PBF STEERING COMMITTEE 73

6.6 NATIONAL PBF UNIT AND INTERNAL CONTRACT UNIT 74
6.6.1 The tasks of the PBF Unit 74
6.6.2 Composition of the PBF Unit 75
6.6.3 PBF Unit administrative and payment procedures 75
6.6.4 Quality indicators of the National PBF Unit 77
6.6.5 PBF Unit indices management tool 78
6.7 OTHER DIRECTORATES AND PROGRAMS IN THE CENTRAL MINISTRY 79
6.7.1 Role and activities of the Directorates of the Ministry of Public Health 79
6.7.2 Output indicators for the Directorates negotiated by the MOH contract unit 79
6.7.3 Quality criteria for the Directorates of the Ministry of Health 81
6.7.4 Indices tool for the Directorates and Programmes 83
6.7.5 Evaluation criteria for the use of the indices management tool of the MOH Directorates 83
6.8 THE PAYMENT AGENCY 84
6.9 ROLES OF THE REGIONAL HEALTH DIRECTORATES 85
6.9.1 Develop regional Business Plan (BP) 85
6.9.2 Negotiate and sign performance contracts with the District Health Management Teams. 85
6.9.3 Evaluate the District Health Management Teams 86
6.9.4 Check the Investment Units for Health District infrastructure 86
6.9.5 Participate in the last district validation committee meetings of each trimester 86
6.9.6 Organize and attend quarterly peer group reviews of hospitals in the region 87
6.9.7 Introduce peer group hospital quality review data and DHMT scores into the portal 87
6.9.8 Counter-verifications of the quality reviews of the health facilities and accreditation 87
6.9.9 Organize quarterly regional coordination meetings of PBF activities. 87
6.9.10 Provide periodic reporting and ensure proper documentation and archiving 87
6.9.11 Ensure management of human and financial resources 88
6.9.12 Inspect pharmaceutical wholesalers 88
6.10 QUESTIONNAIRE FOR THE INSPECTION OF PHARMACIES 88
6.11 THE MANAGEMENT INSTRUMENTS FOR THE REGIONAL HEALTH DEPARTMENTS 91
6.12 THE EVALUATION AND PAYMENT FOR QUANTITY AND QUALITY OF REGIONAL HEALTH DEPARTMENTS 91
6.12.1 Monitoring & evaluation of the Regional Health Department by PBF Unit 91
6.12.2 Quantity indicators 92
6.12.3 Criteria for the quality performance of the regional departments 93
6.12.4 Invoice template and payment terms 94
6.13 MODALITIES OF THE RHD INDICES MANAGEMENT TOOL AND INTEGRATION IN THE EVALUATION GRID 95
6.14 ROLES OF THE DISTRICT HEALTH MANAGEMENT TEAM 96
6.14.1 Develop a business plan for the Health District 96
6.14.2 Map the health care providers and rationalise the principal and secondary catchment areas 96
6.14.3 Evaluate the professional quality of providers at primary level 97
6.14.4 Accredit health facilities 97
6.14.5 Organize Monthly District Validation Committees meetings 97
6.14.6 Inspect retail pharmacies in the district 98
6.14.7 Conduct quarterly coordination / evaluation and planning meetings 98
6.14.8 Enter the results of the health facility quality review in the MOH PBF portal 98
6.14.9 Ensure the management of human-, equipment- and financial resources of the District 98
6.14.10 Ensure proper documentation and archiving 98
6.15 MAPPING AND RATIONALISATION OF THE CATCHMENT AREAS IN THE HEALTH DISTRICT 99
6.16 THE DMT INDICES MANAGEMENT TOOL AND ITS INTEGRATION IN THE QUALITY EVALUATION 101
6.17 DHMT WORKING TOOLS 101
6.18 DHMT EVALUATION PROCESS 102
6.19 THE PAYMENT OF THE DHMT – QUANTITY AND QUALITY 102
6.19.1 The description of the output indicators of the DHMT 103
6.19.2 The DMT quality indicators 103
6.20 STRATEGIES AND INSTRUMENTS FOR QUALITY ASSURANCE IN PBF 105
6.20.1 Different strategies 105
6.20.2 Quality tools: standard reviews, vignettes, direct observations, patient interviews 106

6.21 STANDARD QUESTIONNAIRE FOR HEALTH FACILITY QUALITY REVIEW 107

7. CDV AGENCY, DATA COLLECTION, HMIS & AUDIT 121
7.1 OBJECTIVE AND INTRODUCTION OF THE REGIONAL CDV AGENCIES 122
7.2 THE ROLES OF THE CDV AGENCIES 122
7.2.1 Negotiate and sign contracts with health facilities or other providers 122
7.2.2 Verify the quantitative results of the provider under contract PBF 123
7.2.3 Organize Community Verification and Satisfaction Surveys 123
7.2.4 Analysis of the Community Surveys by the CDV Agency 124
7.2.5 Coaching in the application of PBF instruments (Business Plan, Indices management) 126
7.2.6 Organize training sessions with regional actors on PBF related topics 126
7.2.7 Attend the monthly District Validation Committee meetings 126
7.2.8 Enter data into the MOH PBF portal 126
7.2.9 Produce Quarterly CDV Agency Activity Reports 127
7.2.10 Conduct Action Research 127
7.3 QUALITY IMPROVEMENT BONUSES (QIB) 127
7.3.1 How do QIB operate 127
7.3.2 The process for allocating the Quality Improvement Bonuses for health facilities 128
7.4 THE CDV AGENCY TEAM PROFILES AND ASSIGNMENTS 129
7.4.1 The CDV Agency Manager 129
7.4.2 The Deputy Manager 130
7.4.3 An Accountant 130
7.4.4 Administrative Assistant 131
7.4.5 Medical Verification Officer 131
7.4.6 Community Verification Officer 132
7.4.7 Quality Improvement Bonus Verification Officer 132
7.4.8 Other personnel 132
7.5 RECRUITMENT PROCESS FOR CDV AGENCY STAFF 133
7.6 DESCRIPTION AND USE OF TOOLS FOR IMPLEMENTING THE CDV AGENCY ACTIVITIES 133
7.7 PRESENTATION OF CDV AGENCY INDICATORS 134
7.7.1 The quantity indicators and the criteria for their validation evaluation 134
7.7.2 Evaluation criteria for the quality performance of the CDV Agency 134
7.8 PAYMENT MODALITIES AND INVOICE TEMPLATE OF CDV AGENCY 136
7.9 CDV AGENCY INDICES MANAGEMENT TOOL 137
7.10 CONTRACT NEGOTIATION TECHNIQUES: THE CARROT AND THE STICKS 138
7.11 PBF DATA COLLECTION AND PROBLEMS WITH NHIS 138
7.12 COLLECTING DATA THROUGH PBF WEBSITES AND LINKS TO NHIS 139

8. PROVIDER – COMMUNITY INTERACTION & SOCIAL MARKETING 140
8.1 THE COMMUNITY PARTICIPATION APPROACH OF ALMA ATA 140
8.2 CONSUMER EMPOWERMENT AND COMMUNITY VERIFICATION 141
8.3 SOCIAL MARKETING 141
8.4 COMMUNITY PBF - HOUSEHOLD VISITS FOLLOWING A PROTOCOL 142
8.5 THE ROLE OF THE NON-PROFESSIONAL COMMUNITY IN PBF 143

9. PBF FEASIBILITY, KILLING ASSUMPTIONS & ADVOCACY 144
9.1 THE STANDARD PROJECT MANAGEMENT CYCLE 144
9.2 PBF FEASIBILITY SCANS: PROGRAMME CONTAINS HOW MANY PBF ELEMENTS? 145
9.3 KILLING ASSUMPTIONS IN THE PBF PROJECT DESIGN AND HOW TO TACKLE THEM 146
9.4 MEMORANDUM OF UNDERSTANDING TO ESTABLISH THE OUTLINE FOR THE PBF INTERVENTION 147
9.5 ADVOCACY FOR PBF 147
9.6 EXERCISES ON PBF FEASIBILITY AND ROLE PLAY ON ADVOCACY SKILLS AND ATTITUDES 148

10. CONFLICT RESOLUTION AND NEGOTIATION TECHNIQUES FOR PBF 149
10.1 THE IMPORTANCE OF CONFLICT RESOLUTION AND NEGOTIATION SKILLS IN PBF 149
10.2 SOME DEFINITIONS CONCERNING CONFLICTS 149
10.3 CHANGE AS THE SOURCE OF CONFLICT AND WHAT CAN BE DONE? 150

10.4 CONFLICT MANAGING STYLES: ENFORCE, CONFRONT, AVOID OR GIVE-IN 151
10.5 NEGOTIATION TECHNIQUES AND SEEKING COMPROMISE 152
10.5.1 Preparing negotiations 152
10.5.2 Conducting negotiations 153
10.6 NEGOTIATION SKILLS: THE DOS AND DO NOTS WHEN NEGOTIATING FOR PBF 154
10.7 EXERCISE ON NEGOTIATIONS 155

11. BASELINE & EVALUATION STUDIES FOR PBF PROGRAMS 156
11.1 BASELINE AND EVALUATION STUDIES DURING PBF INTERVENTIONS 156
11.2 SETTING UP PBF HOUSEHOLD & PROFESSIONAL QUALITY STUDIES 156
11.3 WHO SHOULD CONDUCT PBF BASELINE STUDIES? 157
11.4 STEPS IN CONDUCTING THE HOUSEHOLD AND QUALITY STUDIES 157
11.5 STUDY BIASES 158
11.5.1 Systematic biases 158
11.5.2 Statistical or sample biases 159
11.6 HOUSEHOLD SURVEYS 159
11.6.1 Definitions, objectives and indicators 159
11.6.2 Methodology of a household survey 160
11.7 FACILITY QUALITY SURVEYS 160
11.8 INTERVIEW WITH MANAGERS OF FACILITIES 161

12. CHOICE OF OUTPUT INDICATORS, TARGETS AND SUBSIDIES 162
12.1 THE TYPE OF INDICATORS 162
12.2 OUTPUT INDICATORS AND TARGETS 163
12.2.1 Indicators for primary level health facilities (Minimum Package of Activities) 163
12.2.2 Indicators and targets for CPA level - hospital 164
12.3 CRITERIA FOR ESTABLISHING THE SUBSIDY PER ACTIVITY OR INDICATOR 165
12.4 PRIMARY DATA COLLECTION TOOLS 166
12.5 EXERCISE 1 167
12.6 EXERCISE 2: THE CASE OF IBO HEALTH CENTRE 168

13. COSTING IN PBF 171
13.1 INTRODUCTION TO COSTING IN PBF 171
13.2 SEEKING EFFICIENCY GAINS 171
13.3 OVERHEAD COSTS 172
13.4 FACTORS THAT INCREASE OR REDUCE THE BUDGET REQUIRED FOR A PBF INTERVENTION 172
13.5 THE COSTING TOOL 173
13.6 COSTING EXERCISE 176

14. PROVIDER MANAGEMENT: THE BUSINESS PLAN 177
14.1 INTRODUCTION 177
14.2 THE BUSINESS PLAN MANAGEMENT CYCLE 177
14.3 HOW DOES THE BUSINESS PLAN WORK? 178
14.4 THE CONTRACT BETWEEN A HEALTH FACILITY AND AN EMPLOYEE 179
14.5 ANNEX: EXAMPLE OF A BUSINESS PLAN FOR A PRINCIPAL FACILITY CONTRACT 181
14.6 EXERCISE 2: GROUP OR COUNTRY BUSINESS PLAN 189

15. PROVIDER MANAGEMENT: THE INDICES TOOL 190
15.1 THE OBJECTIVES OF THE INDICES MANAGEMENT TOOL 190
15.2 HEALTH FACILITY REVENUES OR INCOME 190
15.3 EXAMPLE OF HOW THE INDICES TOOL WORKS IN A HEALTH FACILITY 191
15.4 PLANNING FOR THE EXPENDITURES AND BALANCING THE BUDGET 192
15.4.1 Basic salaries 192
15.4.2 Method one for calculation of fixed salary: The in-charge is the standard 193
15.4.3 Method 2 for calculating the fixed salary: Using the government salary indices value 193
15.4.4 Taxes and social contributions 195
15.4.5 Supply of medicines, consumables and equipment 196
15.4.6 Social marketing expenditures 196

15.4.7 Current operating expenditures *196*
15.4.8 Investments *196*
15.4.9 The payment of the subcontracts *197*
15.5 ASSURE THAT EACH FACILITY HAS A RESERVE FOR THREE MONTHS OF OPERATION 197
15.6 CRITERIA FOR CALCULATING THE PERFORMANCE BONUSES 197
15.6.1 The responsibility bonus *199*
15.6.2 Overtime Bonus *199*
15.6.3 Non-private practice bonus *199*
15.6.4 Department Quality Score Bonus *200*
15.6.5 Individual Performance Criterion *200*
15.6.6 Questionnaire for individual performance evaluation *201*
15.6.7 Increasing the department income *203*
15.6.8 Hours lost penalty. *203*
15.6.9 Individual penalties for infringements *204*
15.7 CALCULATION OF PERFORMANCE BONUS PER EMPLOYEE 205
15.8 THE HEALTH FACILITY VIABILITY INDICATORS 205
15.9 INDICES MANAGEMENT TOOL FOR HOSPITALS WITH 150 OR MORE STAFF 206
15.9.1 The conceptual approach to solve complex problems *206*
15.9.2 Performance Indicators for Tertiary Hospitals *206*
15.9.3 Departmental PBF subsidies within hospitals *207*
15.9.4 Departments Performance Indicators *208*
15.9.5 List of quantitative indicators *208*
15.9.6 Qualitative indicators *209*
15.10 EXERCISE: IBO HEALTH CENTRE 210

16. PBF IN EMERGENCY SITUATIONS 213
16.1 WHY A PROTOCOL ON THE ROLE OF PBF IN EMERGENCIES? 213
16.2 EMERGENCY INDICATORS COULD BE THE FOLLOWING 214
16.3 ROLE OF STAKEHOLDERS 214
16.3.1 National Emergency Response Centre (NERC) *215*
16.3.2 National PBF & Emergency Unit (NPE Unit) *216*
16.3.3 Payment agencies at national and / or regional level *218*
16.3.4 Distributors of inputs *218*
16.3.5 District PBF & Emergency Steering Committee (DPE Steering Committee) *218*
16.3.6 CDV Agency for PBF and emergencies *218*
16.3.7 Local authorities (regional and District level – quality assurance) *219*
16.3.8 Health facilities *220*
16.3.9 Police *220*
16.3.10 Community *220*

17. EDUCATION SECTOR 222
17.1 INTRODUCTION 222
17.2 THE PBF FEASIBILITY SCAN BEFORE STARTING AN EDUCATION PROGRAM 223
17.3 SEPARATION OF FUNCTIONS IN EDUCATION 224
17.4 PBF INSTRUMENTS: INDICES AND BUSINESS PLAN 225
17.5 THE ROLE OF DIFFERENT ACTORS IN THE EDUCATION PROGRAM 227
17.5.1 CDV Agency *227*
17.5.2 Terms of reference of the CDV Agency staff *228*
17.6 QUALITY REVIEW QUESTIONNAIRE 230

AUTHOR BIOGRAPHIES 243

GLOSSARY 245

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	Out Patient 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. *Depending on country => provincial, county or State*
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 planned 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 car 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 program PBF 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 with good administrative and allocative efficiencies.
- A CDV Agency can cover 2-3 million people in a province or region so that good economy of scale is achieved with low average costs and a marginal cost of zero. However, such a large target population also needs to create district CDV branches with medical verification officers (1 per 100,000 pop) and community verification officers (1 per 200,000 pop) who reside there. This staff live in the district but continue to be 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 health centre in a low-income country that provides the complete minimum package of activities must generate at least USD 7 per target population per year to assure good quality care. Hospitals should generate around USD 20 per person per year. Primary schools should generate at least USD 100 per pupil per year. This revenue is required to achieve the complete health- or educations packages of good quality. Achieving this revenue and thereby quality services is the prime responsibility of the provider. Financing for the poor is the responsibility of the governments.
- The PBF feasibility scan score based on 19 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, or that there exist monopolies for inputs or that the providers have no autonomy.
- Primary level health facilities should have at least one qualified staff per 1,000 inhabitants in their catchment area. For the hospital package this ratio is also 1 qualified personnel by 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 dependant for more than 60% of their revenues on external sources of funding such as from government, partners or PBF programs.
- The essential drugs security stock in PBF structures, which have access to distributors operating in competition, should be 14 days.
- The financial reserve of a health facility either through its bank account or other liquid means must correspond to around three months of expenses.
- The contribution of the population for their health through direct payment or contributions into health insurance schemes should be between 8% and 15% of their revenues.
- It is desirable that government allocates around 15% of the budget to health. However, the political will to assure the actual contribution will depend on the efficiency of its use and in how far those health expenditures are perceived by the public and policy makers to have an impact on better health.
- The proportion of patients exempted of fee paying in PBF may be 5%, 10% or 20% of the total. This proportion depends on the vulnerability of the population but also on the resources available.
- 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 first referral hospital at around 150,000. This will create good economies of scale. Providing the full packages provide good economies of scope.
- A provider can be accredited when the quality reviews conducted by the health authorities has a score of above 80% during 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.

INTRODUCTION and le LINKAGE with UHC and the SDGs

Main messages of this module

- Performance-based financing is a systems reform approach, which offers an answer to the 'how' of achieving Universal Health Coverage (UHC) and the Sustainable Development Goals (SDG) 2015-2030.
- PBF postulates that in the process of development the delivery of *quality* services comes first, followed by the *efficient* use of scarce public resources and then *equity and financial access*.
- It is the responsibility of each provider (health, education, etc.) to generate enough revenues to assure quality care provision. It is the responsibility of governments or other external financers to provide public goods and activities with positive externalities and to protect 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, more PBF resources must be made available to providers.
- PBF reforms can be applied in sectors other than health such as education, administration and the judiciary.

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 that have not yet been published. The following PBF course modules describe the usual course structure, but depending on the specific needs of each group, changes can be made to the program on a daily basis.

Course organizers are aware that the amount of material in the course book is difficult to absorb in 14 days and, therefore, choices must be made about what can be covered in detail. For this we strongly encourage participants to start reading the book before the start of the course.

Module 1: Introduction, UHC, PBF Objectives Hierarchy, Course Objectives and Methodology.
The module starts with the introduction of the participants and the establishment of the course village rules. The course objectives and methodology are presented and why the PBF has become important in the domain of reforms of the public sector.

Module 2: A Simple Example of how PBF works and which are the change topics
This module introduces how the PBF works in a Health Center and why it is important to change the paradigms. The PBF approach is compared 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 PBF best practices 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 are applied in health systems and in the management of health facilities. This module is often considered "difficult" for those who do not have any preliminary knowledge in economics. Therefore, it is strongly encouraged to already study 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 and how PBF is to can be made sustainable in emerging (health) system and how the regulatory institutions can be put under performance contracts. The mechanisms of quality assurance and accreditation are also explained.

Module 7: Contract Development & Verification Agencies (CDV)
This module explains the roles of the CDV Agencies in the PBF system and how CDV Agencies can be put 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 the social marketing indicators home-visit following a protocol, follow up on drop-outs and cases referred by the community relays. The role of volunteering and intrinsic motivation are discussed.

Module 9: Development of a PBF Project, Fatal Hypotheses & Advocacy
This module explains how to start new FBP programs, how to examine the feasibility of a new PBF proposal and how to advocate for making the PBF approach as "pure" as possible. It also explains the importance of avoiding killing assumptions. This module is linked to the action plans of the participants and explains how to conduct advocacy through role plays.

Module 10: Conflict Resolution and Negotiation
The purpose of this module is to provide 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: The costing of a PBF intervention
The module focuses on the costing of a PBF intervention.

Module 14: Health Facility Management: Business Plan
This module presents the key principles of the autonomous management of a health facility and how to use the business plan for negotiating the contract with the CDV Agencies. The module also presents a standard contract between a health facility and an employee and the quality improvement bonus (QIB).

Module 15: Health Facility Management: The Indices Management Tool
This module focuses on the use of the Indices Management Tool by health facilities or other actors to analyze its revenue, the payment of key expenses and how to calculate the staff performance bonuses. This tool stimulates at the same time the autonomy of the structures and the internal and external transparency.

Module 16 PBF in Emergency Situations.

Module 17: PBF in Education

Acknowledgements

Hundreds of PBF "family members" worked during the last decennia to innovate and develop the ideas, which are at the basis of this book. The PBF journey often started from the frustrations of working in ineffective health systems and from a desire to change towards good governance, efficient facility management, improved staff motivation and consumer empowerment. The PBF practitioners share, in fact, a strong desire of working towards a "just" world.

Since the late 1990s, PBF established worldwide and reach in 2019 around 250 million people. The funding initially came from organisations such as the Asian Development Bank and NGOs such as Cordaid. Later bilateral co-operations, the European Union and the World Bank developed an interest in financing PBF programs. More recently governments take over the financing. So far, more than 2500 participants attended the 14-day PBF courses.

Sincere thanks go to CORDAID The Hague for their unwavering support for PBF since 2002 and in particular Niek Thijssen, Piet Spaarman, Piet Vroeg, Remco van der Veen, Frank van der Looij and Beatrice Looijenga. Heartfelt gratitude goes to all the contributors to this book mentioned at the start of each chapter. Special thanks go to Celestin Kimanuka, and Jean Baptist Habaguhirwa, who helped to develop the French speaking courses. To our deep regret, Jean Baptist Habaguhirwa died in October 2011 and we dedicate this book to him.

We thank Gyuri Fritsche and Godelieve van Heteren, who were instrumental in developing the English-spoken PBF courses from 2010 onwards. We received support from Claire Rwiyereka of HDP Rwanda, Aoudi Ibouraima and Christophe Dossouvi from BEST-SD in Benin, Joseph Catraye from BASP-96 Burkina Faso, Fanen Verinumbe from the Adamawa State in Nigeria, and Annick Mondjo from the Ministry of Health in Gabon. We organised 15 PBF courses with Littoral Regional Fund for Health Promotion in Cameroon and we thank Jean Claude Taptue, Denise Tamga, Francis Simo, Fadimatou Atiné and Patricia Ngo Sak for their contributions to the book.

The hierarchy of priorities in PBF

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

1. The *quality* of the services comes first place because without quality provision health centers or schools may become dangerous for public health or will create unacceptable low teaching standards.
2. *Efficiency* comes second because public resources are limited and the system should be sustainable.
3. Only when quality and efficiency are settled, *financial access and equity* aims can be handled.

In traditional approaches, affordability and free health care often came first irrespective of the available resources and, as a result, the services are often of such a poor quality that it is doubtful whether they lead to a better health- or education status.

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 in the PBF (or RBF) health-reform concepts or instruments.

The cost to finance Universal Health Coverage, and the potential resources

First of all, we propose that PBF is the best reform strategy to achieve universal health coverage, universal access to education, etc. PBF assists in the financing of quality services in the most efficient manner and also targets those vulnerable regions, or individuals unable to pay for the services. The PBF reforms proposes that private financing remains important for the sake of sustainability and encourages those capable of paying to contribute financially for their services.

In most low- and middle-income countries (LMICs), out-of-pocket-expenditure through *direct cost-recovery* is between 50% and 80% of total health expenditures. This in itself is undesirable because it creates financial hardships or leads to the non-utilization of services. WHO suggests that the cost for achieving Universal Health Coverage is around USD 86 per person per year. Yet, the WHO calculation seems based on inefficient input financing, which PBF aims to change into performance financing. Moreover, the WHO calculations seem not to consider that there is scope for making more efficient use of out-of-pocket health expenditure both by government and private sector providers. The PBF reforms of public-private collaboration and making the system more efficient significantly reduces the need for public financing towards around USD 10-15 per capita per year. This would finance the comprehensive primary level- and hospital level health packages with several free health care components. Yet, so far there is no low- or middle- income country that has generated from government resources more than USD 4-5 per capita per year for the PBF reforms and even to finance this minimum amount is challenging. Cameroun proposed USD 4-5 for their 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 Nigeria, Lesotho, and Zimbabwe, DRC, CAR mainly depend on external resources for their PBF systems. Despite the intense advocacy of more than 5 years government expenditure in Nigeria for performance systems remains nihil.

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 LMIC at the primary level this 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 is a particular risk when governments impose free health care below the economic market price equilibrium and without a robust reimbursement system. (3) Stabilize provider revenues in particular because external government and partner funding is often irregular. To assure the sustainability of health facilities it is prudent if they internally generate through fee paying and insurance reimbursements between 40 and 60% of their revenues.

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

1. Provide big subsidies for those activities with *public good* characteristics such as health promotion and *positive externalities* such as for family planning, immunization and tuberculosis. These subsidies should be high enough so that the service is free for the patient.
2. Provide smaller subsidies for *curative activities* such as OPD consultations, deliveries, in patient care at a modest proportion of the total cost. These push service prices downward and provides 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* and;
5. Target the *individual vulnerable* with much higher subsidies in such a manner that the services become free-of-charge or nominal. Yet, the proportion of patients that can be exempted must be limited by a ceiling to prevent cost overruns and moral hazard.
6. Target those affected by *humanitarian or natural emergencies* by temporarily increasing the subsidies for the facilities so that they can exempt larger groups of the population from fee-paying.

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 of people 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 the cost of these programs tends to be unsustainable and that a proportion of claims by the health providers remain unpaid. In addition, Ghana and Gabon's evaluation reports point to problems of efficiency in

reimbursement management, unsatisfactory verification systems, moral hazard problems and the assured package does exclude promotional and preventive activities. Coverage is only 45% in Ghana and around 70% in Gabon, so the goal of true universal health coverage is not achieved. As of now, the compulsory insurance scheme in Rwanda has a good reputation, but it should be noted that since 2005, this scheme has been established together with performance-based financing. The Rwanda government is also capable to impose on its citizens the payment of the premiums, which might be challenging in other countries

PBF and crises such as war or the Ebola epidemic

Recent experiences in DRC, Car and Cameroon has demonstrated that PBF can do well during crises such as wars, disasters or outbreaks such as Ebola Viral Disease (EVD). In the Central African Republic from 2013 onwards -when the war broke out - it allowed to compare PBF in PBF areas with the classical emergency approach of input financing through international NGOs. The PBF approach continued to pay cash subsidies to the health facilities and this turned out to be more cost-effective. None of the PBF health facilities stopped to operate during the war. Qualified staff continued to work in the facilities. On the contrary, in the traditional emergency approach areas, several health facilities stopped functioning and many of their qualified staff left. The main problem with the emergency input approach managed by international NGOs was that it did not promote ownership by local staff. Yet, the study in CAR also observed that during crisis situations the PBF approach should significantly increase the subsidies so that those in need affected by the crisis can be treated free of charge. When the situation improves cost-sharing should gradually increase.

PBF and education

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

The PBF approach is recognized by several world leaders

- *Global Fund* Mark Dybul; Executive Director (December 2013). "We are working with countries and partners like the World Bank to accelerate gains in the fight against AIDS, Tuberculosis and Malaria" "The Results-Based Financing approach is an integral part of our investment approach to maximize the impact."
- *World Bank*, Jim Yong Kim; President of the World Bank Group (December 2013) "The Evidence shows that the results-based funding has a significant impact - saving lives and expanding access to essential health services and quality for the poorest women and children in developing countries. "
- United Nations, *Ban Ki-Moon*; Secretary General "Innovative financing approaches are urgently required to meet the health needs of women and children worldwide. Results based financing can improve the quality and efficiency of the services, as well as strengthen equity."
- Germany, *Angela Merkel*; Chancellor "PBF shows the way to change the focus of aid, inputs to results, and thus provides a new complementary modality to systemic approaches."
- England, *Lynne Featherstone*; Minister of International Development (December 2013) "The results based financing approach to aid aims to ensure that every cent we spend on health programs for survival, produces real results. This is good for donors, good for taxpayers, and most importantly, good for millions of people across the developing world desperately in need of better health. "

1. WHY this PBF COURSE, AIMS, EVIDENCE and METHODOLOGY

Main messages of this module

- It is important but not sufficient to know how PBF works. Equally important is mastering the processes of transition management and change, and to develop advocacy and negotiation skills.
- The evidence for PBF is not only based on scientific studies but also on practical experiences, common sense and pragmatism. Increasingly, it appears that there does not exist a “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 other reform approaches they should also produce arguments why they move away from PBF best practices and instruments and present evidence that they produce better results.

1.1 Overall aim of the PBF courses and training objectives

The PBF course *aims* to contribute to the improvement of the health or educational status of the population by providing accessible and financially affordable services of good quality.

The course has the following *specific course objectives:*

a) To help master the theories, best practices and instruments which 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.

1.2 Why this PBF course?

In many parts of the world, the needs of the population remain unmet, because social services (health, education) are either not accessible or of poor quality. PBF currently draws attention worldwide. Its concepts moved away from existing paradigms and ideas on how to organise matters. This sometimes frightened and challenged stakeholders. Some simply lacked the knowledge concerning PBF and only needed better understanding. Others feared the complexity of PBF or believed that they lacked the skills to apply it. Some people may find ‘change’ cumbersome or fear that their interests are challenged and are therefore unwilling to accept it.

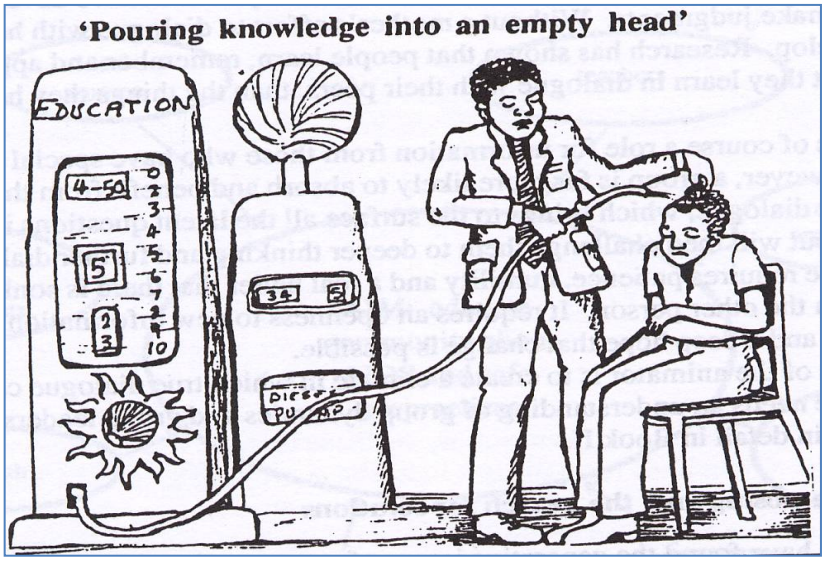
This lack of information, sometimes misunderstandings and fears combined with the great potential of PBF made and still makes a strong case to organize courses, which go in depth into the theories, best practices and instruments of PBF.

1.3 The history of the PBF courses

The first 14-day PBF course was organized in 2007 in the DR of Congo with a group of 30 participants. It was financed by Cordaid and conceptualised with support from the Public Health School of Kinshasa, the CDV Agency in South Kivu. The first 80-page course manual was edited in 2009. Until the middle of 2019, 80 courses have been organized for over 2600 participants and the manual has more than 250 pages. Approximately 2400 participants made the final test. The courses are participatory and meet the specific needs of each participant by helping them to develop their action plans

1.4 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 this when asked to do so. Thus, the teacher is at the centre, and the student merely has to memorise. The learner's mind is like an empty vessel, which is to be filled with knowledge, such 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 centre,* whilst the teacher is a *facilitator.* Together, the participant and the facilitator explore and find the path forward. The participant learns by 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 and the practice comes afterwards. The adult learning cycle does the opposite: learning starts from the *experience* of each participant.

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: example *present work experience, conduct role plays and ask questions through Turning Point*
- **Analyse**: reflect on the activity, discuss and provide feedback to probe into the experience: facilitate *dialogue* and conduct *group work.*
- **Generalise**: help the participant to generalise from the experience and deduce some best practices that may also be applied in reality.
- **Apply in practice**: participants develop practical plans to assimilate what was learned and are encouraged to use the generalisation to change behaviour in order to become more efficient.

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

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

There is a hierarchy between the three learning domains. Somebody may know something but may not have the skills to apply that knowledge. At a next level, somebody may know something and have the skills to apply it but lacks the attitude or willingness to do so. In PBF, we aim to advance all three learning domains at once. Often the attitude changes appear the most challenging. The three domains

are reflected in the course book chapters on knowledge (theories, best practices), skills (applying the PBF instruments) and attitude (how to become change agents, how to negotiate and deal with opposition and conflict).

1.4.1 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 works, conduct daily summaries and does presentations during plenary sessions);
- Deal with the unexpected. Certain elements of knowledge, skills and attitude may be presented during the course that certain participants may find unpleasant or not feasible. The goal is to add new ideas but also to identify attitude problems that can block change. Such discussions of course never have the goal to offend anybody.

1.4.2 Learning strategies during the PBF course

a) Election by the participants of the PBF course *village chief and officials* to assure 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 as well as the presentations must be **TAPIS**, i.e. Timely, Autonomously prepared, Participative, Innovate and includes a Synthesis. During presentations, notes or PowerPoints should also be **CCLR**, which is Clear, Crisp, Large enough and Readable.

1.4.3 The participants' action plans per country or theme

During the course, there will be multiple occasions during which each country - or thematic group will present their individual situation and action plans to be applied after returning from the PBF course. The groups or individuals will be requested first to review their baseline situation concerning PBF in which they work and to review the challenges to implementing PBF. Participants will develop their action plans that answer the question *who* will do *what*, *when* and *where* during the period immediately following the course. In these plans, the participants will address the *knowledge* aspects (what do we want to achieve and through which principles), the *skills* aspects (how to apply the PBF instruments) and the *attitude* aspects. The attitude part concerns why people oppose PBF, what lies behind resistance, how to address resistance and what advocacy techniques to use? This requires of all participant to work on their own skills and attitudes towards change and on how to solve conflicts.

1.5 Why is PBF expanding?

- To the *population* PBF systems potentially offer better quality services with more and respectful qualified personnel.
- *Government authorities* may find PBF attractive in their search on how to improve social services and thereby the status of the population. Ministries of Finance may appreciate PBF as it can show results for the budget it consumes.
- *Politicians* may consider PBF interesting in answering the demands of their electorate;
- *Aid agencies* may like PBF since it may assist to achieve the Sustainable Development Goals and other social objectives.
- For staff working in the *social sector* PBF is interesting because it increases their remuneration and they earn more when they work more. They may appreciate the enhanced supervision, in particular, when authorities are also put under performance contracts.

In short: PBF makes a lot of sense.

PBF promotes good governance, introduces competition and makes use of the comparatives 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 management by providers and puts into place effective strategies to decentralise the service system to the consumers. These underlying ideas are easy to explain to audiences, because they make sense. Several governments therefore adopt PBF ideas, sometimes also before impact studies are concluded in their country to demonstrate the positive effects.

1.6 Where and for which sectors to propose PBF?

When 'contracting' was adopted as a systemic approach in Asian countries during the 1990s, it was common wisdom that it would only work in the relatively 'business-oriented' environment of Asia but not on other continents. When PBF became successful in Rwanda in 2006, it was believed to work due to Rwanda's disciplined government and workforce, but observers still assumed PBF was unlikely to work in other African countries. Recently, however, there is evidence that PBF also had good results in Burundi, Cameroon and even in the unstable regions of Eastern Democratic Republic of Congo and the Central African Republic. *One may therefore conclude that PBF may be made effective under any political, social or cultural circumstance.*

Separating the functions of regulation and contract development & verification leading to the creation of new independent CDV Agencies may be particularly effective in situations of government mismanagement, corruption or even failed states. It may create the much needed checks and balances under adverse circumstances of political crises when systems have broken down (Soeters et al., 2011). PBF may also be applied in other sectors than health such as education and rural development, or even in politico-administrative and legal sectors.

1.7 The academic evidence for PBF

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

There is mounting evidence from the literature that utilization and quality of services increase after the introduction of PBF. It seems that there is little doubt that the payment of a bonus/subsidy for each service delivered incentivizes providers to make more efforts. Yet, PBF does not only introduce financial incentives. PBF also promotes more autonomy for facilities, creates a more competitive environment, moves from input payments to performance payments, seeks collaboration with the private sector, seeks economic multiplier effects. Impact studies should therefore take into consideration this full package of reform proposals and not only the financial incentive part. This implies the need for more action research: for comparing the full PBF reform package with the situation of "no change" or any other alternative reform approach.

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 this is where PBF clearly makes a difference. A study conducted in the DRC showed that both PBF and input financing achieved improvements in the system but *the PBF approach did this for about a quarter of the cost compared to the input approach* (Soeters et al, 2011).

The number of PBF impact studies is growing and the trend is encouraging. A "pure" PBF approach (this means that it incorporates at least 80% of the best PBF practices) tends to produce quality enhancements as well as several quantitative improvements. The value of PBF approaches has been a matter of discussion 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 the outcomes in terms of outputs and quality of services in health service delivery (Basinga et al., 2011; Eichler et al., 2009; Meessen et al., 2007). In Cambodia, Loevinsohn and Harding (2005b) indicated that contracting was more robust than routine government health services in terms of 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 an enhanced level of 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 have been 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 several countries that also show positive results such as Zimbabwe, Nigeria (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 for PBF have been published such as 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 in 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 throughout the period 2000-2015 (Petrosyan V, et al, 2017). In 2018, there was also the very critical and derogatory article on PBF (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 short: PBF works on quality and most quantity indicators, but more action research is needed to advance specific areas, such as how to target the vulnerable or how to integrate community PBF activities or PBF in emergency situations.

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2. A SIMPLE EXAMPLE of WHAT is PBF & CHANGE TOPICS

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Main messages of the module

- PBF moves away from a number of existing ideas and paradigms.
- PBF encourages the flexibility to learn from practical successes and weaknesses and constantly aims to adapt best practices and instruments accordingly. This is an on-going process.
- In PBF pilots, existing national laws may be temporarily put on hold in order to test in how far new ways of doing things may produce better results. Once improvements have been demonstrated, the laws may be changed.

2.1 How does PBF function: a simple example of a health centre

The following table shows a PBF health centre, in which 24% of the revenues are generated by PBF subsidies: 18% is generated by the quantitative results. Each activity (also called 'indicator') receives a fixed subsidy such as e.g. $ 4.00 for a fully immunized child. Every month, a local Contract Development and Verification Agency verifies the quantitative results. Similarly, the supervisors of the District Health Team review the quality of the services at the facilities. Vulnerable patients receive a 4x higher subsidy per indicator for which in return the health centre exempts the patient. In this way: on top of the quantity subsidy, 4% is added for the remoteness bonus and 2% for the quality bonus. Besides de PBF subsidies 36% is generated by the direct payment of salaries, 24% by direct cost-recovery and 16% by health insurance income.

Revenues *Health Centre for a population of 15,000 people*	**Nbr provided**	**Unit Price**	**Total**	**%**	**$ / person / year**
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 *must balance with the revenues*			**Total**	**%**	**$ / person / year**
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%	
Rehabilition			$ 550	6%	
Increasing the reserve at the HF bank account			$ 500	5%	
Sub Total expenditures:			**$ 8,352**	**86%**	
Payment performance bonuses *(revenue minus sub-total)*			$ 1,380	14%	$ 1.10
Total Expenditures			**$ 9,732**	**100%**	$ 7.79

Expenditures of the facility must be in balance with the revenues. This is done through the profit, which may vary every month depending on the results. When the "profits" of the health centre increase the performance bonus also increases. This system stimulates staff to increase revenues, to reduce unnecessary expenses and thereby everybody is incentivised to be efficient. Staff remunerations should not exceed 60% of total expenditures: in this example, it is 50% (36% salaries + 14% performance bonus), which is ok. Drugs expenditures - in a competitive environment – could amount to around 15-20% and the health centre does well by investing 5-10% of their earnings in rehabilitation. Yet, these proportions may be higher or lower depending on the specific circumstances of each health facility.

Once a *"profit"* is made, the issue is how to distribute this profit fairly. The following table shows how this can be done. The distribution tool takes into consideration a number of criteria such as the academic level of each staff member (= the salary index value), the staff responsibility, overtime or hours lost, the non-private practice bonus, the department quality score and the individual performance. The method on how to measure the quality of services is presented in Module 6. The indices management tool, which measures the individual performance of each staff member, is shown in Module 15.

Staff Categories	Salary index value	Fixed (basic) salary	1. Respon-sibility bonus	2. TOTAL points over time	3. NON Private Practice Bonus	4. Quality Score Departmen 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 the health centre managers have the power to influence decision concerning the buying of inputs, human resource management and the setting of the cost-recovery tariffs. Management must be pro-active innovators equipped with management skills and having autonomy instead of being the passive recipients of instructions from above. This also requires regulators at national, regional and district level, who stimulate autonomous management at the providers, who coach and assure that quality standards are being met. The CDV Agencies develop the performance contracts, verify the output results, coach the provider managers.

2.2 Change issues in PBF and for the participants

In the table below, we present issues where PBF moves away from existing ideas or paradigms. These change issues may be *time specific, country specific* or *person specific*.

Change issues may be *specific to time.* For example, there was an intense debate some years ago about the best balance of distribution for the subsidies between 'quantity' and 'quality' indicators or about the need for the separation of functions. These debates seem now largely solved, but are replaced by new discussions, for example how to strengthen the PBF community activities and how to ensure financial access for the poor?

Other change issues that arouse strong debates may be *specific to a country* such as in Burundi around the debate of free health care. In Rwanda and the DRC there are debates about the role of health insurance. In DRC, there is also the fierce debate to which extent NGOs and the MOH should continue to monopolize the essential drugs market?

Other *change issues may be person* specific such as for each PBF course participant. Some participants are already involved in PBF and for them there is no need to change their ideas. Others only superficially know PBF and they may still need a process of developing their ideas.
In Module 9 (advocacy skills) and Module 10 (conflict resolution and negotiation skills) the processes that lead to successful changes towards improved health systems will be presented.

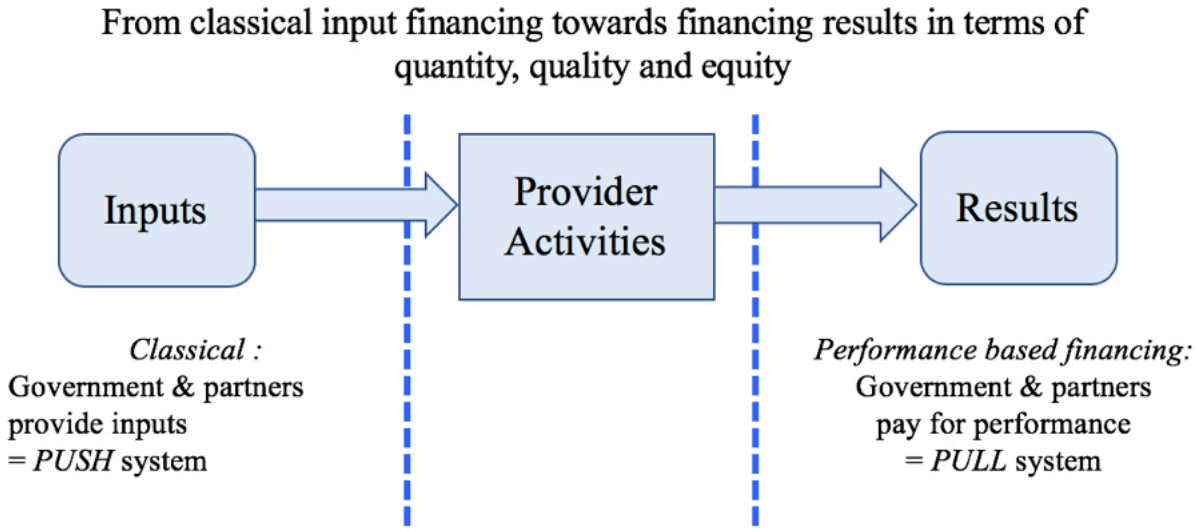
2.3 How does PBF relate to Primary Health Care and the Bamako Initiative

Performance-based financing shares with the Alma Ata Primary Health Care concept of the 1970s and the Bamako Initiative of the 1990s the same social aims. Yet, the hierarchy of aims and the strategies of how to achieve the social aims 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 *the* 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

Primary Health Care 1975 - onwards	Bamako Initiative 1987 - onwards	Contracting – RBF - PBF 1998 and beyond towards SDG
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 empowerment 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 was the outcome of a discussion in the community of practice PBF 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 similar to 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 geographic equity bonus; (4) Apply the provider equity bonus; (5) Exempt a proportion of vulnerable people up to 5 to 20% 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 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.*

Footnote: PBF draws from microeconomics, systems analysis, public choice and new institutional economics theories. The effectiveness can be enhanced by demand-side interventions such as equity funds, conditional cash transfer programs, voucher schemes and obligatory community based health insurance programs.

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

Some countries use the term performance-based financing (Cameroun, DRC, CAR and Nigeria), other countries use the name result-based financing (Zambia, Zimbabwe, Guinea), while the WHO prefers the term strategic purchasing. Basically, the name is not the issue but it is the definition and its underlying best practices that matter. We will use the term PBF in this book.

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 best practices for which there is scientific evidence and that is constantly improved and adapted based on new evidence.

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 *roles of the regulator at* national, regional and district level are to define output, quality and equity indicators. The regulator also costs out public budget with equity bonuses for vulnerable regions, facilities and individuals. Regulator interferes when facility becomes a danger to public health, or when the facility 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 assure that *revenues and expenditures are balanced* while providing quality and equitable services with motivated staff at the risk of non-renewal of contract and bankruptcy;
7. *Contract development & verification* (CDV) agencies negotiate contracts, verify results and coach managers to use business plans and indices instruments; the subsidy payments are done by a different organization.
8. Local community groups *enhance patient interests* and health facilities conduct *social marketing*;
9. Promote efficiency and cost containment by CDV agencies and government to pay *in cash or through bank transfers* for results instead of 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 towards other sectors 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 monopoly of power will not produce transparent results in particular 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 cost 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 the subsidies that the regulator and CDV Agencies are willing to pay for national package services. Facilities also respond to increased patients' or consumer demand. Facility managers balance the revenues from third 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 are responsible for developing contracts with facilities and the verification of the activities for which payments are made. CDV Agencies also coach facilities to use business plans and indices instruments for analysing and planning facility revenues, expenditure and performance bonuses. The Ministry may also recruit independent counter verification and audit organisations that double check the performance of the CDV Agencies, the community based organisation and the local health authority quality reviews.
4. Payment function. To assure the ring fencing of the budget for the provider subsidies it is better to separate the role of the contract development and verification (preparing the monthly or three monthly payment) from the actual payment in the bank accounts of the 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 the services and verify whether subsidized activities have taken place the results of which are taken into account in the performance payments for the facilities.

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

3.2.2 Competition for Contracts

Competition for contracts, goods and services is important to obtain the best possible price-quality mix from suppliers for the consumers, insurance organisations and governments. Without competition suppliers tend to become complacent and may abuse their market position if they are the only supplier for example in a given health or school catchment area. Suppliers or providers of services may be

public, private and private-for-profit. Before giving the contracts a mapping of (health or educational) suppliers is important in order to increase the choice and thereby 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).
Natural monopoly problems such as hospitals in rural areas devoid of other providers are not considered problematic by PBF. If managers are the bottleneck of poor performance they may be replaced. Therefore, the Ministry may insist that managers are only recruited after a competitive process.

3.2.3 Public-Private Partnerships, Non-Discrimination and Principal & Secondary contracts

In PBF, the public or private status of a facility is irrelevant in the decision to obtain a contract. The main criterium is in how far the facility is capable to deliver good quality and equitable services. Local authorities and CDV agencies may 'map' existing facilities and select the best. The selection criteria may include availability of qualified staff, completeness of the services provided, state of infrastructure, the quality of services and the willingness to enter in a contract. It is also important to find out what are the resources available and the ambitions of the potential principal and secondary contract holders to advance the quantity and the quality of the services. Once a facility has won the principal contract, they should not consider any other facilities in their catchment area as 'competitors' or 'threats' but as an opportunity. In PBF systems, these other facilities may be sub-contracted by the principal contract holders. Typically, 20% of the production may be retained by the principal provider, which forwards 80% to the 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. Under such circumstances, only serious candidates are selected to obtain a secondary contract and to contribute to the national packages. Formalizing well performing (private) facilities and subsidizing their services will put pressure on the informal or illegal facilities to close down voluntarily because they go 'out-of-business'.

An accreditation system is highly recommended whereby the regulator accredits those structures that achieve a minimum level of quality. This accreditation can be reinforced by a logo that must be recognizable for the population so that they know that the government has confirms that this structure provides quality care. Once the accreditation system in the public and private sector is operational, it makes it easier for the regulator to close those facilities that perform below acceptable standards.

3.2.4 Regulators' Role to Define Indicators, Cost Budgets and Assure Quality and Competition

Regulators must be specific on what services or packages the government purchases from facilities in terms of output, quality and equity. Yet, they should interfere as little as possible in the strategies on how facilities produce the desired results. The second role of the regulator is to cost adequate funding for the purchasing of the health packages and to pay realistic subsidies to obtain financially accessible services of good quality. The third role of the regulator is to review in how far certain regions (provinces or districts) facilities are in more vulnerable position than others due to the poverty of the population, distance to the capital, or unfavourable location. Such inequities may be compensated through additional bonuses on top of the basic subsidy for the indicators. Moreover, governments may subsidize fee exemptions for the vulnerable. Another crucial role is to assure that the market operates well and that there are sufficient providers to serve the population and sufficient distributors to serve the providers – i.e consumers and providers should have choice.

3.2.5 Autonomous Management of Facilities

With reference to the theories of systems analysis and microeconomics, a facility is both an independent component of the system and an economic actor of supply. Based on these theories, PBF proposes that

independent facility managers are best positioned to find solutions to solve specific problems. Facility managers must therefore have the freedom to hire and fire and to set user fee tariffs in dialogue with their communities and 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 is the profit that subsequently the managers can pay to their staff as performance bonuses. It creates a strong positive incentive for staff to work better. The PBF indices management tool assists managers to translate profits into performance bonuses for each individual staff member.

In contrast, when facilities perform poorly, revenues and performance bonuses will diminish and this creates strong *negative* incentives or even the closure of the facility. Following this logic, poor performance is not considered the problem of the CDV Agency or local authority but primarily of the facility. When problems are too serious to solve, the CDV Agency may either postpone a new contract or even cancel the contract 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.

The Rwandan case: Decentralizing human resource management to health facilities.

The Ministry of Health believed that central administration of government facilities and health workers was a source of inefficiency but did not want to privatize government facilities. Management of government facilities was then made autonomous in 2008 whereby staff recruitment and salary payments became the responsibility of autonomous health facilities. Health workers with a civil servant's status were then transferred to become employees of autonomous facilities. Government today pays a fixed lump sum subsidy to each facility, which roughly covers the basic salaries of health staff but leaves the individual bonus payments to facility managers.

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 x 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 x Q equals the expenses engaged by the facilities;
G + A + C equals the total income of the facility.

If revenues are too low, compared to expenditures, new revenues should be found or expenses should be reduced. When aiming to achieve activities of higher quality standards, more revenues are required. Experience shows that the revenue base for well performing primary providers and hospitals with adequate staff levels in low-income countries should reach a minimum of 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 be obtained by other 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 assure a stable income, which is not too dependent on external often-unreliable revenues.

3.2.7 CDV Agencies Negotiate Contracts and Coach HF to apply Management Instruments

Well-equipped and independent Contract Development & Verification agencies (CDVs) are responsible for the contract development & verification of services from providers (and in other sectors from schools, etc.). The first instruments are the business plans (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. The instruments to assure that facility managers balance revenues and expenditures are presented in module 15 'indices performance management'. This tool assist managers to calculate the income, to plan its crucial expenditures and to calculate the individual staff performance bonuses based on SMART criteria.

3.2.8 Local NGOs defend the Consumer Interest & Social Marketing

Obviously, in PBF patients, consumers, pupils of schools and their parents are crucial stakeholders. It is their interests that should be assured in the end. To that purpose, PBF proposes to identify independent local community groups that conduct satisfaction surveys and verify in how far facilities did carry out the services for which they claimed subsidies. Moreover, such community groups verify the satisfaction of the consumers with the services. The results on satisfaction can be converted into a score that influences the output and quality subsidies of the providers.

Another important community PBF element is social marketing conducted by the providers and thereby to change community behaviour towards more healthy practices. Community PBF indicators have been developed such as household visits following a protocol and the detection and identification of drop outs for important activities such as immunisations, TB & Ebola treatment, family planning, etc.

3.2.9 Seek Efficiency Gains by paying Cash and let Providers Freely Choose their Inputs

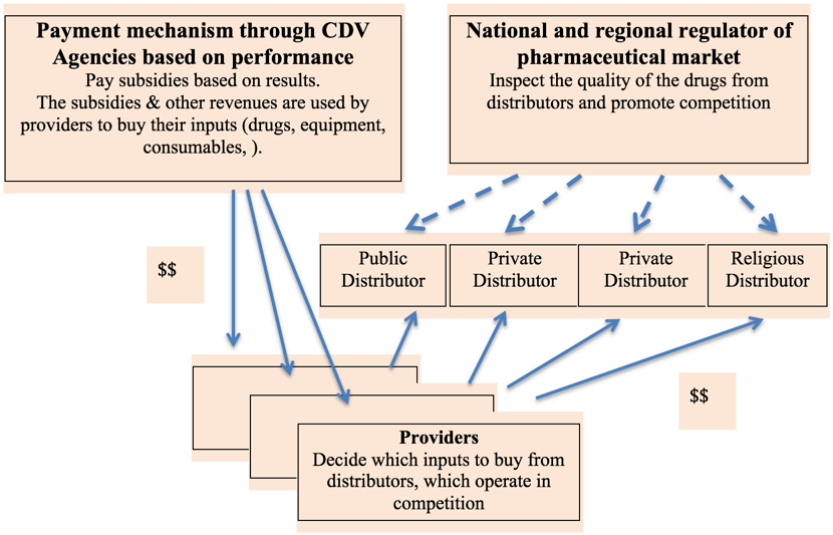
Payments of PBF subsidies should only be **in cash and not in kind.** This assures that facilities are de facto autonomous to use the cash money to solve their specific problems. In contrast, government, aid agencies and NGOs adhering to traditional input based aid-systems routinely distribute inputs such as drugs, equipment, infrastructure rehabilitation and salaries. This has proven to be inefficient: resulting in some products being over abundantly supplied and unwanted, while other products are in short supply leading to stock-outs. Studies in PBF projects such as from the DRC indicate that one US dollar given in cash through PBF to a facility may have the same result as $4 invested centrally through inputs such as medicines, equipment, and facilities.

Therefore, in PBF, government must assure that facility managers **have free access to several distributers operating in competition**. 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 arguing that monopolies typically lead to a loss of welfare. However, this does not seem to stop organizations from Europe or the USA from promoting public essential drugs monopolies in low-income countries.

In PBF, the role of the government in the distribution of inputs should be to guarantee anti-monopoly and cartel rules and to promote competition by accrediting independent distributors, which fulfil 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 drugs distribution was imposed in DRC through provincial distribution centres with the argument that it would assure good quality drugs. This argument for monopolies was not confirmed by several Cordaid studies conducted between 2006 and 2008 in the province of South Kivu. They showed that the monopolization of essential drugs by international NGOs and government in two districts created serious drug stock outs in health facilities. The stock outs were confirmed by patient satisfaction studies among 200 households as well as by interviews with health workers. In contrast, in two health districts that applied PBF and where health facilities were allowed to purchase essential drugs from any distributor accredited by the provincial health authority, there were no drug shortages (Soeters et al., 2011).

National regulators set the quality standards for drugs and equipment while the peripheral level regulator should control in how far these standards are respected. The drug distribution system proposed by PBF is visualized as in the diagram. In this approach, the state uses the comparative advantages of the private sector to create a cost-effective and good quality mechanism to distribute essential drugs and medical equipment. Government should also encourage private investors to start industries to produce drugs, mosquito nets, equipment, etc. instead of purchasing these inputs from abroad.



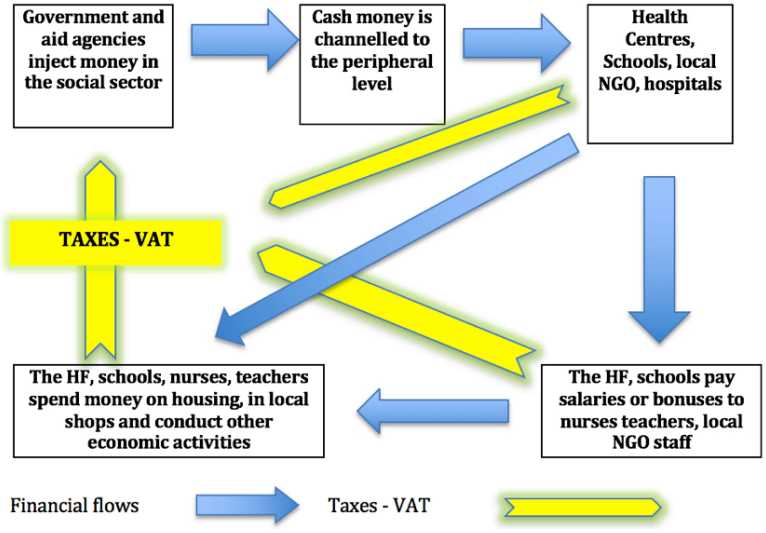
3.2.10 Economic Multiplier Effects to stimulate Local Economy and Generate Tax Revenues

Due to its re-directing of cash to the lower echelons of the system, PBF will also contribute to increasing funds available at those levels. PBF benefits the local economy, as money changes hands for procuring inputs, and in spending in the local economy, for instance as an outcome of increased income of local staff.

Economic multiplier effects will develop as follows:
See also http://www.youtube.com/watch?v=H3nyc8XHrQc

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

Government can tax these economic activities and may furthermore use this money to reinvest in the local economy. Through this mechanism, invested money 'multiplies' itself.



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.

A first multi-sector PBF project was launched in South Kivu, DRC in 2008, included health, education and rural development. Education sector indicators include schooling of girls and boys, sex education sessions as well as quality indicators such as the availability of educational material and furniture and the number of children per class. Rural development indicators include bridges rehabilitated, 1 km of road cleaned of grass, etc.

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. Boosting the equity agenda came as a response to the disappointment with the traditional equity mechanisms that did not meet the expectations, such as several forms of voluntary health insurance systems, fee exemption schemes and, in particular, generalised free health care. It was also a response to justified criticism on the earlier designs of PBF until 2010.

The *first principle* in the PBF equity strategy is that providers *must* provide *acceptable levels of quality*. For this, providers need to generate *sufficient revenues* estimated in low and middle-income countries at USD 7 per capita per year for health centres and 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 in the most *efficient* manner.

The *third principle* is that it is *not* the responsibility of individual providers to finance free services for the poor. That responsibility lies with the government or other partners through an external financing mechanism. *How much* equity should be aimed at in a given society is the expression of the 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 be translated into a realistic tax collection system to obtain the desired funds.
Another principle is that the limited pubic funds available for equity purposes should target the vulnerable in the most efficient manner and should not be spread equally among large population groups such as children under-five, whose parents are not necessarily poor.

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

3.3.1 Subsidising positive externalities and public goods

PBF subsidies for activities with *high positive externalities or public goods characteristics* are designed to be so high that the cost for patients becomes zero and will therefore automatically include the vulnerable and the poor. These activities include family planning-, immunization-, tuberculosis, HIV/AIDS diagnostic and therapeutic services and various kinds of social marketing activities through household visits by qualified staff following a protocol. Subsidies higher than cost price may also be proposed with the aim of stimulating providers to incentivise patients into certain desired behaviour such as parents fully immunizing their children, paying extra money for TB patients or malnourished children for transport or supplementary food. These PBF demand side incentives operated through the supply side are similar to voucher systems or conditional cash transfers (CCT). By organising them through the supply side in a package, the administrative costs will be many times lower.

3.3.2 Giving market signals to providers to reduce curative care tariffs

Small PBF subsidies *other curative services* (without externalities) automatically reduce user fee tariffs through market mechanisms. Managers will make a trade-off between reducing user fees and thereby increasing the utilization of their services and obtaining more public revenues. In the microeconomics

module in this manual it is explained that provider subsidies shift the supply curve of the services to the right and thereby reduce 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, close and remote, difficult to reach areas.

The selection criteria may include the following:
a. The number of inhabitants per health facility: Higher => more subsidies;
b. The density of the population per km^2: Denser => lower subsidies;
c. Number of trained staff per 1000 population: More personnel => lower subsidy;
d. Poverty Score: More Poverty => more subsidies;
e. Number of travel hours from the capital to the health district: More hours => more subsidy
f. Safety factors: Less Security => more subsidies.

The evaluation of these criteria is usually determined centrally during the costing of the program. 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 is to correct the differences between the advantaged and disadvantaged health facilities in the same district. For example, if the inter-district vulnerability is in the 30% category, the options for intra-district health facility vulnerability will be 10%, 20%, 30%, 40% or 50%. The average bonus for all health facilities in the district must remain 30%.

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

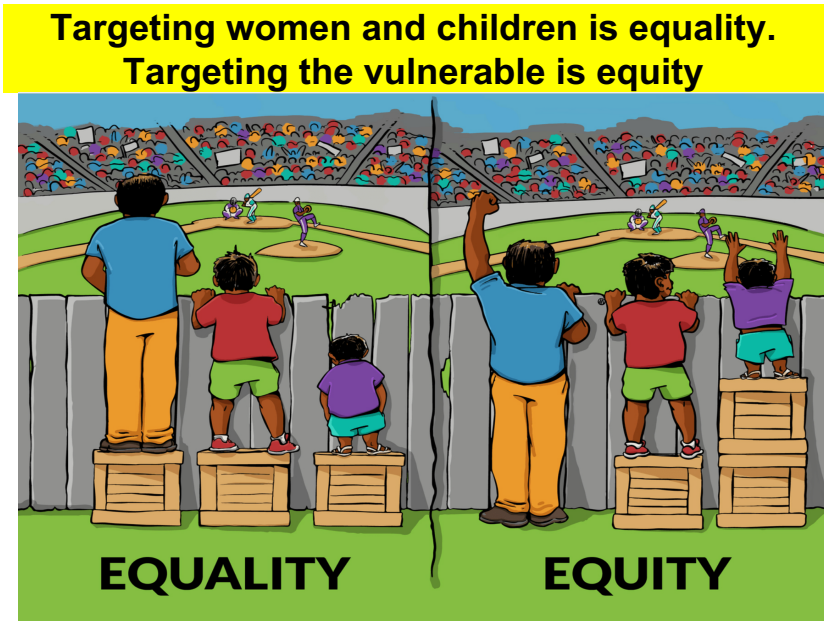
The criteria, justifications and indicators of vulnerability may be as follows:

	***Intra* district criteria**	**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 / km2
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 system of *two levels of subsidies per curative indicator* or services. A lower subsidy will be paid for those patients who can afford to pay user fees themselves and another higher fee will be paid to the provider in exchange for fee exemption for needy patients unable to pay. If, for example, we pay $ 0.30 for a outpatient consultancy for those who can afford to pay, we may pay $ 1.20 for a financially vulnerable patient. For this to work the government may propose that each health facility is allowed to exempt up to e.g. 10% or 20% of all patients depending on the inequality and poverty of the country. And for this vulnerable patient the health facility receives a for example 4 times higher subsidy in exchange. The CDV Agency verification officers each month check how many patients were exempted and reimburse the health facility through the monthly invoice. Yet, the *prompt payment of the subsidies* is important because the facilities must pre-finance the support for the vulnerable. This equity strategy of targeting *financially*-vulnerable people is different from targeting the *physically*-vulnerable groups like women or small children, who are not necessarily financially vulnerable. The latter can be considered as equality. In this strategy government spends public money for groups that do not necessarily need the financial support and is therefore less efficient.

3.3.6 PBF response in the event of natural or humanitarian emergencies

During a natural or humanitarian crisis, the provider may be authorized to exempt the affected or displaced persons from fee paying. The proportion of exempted patients may increase from the standard 10% 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, the local provider managers decide how to best use it. The PBF emergency response has shown to be many times

more efficient than the alternative of international organizations taking over the emergency response, which is also not a sustainable approach.

In this approach, the district validation committee may decide which health facilities will benefit from the higher exemption ratio of 25%, 50% or 100%. The national PBF Unit may double check during their evaluation visits in how far the decisions taken by the district validation committee were justified. The national PBF Unit should thus assure that there is not an inequitable application of the criteria between districts and regions. The national PBF Unit also provides the budget per region for the subsidies and thereby assures that there will not be an overconsumption of the PBF budget.

3.3.7 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* which entails having a village committee or a community group able to decide who in the community should be considered poor. This approach takes into consideration local knowledge of individual circumstances, allows for local definition of need, and transfers the costs of identifying beneficiaries from the program to the community. However, local personnel may also have other motives besides accurately identifying program beneficiaries, which could maintain or exacerbate patterns of social exclusion.
- Allowing health facilities to identify « *circumstantial vulnerable patients* ». This means that patients will be exempted from payment and the decision lies in hands of the health facilities for road traffic accident patients with no means, vulnerable patients from outside the catchment area, seasonal workers, internally displaced people, etc.

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

In this paragraph, we propose a text (inspired on the DRC) that can be used as an example for a national PBF manual of how to identify the vulnerable in the society. This text needs to be adapted to the specific local conditions of each country.
The DRC PBF program allows health facilities to exempt up to 10% of the curative consultations with seven indicators, which will be reimbursed by the PBF program. 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», « caesarian 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 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 to enter 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.

Members of the Committee for the Vulnerable may be the following:

- A president who is a respected member of the local community, not related to the staff of the health facility and also not a member of the Health Committee;
- A Secretary who is a member of the health facility staff;
- Two members appointed by the local community and not related to the staff of the health facility and also not a member of the Health Committee;
- A high proportion of women in the Committee is desirable.

3.3.9 Proxy means testing tool. Example from Kenya

This tool must be adapted to the local situation and the instruction may be that a maximum 10% of all patients can be exempted from fee paying (see paragraph 3.3.5). The district- and provider specific vulnerability is already taken into consideration 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 each indicator in the tool and finally add together the total points scored for all the indicators to determine the overall poverty grade.*	**Score** *Circle correct answer*
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 others 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** **…**

3.4 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 centre, a religious health centre, 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 analyse the data they collected and compare them with the standards such as the optimum number of qualified staff per thousand habitants or the revenue in USD per person per year target in 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 an autonomous management such as for buying their own inputs, hire staff, set 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?
- The providers generate how many revenues per capita per year from cost sharing, subsidies, and government budgets, 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 a sufficient number of qualified staff to provide the full basic package including for household visits following a protocol, nutrition and HIV /AIDS activities?
  Standard: 1 qualified 1000-target population.
- Does the health facility apply the indices management tool so that staff is paid on the basis of various performance criteria (responsibility, additional or lost hours, individual performance evaluation, non-private practice agreement, 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 decentralising power to peripheral actors of demand (consumers) and supply (suppliers).
- The theory of sy*stem analysis* is developed to solve complex problems such as how to launch a rocket to the moon or how to achieve sustainable development goals. The problem is broken down into smaller components (or black boxes) that are solved by autonomous specialized entities.
- The *public choice* theory describes the behaviour of actors in general and civil servants in particular and proposes how to influence their behaviour for the promotion of 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 more rewards and 30-40% of the remuneration should be variable and can be paid in the form of 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 so that there is 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 cannot be foreseen. 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 memorandum of understanding and are based on the mutual interest to collaborate.
- In PBF, we often start with a relational contract approach when events are difficult to predict. After learning the lessons during the pilot PBF phase the next contracts can become more predictable; And thus, with time, contracts can become *more classical than relational*.

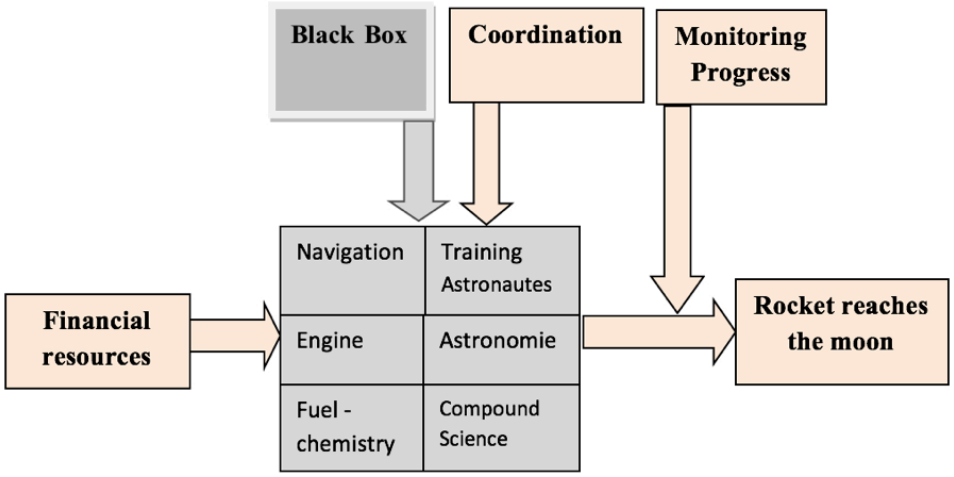
Theories linked to PBF

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

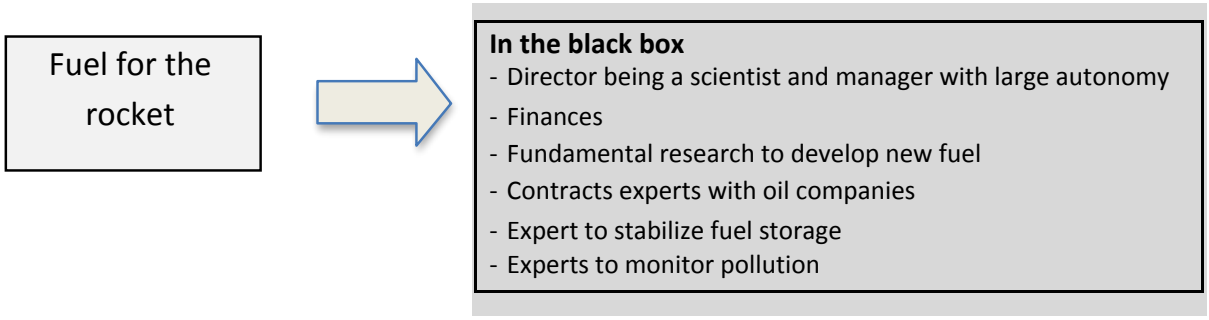
4.1 Systems Analysis

Systems Analysis theory has been developed to understand complex and interactive systems such as most social and biological systems, or concrete physical systems such as how to launch a rocket to the moon or construct a modern aeroplane. Systems Analysis studies the relations between the different components of a system. The basic idea is that while each of the components must operate independently and autonomously (in the “black box”), it requires coordination and monitoring to assure that the objectives of the system 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 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 as independent (i.e. as a black box), which must be managed by an autonomous specialised team.



Take the example of the fuel component. The fuel needs to have certain characteristics: a certain power, quantity, 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: with experts in chemistry and physics; with negotiations with an oil producer to be conducted, etc. The coordinator of the entire moon rocket project cannot oversee all these details and processes. Only the manager of the fuel component can understand its operational details. The coordinator of the total moon project must monitor the fuel department on results and not in detail on how they are executed. Therefore, the overall coordinator compares results with predefined and specific objectives or criteria. For that purpose, performance contracts between the coordinator and the manager of the fuel component must be established.

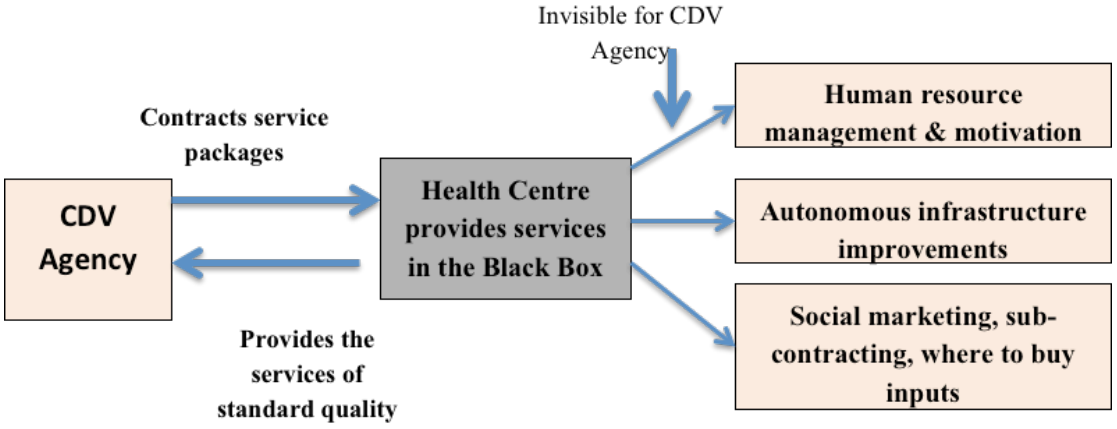


Performance-based financing is based on Systems Analysis theory. Neither decision makers at national and peripheral level nor CDV Agency managers know, or should aim to know, all the details concerning the management, logistics and financial aspects of each provider. These details differ for each provider and are impossible to know for a central planner or decision-maker. Any attempt to control and harmonize the strategies in each facility from above in a hierarchical manner is bound to fail and create more damage to society than would be the case 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, facility committee and staff control the strategies, they know which inputs they need and where they can obtain them. They may develop locally adapted social-marketing approaches and make use of the opportunities to collaborate with local private providers or other stakeholders in the catchment area, etc.

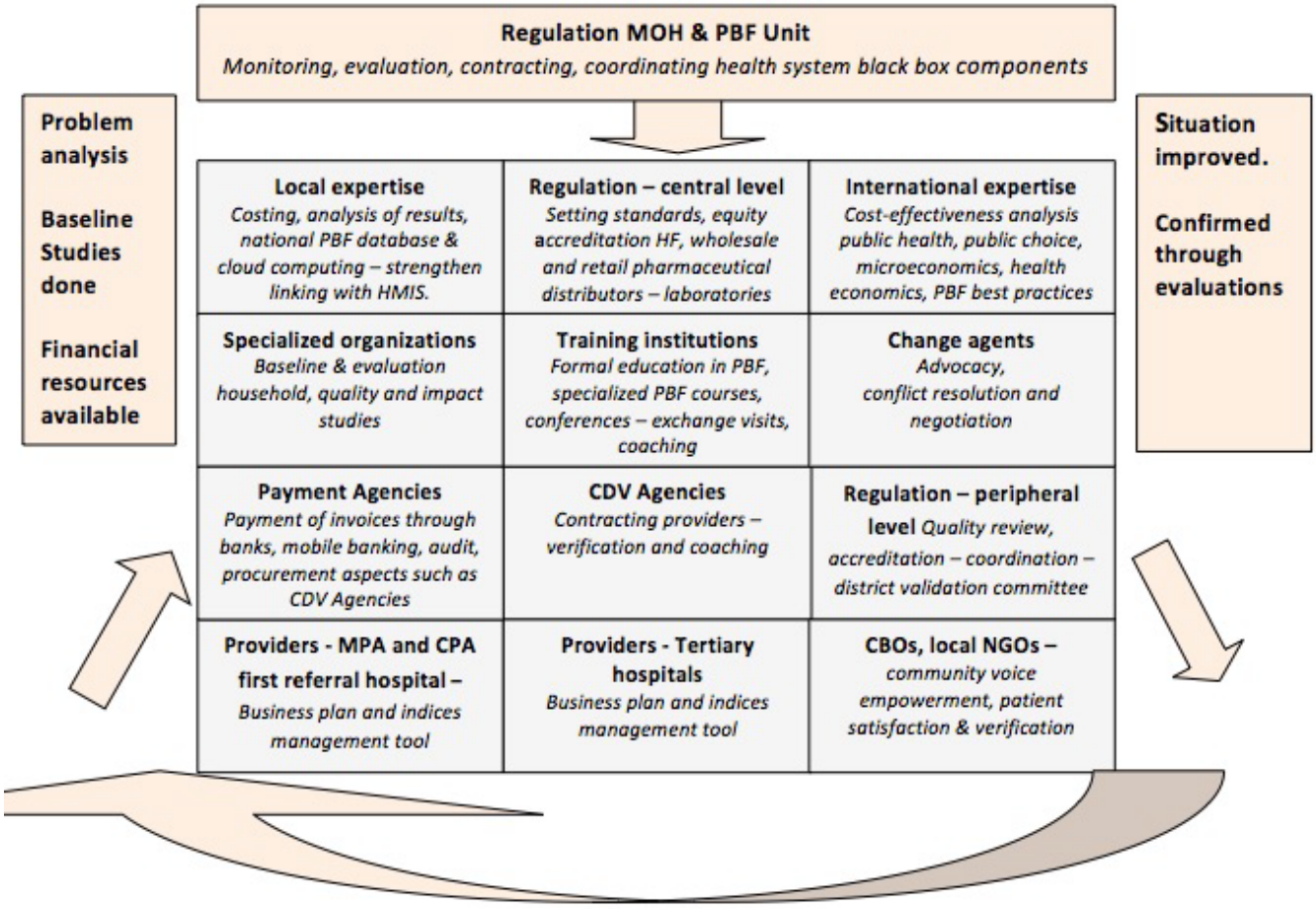
Yet, the 'black box' approach does *not* imply that internal procedures of providers should be fuzzy or ambiguous. In PBF, the regulator- and the CDV Agency representatives may demand from facility managers that they are transparent in their decisions. Facility managers should be able to show the

three-monthly business plans and the outcome of the monthly internal 'indices' management tool. The latter calculates the income of the facility; its expenditures and how individual staff performance bonuses were calculated. Allowing such autonomous management *with* transparency should be the foundation for facility managers to have decision-rights, e.g. on recruiting staff or purchasing drugs and equipment from accredited distributors *without* continuously consulting higher authorities. By contrast, in traditional social 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 assures that the 12 basic components, is oriented towards the improvement of 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, in reality, if their private interests are not taken into account, civil servants may not behave in the public interest or may even inflict damage on society. In some countries, police officers, health workers, teachers or authorities are more part of the problem than of the solution – taking bribes, over-prescribing 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. It is therefore of crucial importance to find the best way to explain the behaviour of civil servants.

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

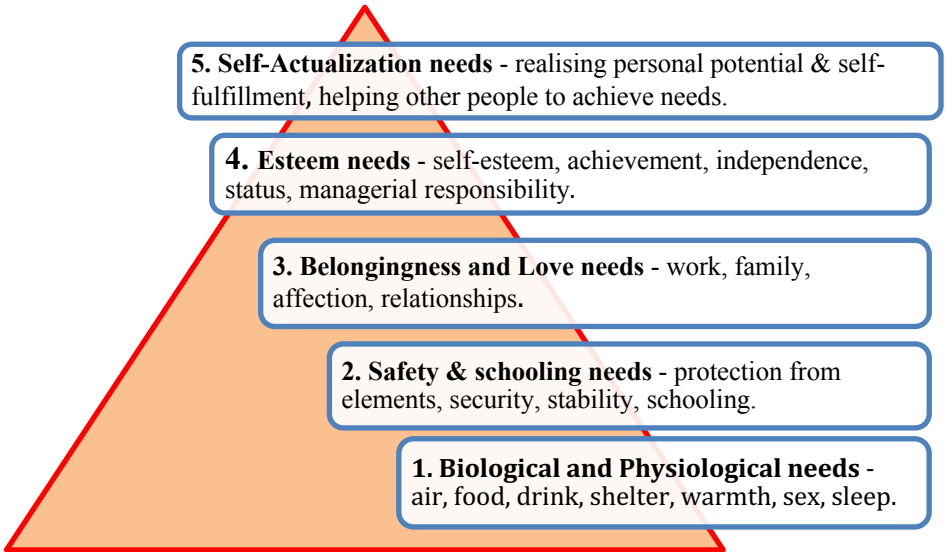
1. ***Public interest behaviour*** theory assumes that civil servants will follow their job description and serve the interests of their patients, pupils, citizens, etc irrespectively of their remuneration or salary. The public-interest view of government sees government as composed of individuals who are motivated by a desire to serve the public by doing what is 'right'. It assumes that the state is able to identify the public interest and that its civil servants are competent to implement that interest. In certain countries, the salary of civil servants is indeed high enough to meet their basic needs and then it may become realistic to assume that they implement common social tasks without temptations to corruption or self-enrichment. Yet, even when basic salaries are reasonable there are still examples of civil servants abusing their power. Moreover, what to expect 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 feeding, habitat and sending children to school.

2. ***Medical ethics behaviour*** theory. According to this theory, health workers behave according to the Oath of Hippocrates. Universities often require students to swear by this oath when graduating. It includes respecting scientific standards, applying all measures needed for the benefit of the sick, while avoiding overtreatment. It assumes health workers to be sympathetic; to respect the privacy of patients and that prevention is preferable 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. Thirdly there is the public choice theory that is based on the idea that civil servants, or other interest groups conduct ***private interest behaviour,*** which assumes that each economic agent aims to maximize the private interest. If both suppliers and consumers aim to maximize their own benefit under perfect competition conditions, then this will also maximize the public interest by making the most efficient use of limited resources. A similar argument can be developed for the behaviour of 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 become at least overlap to a certain extent (congruence of goals). It assumes that civil servants are mostly self-interested agents and public choice studies their interactions in the social system.

PBF's understanding of how civil servants act, is built on 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. In particular, it aims to explain and thereby influence the likely behaviour of politicians and civil servants such as health workers, teachers, police officers etc.

Maslow's hierarchy of needs, which is close to public choice theory, further help us to understand the behaviour of individuals such as shown in the following diagram. Only when the lower order needs of physical and emotional wellbeing are satisfied one is able to focus on the higher order needs and personal development. It is clear from the above diagram that few civil servants in developing countries have achieved the higher levels of self-actualization whereby they start helping other people to achieve their needs.



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

In PBF, we assume that the majority of civil servants are mainly motivated by their private interests and for this purpose it is necessary to ensure that there is a link between the public interest and their private interest. 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 the public choice theory and proposes to avoid any form of perverse incentives.

However, does this mean that *intrinsic motivation* is not important? 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 to be best assured when the system creates an environment in which someone who does well is recognized by his peers.

4.2.2 Positive public choice incentives to motivate workers

1. It is **firstly** necessary to reach a level of remuneration (consisting of salaries and performance bonuses), which can support a family in terms of primary necessities such as food, clothing, habitat and schooling for children. The PBF baseline studies should identify this essential level of remuneration. If the baseline remuneration level is lower than the minimum level, then this should be increased by the PBF intervention. For example, in Burundi at the baseline for the PBF intervention both in health and education we found that the total remuneration should triple from 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 for salaries versus bonuses is: around 60% fixed salary against some 40% for the performance bonuses. Yet this may vary depending in how far salaries are relatively high or low compared to the cost of living. For example, in DRC salaries are so low that the bonuses must be more than 40% of the total remuneration while in Ghana and Zambia salaries are already rather high so that the proportion for performance bonuses may be lower than 40%.
3. The **third** positive incentive is that there must be an administrative and political atmosphere of transparency and support for check and balances. It is also important to align the objectives between principal and agents or administrations and providers once each actor understands that everybody is aiming for the same objectives within the context of a shared vision. Facilities may aim to create an atmosphere among its workers of common goals and of being part of a 'family'.

4.2.3 Negative public choice incentives

1. **Reducing staff incentives.** When facilities pay performance bonuses to their staff these bonuses may be stopped when staff members do not follow their job description or when they do not achieve pre-determined tasks. Even small deductions in the performance bonus tend to serve as a strong "stick" to prevent undesirable behaviour.
2. **Non-renewal of facility contracts.** When the performance of facilities is reasonable, contracts will be renewed without any problems. When there are minor problems the CDV Agency may delay approval of the business plan (and the contract) until a new more convincing business plan is made. When the performance of the health facility is so poor that it is unlikely that targets will be achieved, the contract may be ended and a new facility or management team may be invited to propose a business plan for the target area.
3. **Administrative measures.** When workers conduct themselves unethically, it is important for the management to give instructions to correct this behaviour. Events that are more severe may lead to suspension or even dismissal. In the private sector, this is usually effective. Where it concerns government workers, administrative procedures tend to be complex and often very bureaucratic, so taking administrative measures may 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 caesarean sections will create supplier-induced demand or provider' moral hazard. Hospitals will respond by maximising their profits and conduct interventions for which there is no need. One should equally avoid perverse incentives by giving reimbursements above cost price for curative care activities for example in free health care schemes. One may propose to the provider's subsidies for free health care elements for vulnerable patients at 60-80% of the cost price. This will avoid moral hazard and be just enough for the provider to accept the targeted free health care exemptions.

4.3 New Public Management and contract theory

New Public Management is a theoretical framework that introduces market managerial approaches to the public sector with the aim of improving the efficiency of public services (Craig and Porter 2006). Contract theory is one important component of the New Public Management approach of the 1980's and 1990's (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 when private sector investors respond to the demand for health services created by the population in the fast expanding cities. The public sector is absent from responding to this demand. In cities, such as Douala and Brazzaville the mapping of health facilities in preparation of PBF interventions found that over 80% of the health facilities were private. Most were licenced by the government but sometimes also without licence. So, this is not a planned privatization but rather a de facto privatization.

Contract theory is based on principal-agent theory, which echoes the purchaser provider split, and in which the contract is the tool to bind the relationship. Essentially, contracts involve the need for communication between an agent and a principal, so that there is a clear understanding of both the needs of the principal and the ability of the agent to meet those needs in a competent manner. To avoid misunderstandings between the agent and the principal contracts should be signed between two entities – the contract must be *bilateral*.

Contract theory helps to focus on results and overcome the constraints that prevent governments from effectively using their resources. It aims making use of the comparative advantages of private and public providers. It introduces competition (through bidding) to increase effectiveness and efficiency of services (Batley and Larbi 2004; Loevinsohn and Harding 2005a). It may also aim at increasing equity among consumers in accessing services. Moreover, the regulator must aim to create as much as possible the conditions of perfect competition. Promoting the private sector to invest in health services will increase the actors of supply. Informing patients about health services will reduce the chance of supplier-induced demand and by informing the community about the quality scores of health facilities it will reduce poor services. Setting standards, quality evaluations and accreditation further enhances the perfect competition conditions in the health services market.

In order to prevent unfair advantages in the transaction, extra efforts on the part of principal are needed, such as collecting all relevant information before contract negotiations, and strict monitoring of the processes. These activities incur transaction costs. Obviously, this is also the case in PBF where specialised contract development is required, and verification agencies must be put into place. To enforce compliance, contracts need to include the conditions of payment based on the desired outputs and the contract needs to stipulate the sanctions against poor results (Duran, Sheiman et al. 2005).

The strict monitoring of contracts is essential for enforcing the desired outputs and to provide warnings if there are problems or when there is suspicion of gaming (e.g. faking numbers, misreporting). As services or products become more complex, the contract must be more detailed and the monitoring becomes more intensive, which has its cost (Forder, Robinson et al. 2005).

Contracting may also have weaknesses. In judging efficiency, transaction costs (which are sometimes hidden and can be expensive) must be taken into consideration (Guinness 2011). Transaction costs in developing PBF systems can reach up to 30% but with economies of scale by national rollout transaction costs of around 20% are possible.

The contractual approach may not improve efficiency in settings where only a few contractors enter into competition. As management capacities in low-income countries may be limited some researchers argue that it is risky to carry out contract practices (Eldridge and Palmer 2009). Even so, most researchers maintain that contracting using the performance-based financing (PBF) approach is more flexible and practical and help to diminish systemic challenges (Macqa and Chiema 2011). Setting detailed rules helps to avoid conflicts and assures the success of contracting (Kadai, Sall et al. 2006).

In the **contracting process,** usually the following phases occur: (a) preparation; (b) formalisation 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 fulfil 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 behaviour; (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 characterised 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 are the building of a home or the contracting of laundry or security services of a hospital. In PBF certain contractual relationships

that can be explained by classical contract theory such as the services that a health centre provides and which are verified by the CDV Agency. The services have SMART indicators; the subsidies are clear, as are the sanctions in case of cheating. Fraud or unacceptable poor quality services may be punished by withholding payment or even contract cancellation.

4.3.2 Relational contracts

The reality of health or educational services is often complex and it may be difficult to predict the future (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** but at the same time, they have a mutual interest to enter into a contractual relationship. Such less rigid contracts, based more on trust instead of certainties are called **relational contracts**.

Contracts between a government and an aid agency or an international NGO are often more open in terms of expected results and realities that may change. The partners cannot objectively set the contract duration; it must be done in partnership and interdependency. It requires mutual trust because there is need for flexibility in case of unexpected events. It is difficult to go to court especially because the contract is established 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 experience in PBF to assist with the development of PBF. This phase requires testing new ideas and changing the design once lessons are learned. It requires action research to develop the best possible strategies to achieve social aims and this requires an element of mutual trust. The contractual relationship may be settled in a memorandum of understanding in which it is explained that the objectives may change during the contract period. After such an in 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 distribute scarce resources. In principle, free market economy is linked to societies, which accept democracy, seek partnerships with the private sector, promote the free choice among patients for facilities and encourage competition among providers for patients or pupils at schools. Yet, in some countries, decision-makers argue that free market principles should not be applied in the market because the market failures to achieve social objectives are so massive that systems should be based on central command and control. Is this indeed better? In this book, we present the arguments why we feel free market principles should still be used, but that market failures should indeed be taken seriously and addressed. We argue that market failures can be corrected by also 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 introduce the mechanisms to correct those failures by also applying market-oriented techniques (see chapter 5).

Public health

Public health is another important discipline for PBF, as it assists in determining cost-effective interventions such as specified in minimum health packages at primary level and hospital packages. In this book, we do not enter into detail about public health because our course participants are considered to have already a sufficient degree of public-health knowledge.

4.7 Decentralisation

Decentralization is the transfer of responsibility of the state to local authorities or public institutions. In PBF, **decentralisation** is important as it allows local decision-makers and stakeholders to influence the services better and more efficiently and to enhance empowerment.

The levels of decentralisation 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 exactly implement national policies. However, they do not have the power to change any of the national procedures or instructions. It is described as a form of decentralisation 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 be done for government owned facilities, whereby government continues to own the facility but whereby the management is autonomous concerning the recruitment of staff (hiring and firing), use of resources and establishment of user fee tariffs. This form of decentralisation is often applied in performance-based financing.
d) The most advanced form of decentralisation is **full privatisation** with the transfer of public assets to the private sector. In privatised systems (for example in The Netherlands), government plays the role of regulator of the market and assures the financing for the services through general taxes and regulating the health insurance system. This is probably the most desired form of decentralisation, but in many countries, this may not be politically feasible. Yet, more often there may exist a de-facto privatisation of the health services such as in large urban centres. Studies in Brazzaville and Douala showed that 70-80% of the health services were already provided by the private sector. When starting a new PBF program there is a need to first map all providers in the government and

private sector. The CDV Agency then invites those with a good starting situation and a clear business plan to sign a contract. By including the private sector as candidates for a contract, it will also put pressure on government health facilities to improve their quality.

4.8 Good Governance

All over the world, "good governance" is intensively debated, and people argue over what that term actually 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 (right to command obedience) and power (the use of authority). *Good* governance implies that one individual or group should not exercise all authority and power, but 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**: the ***regulator***, the ***CDV Agency***, the ***payment function,*** the ***provider*** and the ***community.***

To assure stability, the division of power must be equilateral between the actors. There should be checks and balances among these actors and their responsibilities should be clearly described.

In other chapters of this book, a number of individual governance structures are discussed in more detail. The governance and regulation function is described in Module 6. More information on contracting and verification can be learned in module 7. For customer satisfaction surveys and strengthening the voice of the population see Module 8. Other modules describe the role of the providers.

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. It leads to inefficient use of scarce public resources, poor quality services and too high prices for commodities. **Governmental interventions** are necessary to correct the abuses of the monopolist or the group, which has formed a cartel with the aim to improve the market efficiency and improvement in price-quality ratios.
- A society best distributes scarce resources if the economic actors of demand (consumers, patients) and supply (health facilities, schools) have the economic decision rights instead of central planners.
- A PBF expert should be guided by *positive economics* to predict the future based on tested facts and advise accordingly. When political *normative economic* decisions are reviewed, the expert must calculate the consequences based on 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*.
- The goal of improving financial access for the vulnerable in particular is shared by all health systems including PBF. However, to achieve this goal it is *unwise for a government or local authority to fix nominal user fee* prices in health facilities without a well-developed mechanism to compensate for the lost revenues from cost sharing. Setting price ceilings, such as in generalised 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 by subsidies, taxes and informing the public.

An economist can influence market price with the use of 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.
2. Taxes on for example alcohol or cigarettes => This moves the supply curve to the left. This will automatically increase the equilibrium price and thereby reduce 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 the use of scarce resources intended to meet unlimited human needs.

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

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

Fundamental concepts 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 centre or hospital, which constitutes a centre of economic decision *(to buy or sell or not to buy or sell)*.
- **Economic Act**: actions undertaken by economic agents
- **Economic system**: deals with resources allocation issues and decision procedures.

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

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 through statistics to find causalities. *'It is necessary to study the present, in the light of the past, to forecast the future.'*
- **Economic modelling.** These are simplified versions of some aspect of the economy. Economic models are often expressed in equations, by graphs or in words. It is based on abstraction, which ignores details so that one can focus on the most important elements of the problem.
- **Economic theory.** For a theory, there is scientific evidence. It is a deliberate simplification of relationships used to explain how those relationships 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 what the result will be of a new policy proposal. This is often the work of scientific organizations such as the National Statistics Bureau (in the Netherlands) or Schools of Health Economics. Economic theories are the scientific underpinning of PBF.
- **Hypothesis.** This is an untested theory for which there is not (yet) scientific evidence that the hypothesis is correct, contrary to tested economic theories. An example of 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 resource allocation decisions are left to individual producers and consumers acting in their own best interest without central direction.
2. The **central plan economy.** Here central decision 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 until 1991. However, this system collapsed spectacularly and the former socialist countries have been working hard to "marketize" their economies. In addition, China, which is still in name a "communist" country, shifted towards the 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? The production processes of different industries and the preferences of the consumers are all interdependent; the whole economy can be disturbed if the problem of production planning is not resolved. Given that the interdependence of these processes of production implicates the treatment of a phenomenal quantity of data, *centralised planning is almost impossible*.

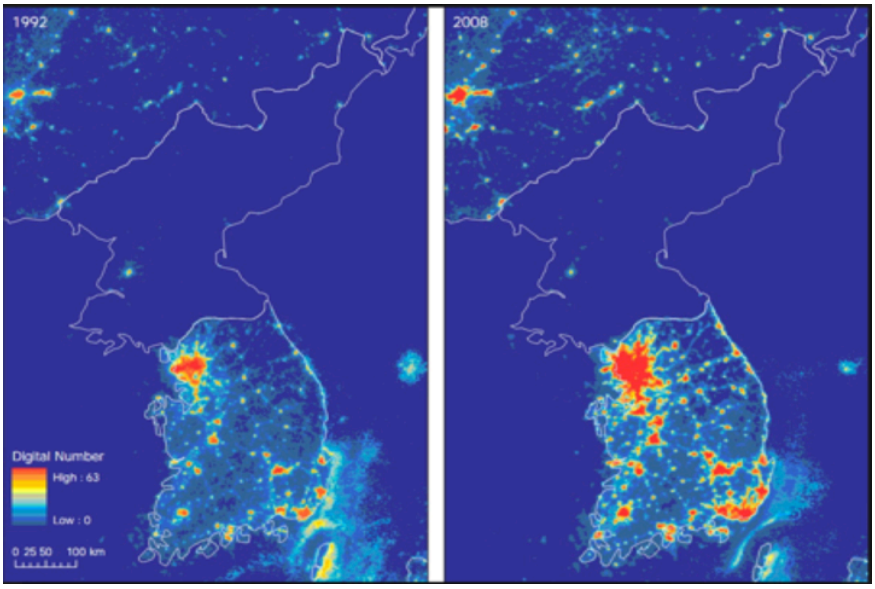


Illustration: The two Koreas: Central Planning (North) and market economy (South) – 1992 et 2008.

The market economy (with freedom for the economic actors to change prices according to their wishes) provides a solution to this problem through the law of supply and demand, which automatically seeks the equilibrium price without outside interference. However, free markets may not solve unemployment problems or protect the environment and not all goals in society can be solved with free markets. It may produce too much or too little of socially desired goals and actors with superior knowledge may misuse the market for unrealistic profit making.

One may either defend or attack the capitalist system, but also socialists such as Karl Marx agreed that the market is remarkably efficient in producing and distributing goods. The free economic market system is the superior form of distributing scarce resources while we should remain aware that at the same time markets also 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 behaviour 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 produced quantity is equal to what is needed.

Sub 2: Distribution of resources: By virtue of non-interventionism, it is the price system, which distributes energy and other raw materials among different industries according to the need of each. In a free market, factors of production are allocated to firms, which are capable of productively using them. Firms that are unable to make productive usage of a factor will be moved aside from the market by the price of this factor (they may go bankrupt).

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

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). It is not the market price of a house or of a new computer or the expenses related to schooling which represents, the *real cost of a decision*. It is rather the value of what is necessary to give up such as meals in a restaurant, a new office or a holiday. This opportunity cost corresponds to all possibilities which the individual, firm or organization must give up to obtain desired property. If they want to make logical choices, the opportunity cost must be taken into consideration in the decision-making process.

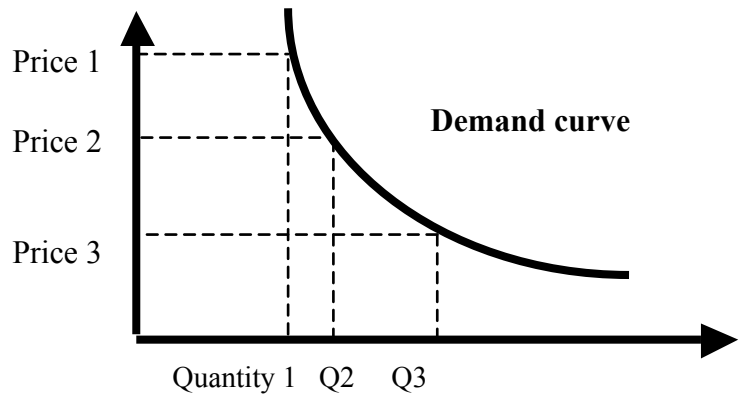
When the market functions poorly (such as when central decision makers impose market decisions), the opportunity cost is high. This is very common in developing countries when central administrators decide on management procedures and when they distribute inputs such as drugs on behalf of health facility managers. The opportunity cost is then high because the same money could have been used more effectively for infrastructure improvement, equipment, recruiting an additional staff member, etc.

5.1.4 Demand for goods in microeconomics

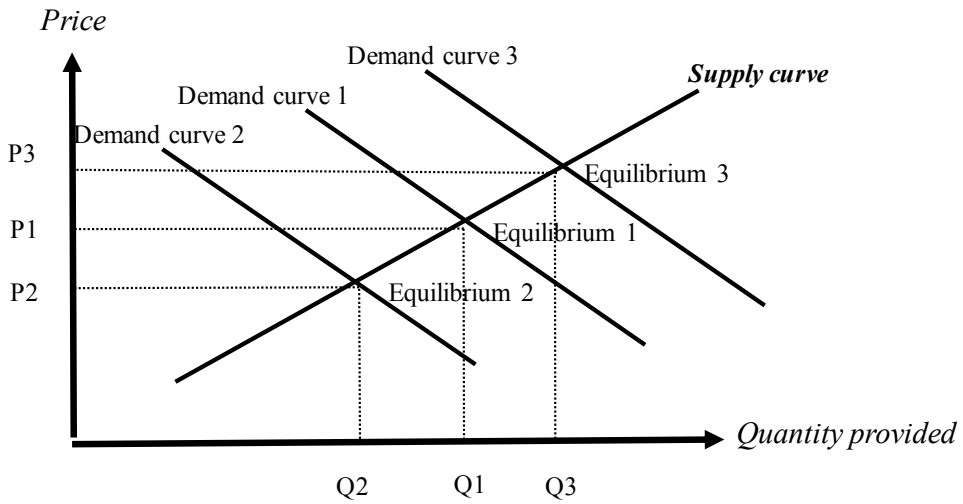
The quantity of goods demanded in an economy depends on various factors:

- The *price* of the concerned good (Px) ;
- 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.



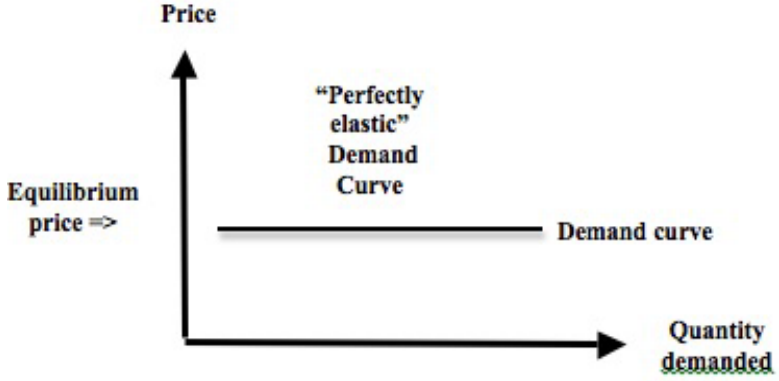
Displacement of the demand curve. A *variation of the price* of a given good causes a displacement of demand along the demand curve. On the contrary, a variation of other factors (such as income, population growth, the taste of the consumers, etc.), which influences the demand of this good will cause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



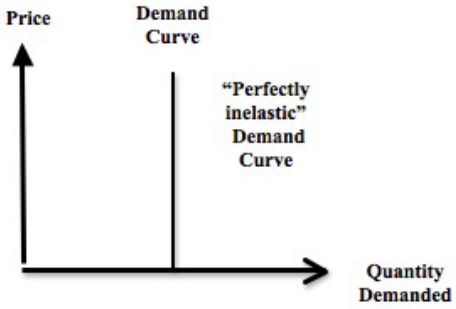
As a result, any factor (population growth, a product that is popular), which causes the displacement of the demand curve towards the right without changing the supply curve, causes an increase in the equilibrium price and quantity. Any factor (reduction of household incomes, increased unemployment,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

5.1.5 Elasticity of demand

The elasticity of demand is very important for the user fee tariffs of facilities. If the demand has a high elasticity a given percentage price change leads to a larger percentage change in quantity demanded. In a perfect competitive situation, there may exist an almost horizontal demand curve also called the "perfect elastic demand curve". So, for example at a market with many sellers and buyers for bananas where the price is USD 1 for one kg of bananas, it means that if a seller increases the price to USD 1.05 that the demand demanded will drop to zero.



In contrast, when the price is inelastic a higher tariff will *not* reduce much the demand and the facility can make big profits (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 what they wish and the patient or family will accept the price. To prevent such negative outcomes, government may insist that prices are advertised in advance and not at the moment of the event. Government may also stimulate competition by offering other providers to enter in the market - and thereby to force prices down.



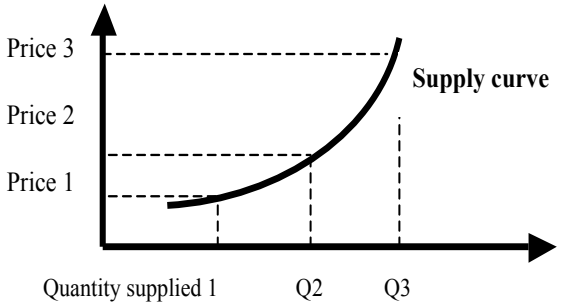
Elasticity of demand in comparison with the price is the proportion of the increase of attendance (e.g. the number of consultations) divided by the proportion of price reduction. If elasticity is > 1 it means that the proportion of attendance increases more than the proportion of price reduction.

5.1.6 Supply of goods in microeconomics

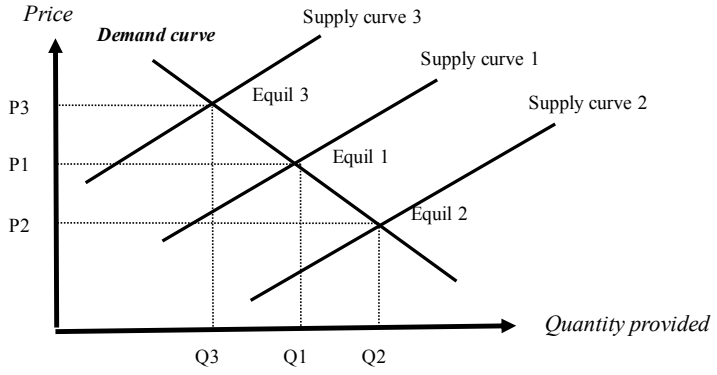
The supply of a good is the quantity of this good offered on the market by a seller at a given price. **The quantity of the supply of a good in an economy depends on several factors:**

- 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 more the price of a good increases, the more is the quantity offered of this good 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.



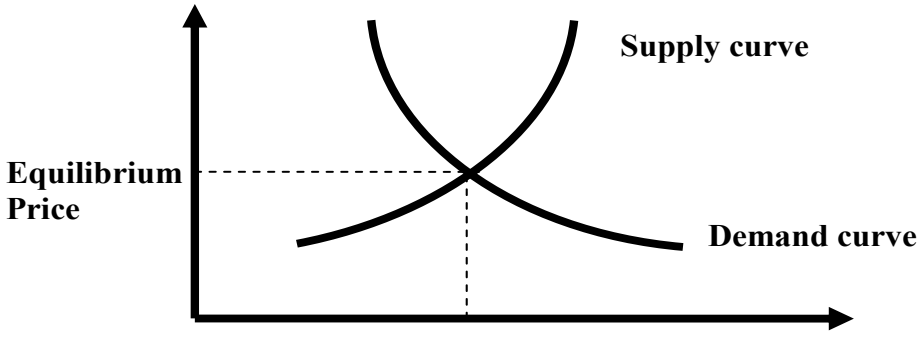
Displacement of the supply curve: A variation of the price of a given good causes a displacement of fixed supply along the supply curve. On the contrary, a variation of one of other factors (price of production factors, size of industry, progress of technology, etc.), which influences the supply of this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



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

5.1.7 Equilibrium in microeconomics

Equilibrium Price: To analyse how the free market determines price, we must compare the desires of consumers (demand) with the desires of producers (supply) and see how they interact. In a free market, price and quantity are determined by the intersection of the supply and demand curves. Equilibrium is reached when there are no more inherent forces that 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.*

5.1.8 Perfect competition

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

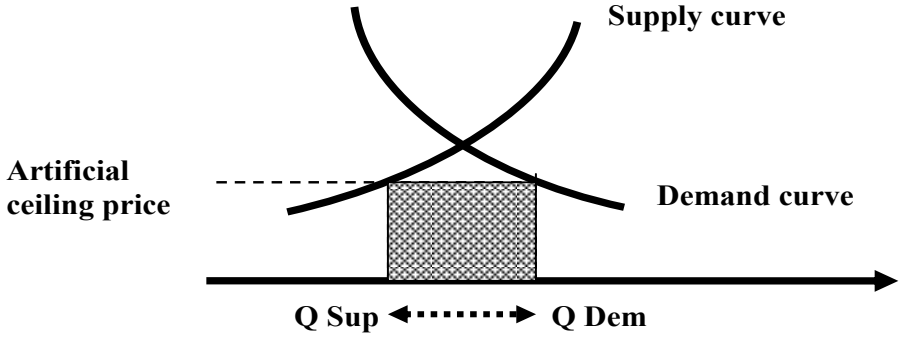
The conditions of perfect competition are:

a) Numerous small sellers and customers. This rules out collusive arrangements whereby firms work together to fix prices;
b) Homogeneity of the product. The product is identical to that supplied by any firm and consumers do not care from which firm they buy;
c) Freedom of firms to enter the market to compete with existing firms. Equally when a firm is not profitable no barriers should prevent firms from leaving the market and;
d) 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 whereby firms and consumers use society's scarce resources with maximum efficiency. Government regulators must create as close as possible the perfect competition conditions by stimulating investors to install themselves, to control quality, to inform the public and to support vulnerable regions, providers and individuals.

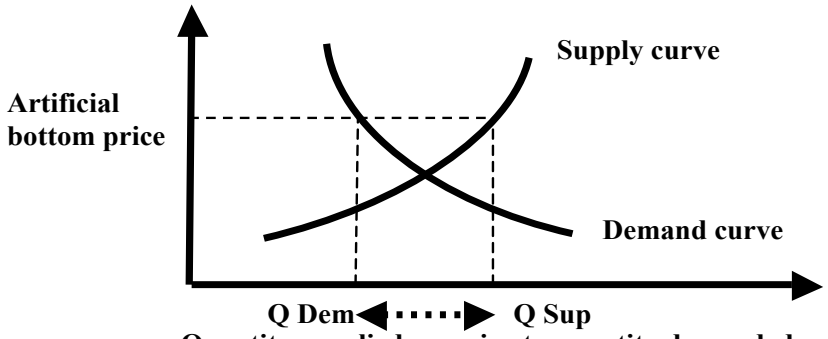
5.1.9 Ceiling and bottom prices and The Invisible Hand of Adam Smith

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



Quantity supplied inferior to quantity demanded

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



Quantity supplied superior to quantity demanded

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:

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

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

In summary, this leads to a situation where the invisible hand of Adam Smith will start 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 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, hospitalisations and deliveries)? *The invisible hand of Adam Smith.*

If the quality of care improves (reasonable waiting time, respectful treatment, and medicines available), the supply curve moves to the left (and the price increases) and if the quality is poor the supply curve moves to the right (and the price reduces). If the per capita income of the population of a given area increases because there is a good harvest the demand curve moves to the right (and the price increases) while if there is shortage of rain or a political crisis the demand curve moves towards the left (and the price reduces).
'The market' automatically finds the new optimum price for patients and facilities, taking into account all the complex factors, which influences supply and demand. These factors also include how each facility is organised, its managers' capacities, motivation of personnel, etc, etc.

According to economic theory, it is impossible for central planners to 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 for the society,

A typical example is the **Burundi** case during 2006-2009 when government for electoral reasons and under pressure from international NGOs and some donor agencies introduced a poorly designed free health care policy. It resulted in immediate loss of revenues for government health facilities, which were not compensated. It created labour unrest, qualified staff abandoned facilities and it meant for the population, poor quality care, long waiting times and lack of respect by staff. In 2008, a study found that women in those provinces with only free health care policy paid more for deliveries because the *"invisible hand of Adam Smith"* in the health facilities had found indirect tariffs for transport and food purchases. Patients also started to go to those health facilities that did *not* provide free health care. By 2010 the government then introduced PBF and several of these negative effects disappeared.

5.1.10 How to use market instruments to enhance social aims

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

Examples of market-oriented solutions:

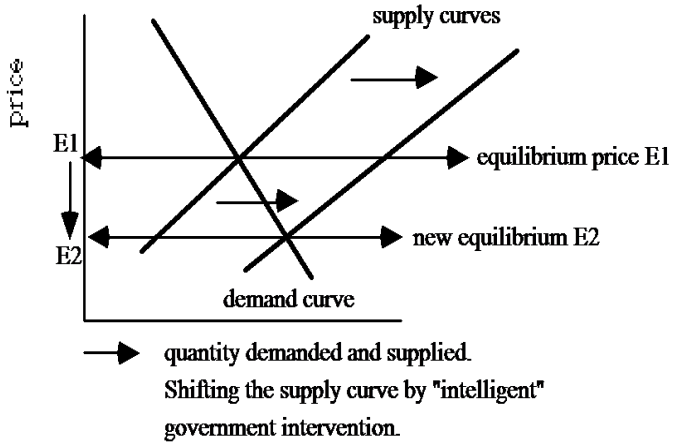
- Services that have high *positive externalities* (certain health services such as immunization or family planning) or *public goods* characteristics (information concerning safe sex and use of hygienic practices) should be subsidized.
- *Imperfect information* must be countered by information campaigns and sometimes regulation to prevent providers with below quality care or with unskilled health workers to enter the market.
- Firms or government departments *seeking to monopolise 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 need to pay for the services, abuse the system and make excessive use. This can be corrected by co-payments.
- *Adverse selection* by insurance companies who only select healthy young customers should be regulated to avoid that insurance companies deny entry for patients. The best solution for this is obligatory insurance.

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

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

An economist can influence market price with the use of 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 (a delivery, an OPD consultation) may be agreed for the vulnerable.
2. Taxes on for example alcohol or cigarettes => This moves the supply curve to the left. This will automatically increase the equilibrium price and thereby reduce 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.

There are only a few situations where monopolies are justified such as patents whereby a company is allowed to protect the investments made to discover and test new drugs. Monopolies are usually undesirable and harmful to society. It leads to inefficient use of scarce public resources, poor quality services and too high prices for commodities. Sources of such monopolies are barriers to entry such as legal restrictions (drug distribution system in DRC), control of scarce resources (such as the South African diamond syndicate) and large sunk costs (such as Boeing airplane industry in large aircrafts such as the 747-jumbo jet until the Airbus 380 entered the market), technical superiority (Microsoft over Windows computers).

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

Governmental interventions are necessary to correct the abuses of the monopolist or the group, which has formed a cartel with the aim to improve the market efficiency and improvement in price-quality ratios. It is through competition that prices will decrease and that quality increases because suppliers aim to attract customers with the objective of making a profit and surviving.

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

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. It is therefore not logical to build new railways or hospitals for natural monopoly reasons. However, to stimulate competition, it is possible to have several companies operating different train companies on the same railway tracks or to change the management of the hospital. Furthermore, government may also stimulate the private sector to open new hospitals that compete with government-managed hospitals but probably regulate its location so that in one district the hospitals 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 and whereby marginal cost is around zero) and economies of *scope* (to distribute fixed costs over more activities). In practice, this means that primary level health facilities target around 10.000 people and provide between 25-35 main activities to assure the full packages. Vertical program approaches with less than 20 output indicators should be avoided.
- PBF experts should also look for good allocative (make a choice among different activities), technical (making a choice among different strategies for the same activity) and administrative (avoid too high overhead costs) efficiencies.
- The problem with disease in the economic sense is that an individual cannot predict when it will take place. 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 put a zero price for all health services and free health care creates enormous inefficiencies. Therefore, PBF proposes to target vulnerable geographic areas and vulnerable individuals for public assistance in case of disease but leaves at the same time enough space for market transactions to assure the revenues required for quality services. Such market transactions aim also to promote efficiency and contain costs.
- PBF aims to cement together through contractual arrangements different provider payment mechanisms such as through fixed salaries, fixed operational budgets, insurance- and user fee contributions. The remainder variable PBF payments may only constitute 10-30% of total revenues but are crucial to enhance social aims, create efficiencies and promote equity. The PBF subsidies is like the oil in the health systems engine.
- Health insurance systems and direct fee paying may also obtain revenues for health facilities. The obligatory insurance system may be more feasible than the voluntary "mutuelle" system. Topping up tax-based revenues with technical and financial partner's contributions is highly welcome and by adopting the PBF reform approach it will be more efficient than traditional aid agency systems.

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 Ate conference on Primary Health Care, there was little attention to scarcity. *The 'sky was the limit'* because health should not have a price. Medical science also had less to offer than today. However, gradually, it became clear that costs were rising in the health sector and this forced decision makers to start reviewing how to make rational and efficient use of limited resources. 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 health economics: the study of scarcity and choice within the health sector.

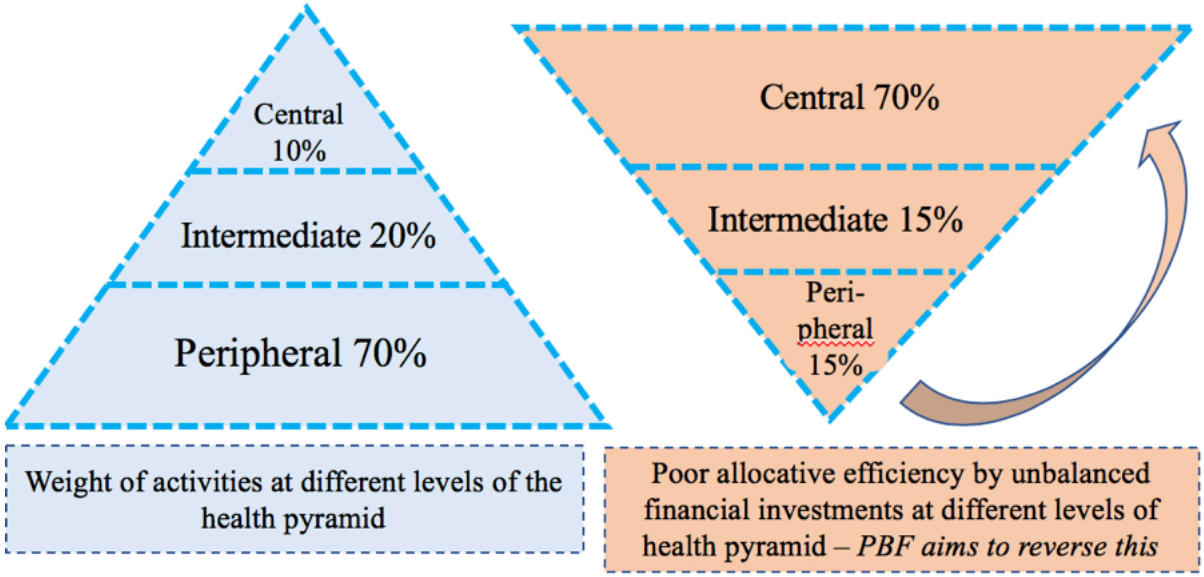
Health economics objectives: health economics aims at providing tested theories leading to best practices on how to provide quality and financially accessible health services to all socio-economic groups in society while making the most efficient use of scarce resources.

The macroeconomic perspective: health economics studies the importance of health for the economy as a whole. It answers questions such as what is the optimal household and government expenditure for health care as a proportion of the total economy. Health economics principles may also be used to enhance economic growth through economic multiplier effects and to study how to stabilize the demographic situation in a given country.

The microeconomic perspective: make the most effective and efficient use of limited resources and distribute between primary, secondary and tertiary care in terms of curative and public health interventions.

We may identify three types of **efficiency:**

a) *Allocative efficiency.* Which health interventions obtain the most health gains: immunization or cardiac surgery? By intuition, one may already sense that one can save more lives with the same amount of money with an effective immunization program for children compared to investing in cardiac surgery. The efficiency ratio may be expressed in terms of what is the cost to achieve one 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, allocative efficiency decisions play a large role in health markets such as: (i) to invest in primary level activities or tertiary level; (ii) between curative and promotional or preventive and; (iii) between public facilities or private ones. Typically, in many countries governments chose for the tertiary level, instead of for the primary level; for curative care, instead of for promotional and; for government facilities, instead of for private sector ones. All this produces poor allocative efficiency and therefore poor returns on (public) investments.



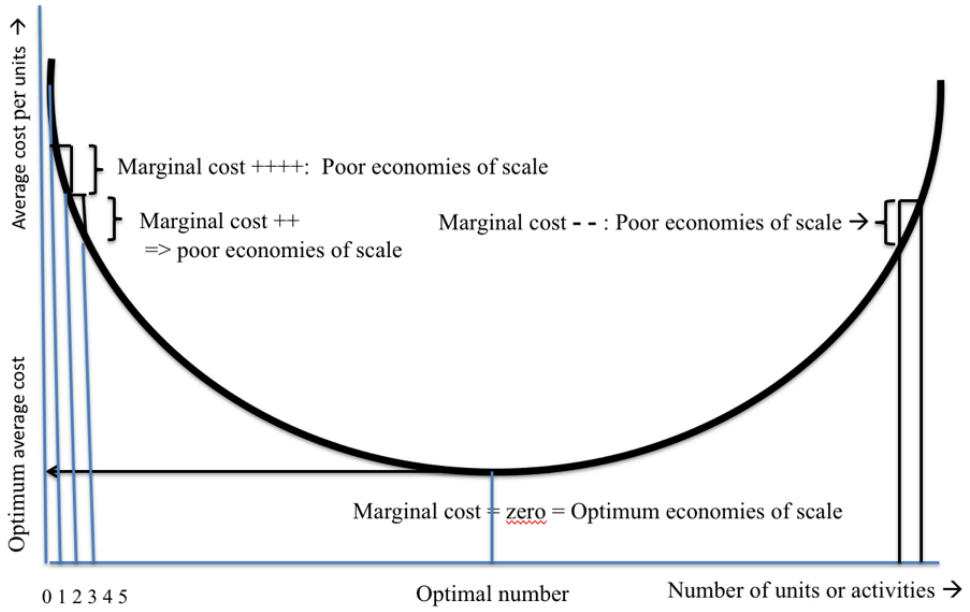
b) *Technical efficiency*. How can an intervention be carried out most cost-effectively such as for example using fixed or mobile strategies for an immunization program? Should health activities be delivered through central input financing or through performance financing? A shift from input financing towards PBF may make the health activity technically more efficient.

c) *Administrative efficiency.* This deals with issues of general overheads and how health systems are delivered. What are the costs of setting up a 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.

When a health centre only receives one patient per month then the marginal cost of one additional unit per month is very high. Yet, if there are 1000 patients per month the marginal cost may be close to zero. Zero marginal cost is linked to *economies of scale* whereby the most efficient level is achieved.



Economies of scale are the savings that are obtained through increases in the quantity produced of one good. In health systems, we seek economies of scale by rationalising the number of inhabitants that will be served by one principal contract holder. Similarly, we seek economies of scale by determining the optimum number of inhabitants that can be served by one CDV Agency.

Economies of scope are savings that are obtained through simultaneous production of many different goods. For example, in a supermarket a client intended to buy bread but at the same time also buys shoes. In health systems economies of scope are obtained when the same health facility offers the complete package of health activities (horizontal approach) instead of only a few activities (vertical approach). Already 30 years ago health economists argued that the horizontal primary health care systems are preferred above vertical primary health care systems whereby one health facility for example only provides reproductive health- or HIV/AIDS services.

5.2.2 Demand for health care

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

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

- *Patient or consumer felt needs*, which are usually also expressed. The treatment of pneumonia is a felt need for the individual and which 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 called an unmet demand for a given health service. Non-satisfied 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 can therefore not be planned for such as how an individual can plan for the purchase of a computer or a car. Patients do not know in advance whether they will become sick and, if so, what the cost will be. Such considerations are at the base of social justice and therefore of the risk sharing principle of health insurance. It is a very powerful ethical and social issue.

Are pregnancies, deliveries and child caring also unexpected health risks? One may ask the question in how far the costs linked to pregnancy; deliveries and childcare are also unexpected? From an economics point of view, the parents could plan for these events and costs. In addition, from an ethical point of view one may argue that a couple making the decision to have a child could at least also partially plan financially for that child. Such dilemmas are hotly debated in Rwanda whereby one questions to what extent the government is responsible for all children born. This has lead to the argument that government may assist the first two or three children of a couple but not necessarily the fourth. Such notions are increasingly built into their health systems and the PBF approach may provide the instruments to execute the outcome of the economic and ethical debates on demographic issues.

5.2.3 Health service supply

Health services are produced by the following input factors: capital, human resources, land & equipment and organisation. However, the factor "organisation" was often misunderstood in the past as if this would be automatically available. In fact, this is often the key to success as only entrepreneurship can ensure new services are put into effective use. Therefore, more recently entrepreneurship is considered an important input factor for growth and development potential. Countries may have several untapped sources of development. Besides the official (government) health services, there may be private health providers and pharmacies both formal and informal as well as traditional healers. These health services may be homogeneous (a private or a government health centre) or substitutes (a health centre and a pharmacy or traditional healer).

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, it remains a decision of society (the regulator) to determine in how far such substitutions are allowed if for example they have 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) Under provision 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 for which one of them has more information this constitutes a market failure. This is called asymmetry of information.

Asymmetry of information is more common for transactions in health than for example in the buying and selling of food or bicycles. Yet, also in health care markets there exist 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 cure. In this case, there is *symmetry of information* because the patient understands the problem, knows what he or she is looking for, the doctor agrees and prescribes the requested drugs.

However, when a patient has thorax pain, the problem may be more complex for the patient. Is it a simple muscle pain or a potentially fatal heart problem? Here doctors have superior knowledge on how to diagnose whether the problem is serious or not and what treatment to propose.

In this case, there is *asymmetry of information.* The doctor knows better, what the problem is and how to solve it. In this scenario, the doctor may also identify the demand for care on behalf of the consumer and this is called **"***supplier induced demand".*

Imperfect information should be countered by information campaigns, quality reviews (see module 6) and regulation to control firms or providers which simply maximise their profit due to this market failure.

5.3.2 Positive and negative externalities

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

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

Positive Externalities in Education. These are better health and lower mortality in children, a lower number of birth and increased productivity. Well educated mothers have a positive effect on the development of their children. Education increases civic engagement and thereby contributes to a stable and democratic society. A better educated workforce also stimulated innovation in the economy.

Negative Externalities: Pollution, alcohol, cigarettes, fish farming (which stimulates the mosquito growth and thereby malaria). Pollution producers such as cement industries are not primarily interested in the protection of the environment because corrective measures may increase their production costs and therefore reduce profits. Yet, for the society pollution is important so 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 it is also the government that must provide those services. The private sector are often better equipped to provide quality services to the population and this is particularly true in urban settings and in the education sector.

5.3.3 Under Provision of Public Goods

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

5.3.4 Health Insurance Market failures

Health insurance markets are particularly prone to market failures.

Moral risk or hazard is the tendency of overconsumption and overproduction of health services when the person using those services is not the one who directly pays. This is the case when there is a third party, who pays the bill such as an insurance company. There may be the moral risk of the **patient** but

also the moral risk of the **service provider,** who knows the patient to be insured and therefore increases the services provided for financial gain.
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 the out-of-pocket spending of consumers, which decreases their incentive to consume. Thus, the insured have a financial incentive to avoid making a claim.

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

Anti-selection or *cream skimming* happens when insurance companies try to select only those clients who have a smaller chance of falling sick and therefore to be low-cost and incurring less health expenditures. This market failure in particular occurs when an insurer knows more about consumers' expected costs than the consumers themselves and enrols 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

There are a number of provider payment systems a country can choose from and this paragraph analyses their comparative advantages and disadvantages. What would be the optimum mix among those systems in a given country?

5.4.1 Tax based national health system & free health care

This financing system based on free health care was introduced in the 1950s and 1960s particularly in former Soviet Union countries and the National Health System in Great Britain. It has been closely associated with the WHO and the Primary Health Care system of the Alma Ata Conference of 1978. Many African countries have chosen it after independence mostly through an orientation to serve the public through government health facilities and partnerships with the private sector was not considered important. This therefore often developed into public monopolies in which the provision, regulation and channelling of funds were provided by the hierarchy of the Ministry of Health from the national level to peripheral levels. It was associated with centralized decision-making regarding the management of health facilities, the distribution of inputs such as drugs and equipment and the construction of infrastructure. Theoretically, the revenues for this centralized system were generated from general taxes. In practice, this money was rarely available and often replaced by foreign aid through aid agencies.

Countries like Zambia, Tanzania 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 but they equally did not develop an effective tax system to centrally finance the free health care government health system that then only existed in theory. It 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 by a patchwork system of unregulated and informal private health services.

Due to the absence of a robust financing system the 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 drugs shortages. The national system of free health care has therefore a poor reputation in most low- and middle-income countries in terms of access to health services, quality of care and sustainability.

5.4.2 Compulsory Health Insurance

With compulsory health insurance, employers and employees both pay a premium for health services. Independent health insurance companies may then negotiate reimbursements with health providers for a clear set of health services on behalf of their insured patients. The advantage of compulsory health insurance is that it prevents the problems of adverse selection (the patient) and cream skimming (by the insurance company). Insurance companies are not permitted to refuse patients and the patient must be insured. This system is common in continental Europe since many years and recently it has been tested in Rwanda.

Governments must heavily subsidize compulsory insurance systems so that the premium payments become financially accessible for patients. In many countries, government for example pays for the chronically ill (in The Netherlands) or for the hospital services (in Rwanda). If not, the patient insurance premium would become too expensive, especially for the poor.

Smaller insurance systems have very high administrative costs for the collection of premiums, the administration and verification of results. These costs reduce with economies of scale as well as when the per capita income of a country increases. Therefore, in most low-income countries the administrative costs tend to be very high – up until over 50% of the total costs. This is because after the fixed costs of administration are paid, there is little left for the reimbursements of the health facilities. Furthermore, if the compulsory insurance system is poorly designed without adequate deductibles (own risk) or co-payments (a proportion the cost incurred) there may be a serious problem of moral hazard both at the provider and the patient level and makes the system more expensive than necessary.

Compulsory health insurance: The case of Rwanda. There is an encouraging experience in Rwanda showing that there may also be a role for obligatory insurance systems and in particular, when combined with Performance-based financing in Africa. A combination of an insurance system with PBF may gradually develop during the coming years whereby the members of the insurance scheme obtain a reduction in the direct fee paying invoice of 80% for example. However, the difference with insurance would be that the health facility does not obtain a full reimbursement of costs (such as in insurance systems), but receives the standard PBF subsidies. The health insurance premium could then be paid to the PBF CDV agents, which will generate local funding for the PBF system besides other sources such as the Ministry of Finance and aid agencies.

5.4.3 Voluntary community based health insurance or ‘mutuelle’

The system of voluntary health insurance (or ‘mutuelle’) is based on voluntary contributions of the insured. This system tends to have a positive effect on risk sharing for those who are members. However, especially the rich in a given community in low-income countries have the tendency to adhere. For the poor, even the nominal premiums are too high and several studies show that people whose income per capita is below USD 1 per day rarely adhere to voluntary health insurance. For them, other expenses such as food or school are more important.

Voluntary health insurance in low-income countries tends not to be fair or 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, adhering proportionately more, also benefit more from these public investments. Similar to compulsory insurance, voluntary health insurance or ‘mutuelle’ also has high administrative costs.

Another problem in low-income countries for the voluntary health insurance is that much of the economy is informal and therefore it is difficult to formally collect insurance payments such as is easy in a formal employer-employees’ relationship. In summary, the opportunity cost of voluntary insurance

may be high in comparison to PBF systems and compulsory insurance, which is more efficient and probably better, protects the poor.

5.4.4 Direct User Fee Payments

From an economic point of view, the direct payment by patients to a provider is more efficient in the sense that it constitutes a direct market transaction between a provider and a patient. The patient is negotiating with his own money and can choose another health facility when not satisfied.

However, direct payments may also create problems when the rates are too high for patients. This problem of financial access is a real concern that was not well resolved by the Bamako Initiative. Rates may be applied either by service (for each drug, supplies, consultations) or by flat rate (under which a fixed amount is paid regardless of how many drugs, etc. are consumed). Flat rate pricing has the advantage of sharing the risk amongst the patients and patients know in advance how much they will pay. The disadvantage of flat fees is the cost is that patients tend to demand the same amount of services and drugs equal to what they pay for in the flat fee also 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 the proportion of the out-of-pocket health expenditure for patients to not more than 60% of their total revenues. However, imposed low direct payments are also better to avoid in order to maintain for health facilities the possibility to negotiate their fee levels with their communities. The role of the CDV agencies and local health authorities is to negotiate the level of the PBF subsidies against the provision of health care for both the wealthy and poorest socio-economic groups.

5.4.5 Voucher systems or conditional cash transfers

The voucher systems and conditional cash transfer (CCT) belong to the RBF demand-side mechanisms and conceptually fits well with PBF. After obtaining a voucher, it gives patients the right to spend a certain amount of money in a health facility. Conditional cash transfers directly allocate cash to a family if for example they send their children to school, correctly vaccinate their children or conduct other check-ups. The integration of the voucher mechanism and the PBF indicators is increasingly discussed. There are several similarities such as: (1) the purchase of performance indicators; (2) there are mechanisms to evaluate the 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 of all, the health package indicators bought with PBF is comprehensive while vouchers mostly concentrate on reproductive health. Vouchers generally target children, pregnant woman, deliveries or family planning while PBF targets any vulnerable groups or persons such as elderly, handicapped, displaced persons, etc. The cost of the targeting mechanisms with the voucher system is high because it involves the setting up of demand side community groups and the printing of vouchers while PBF targets the vulnerable through the health facilities with relatively lower administrative cost. The more comprehensive PBF approach creates economies of scope.

The best solution would be to target with money from the vouchers the most vulnerable patients but through a system organised by the health centres and hospitals. This requires introducing into the package of indicators at the primary level (PMA) and hospital (PCA) indicators such as: voucher external consultations; voucher in patient care; voucher minor surgery; voucher great surgery and; voucher delivery, etc. The subsidy for this voucher should be high enough so that health facilities can organize local mechanisms for identifying the vulnerable who in "normal" situations may not be more than 10% of all patients. In case of humanitarian or natural crises such as war, displacement, natural disasters or epidemics with negative effects on the local economy could raise the ceiling for the exemption of patients to 25%, 50% or even 100% (= totally free). The reimbursement must reach roughly 60-70% of production costs. High enough for health facilities agree to exempt vulnerable but not so high that there will be moral hazard.

5.4.6 Which provider payment system is the best?

The "ideal" provider payment system depends on several factors, such as the availability of state resources and willingness of citizens to pay taxes, the purchasing power of the population, the historical development of the financing system and normative political choices taken. PBF should adapt and integrate itself in each country, but at the same time aim to advance the best practices and towards the "purest" form of reforms to assure success.

Probably the best health financing system is a mixture of the above described systems whereby part of the financing is obtained by the state through taxes and independent agencies negotiate and purchase at decentralized level the best possible result with health facilities through performance contracts.

Health insurance systems and direct fee paying may also obtain revenues for health facilities. The obligatory insurance system may be more feasible than the voluntary "mutuelle" system. Topping up tax-based revenues with technical and financial partner's contributions is highly welcome and by adopting the PBF reform approach it will be more efficient than traditional aid agency systems.

5.4.7 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 centre 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 bank transfers) because if in inputs (such as in the form of drugs or equipment) the efficiency it is so poor that the required resources will be 3-5 times higher. Most pre-PBF studies in low- and mid-income countries show that cash revenues of service providers are less than USD 3 and that it is therefore impossible to provide quality services. Thus, the designers of new PBF programs should answer the question how to achieve the annual target revenue of USD 7 per person.

When government allocates civil servants to providers their salaries are also cash contributions, which reduce the salaries that those providers would need to pay for their employees. Government may also assist providers by paying them fixed operational budgets in cash. Let's assume that the fixed government cash support is 40% of the revenues, cost sharing revenues around 40% and PBF the remainder 20% as additional variable revenues it shows that PBF is not the main revenue. Yet, it is important because it constitutes the "oil" on the engine of the providers.

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 small fee
Health market failures	-	Protects against risk of unexpected illness
Free health care	-	May be taxed to decrease demand
Public goods	-	Centralised distribution of inputs
Negative externalities	-	Economic multiplier effects
Traditional financing approach	-	May be corrected by market techniques
Moral Risk	-	May be corrected by subsidies
Decentralised subsidies in cash	-	Nobody can be excluded from benefiting.

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 or liberal economy against the central planning economy.
7. Demand curve: all other factors being equal a price increase creates a decrease in demand.
8. Supply curve: all other factors being equal an increase in price creates an increase in supply.
9. A change in price causes a movement along the demand or the supply curve. A change in other factors causes the demand- or supply curve to move to the right or to the left.
10. Where the demand curve and the supply curve cross the price of the equilibrium is established automatically and the satisfaction of consumers and supply agents is maximized.
11. In case the government creates a price below equilibrium price (ceiling) or above equilibrium price (floor) there will be a shortage or a plethora and the society will be struck by the invisible hand of Adam Smith (black market practices, poor quality, plethora of products).
12. Market failures in the health sector are public goods (health promotion), externalities (TB, vaccination, HIV), information asymmetry (abuse by prescribers), moral hazard in insurance systems). The government must correct these failures by corrective measures (subsidies, quality assurance, taxes).
13. The criteria of perfect competition are: the existence of numerous sellers and customers, the homogeneity of 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 asymmetry of information of a doctor with respect to a patient is necessary to correct by informing patients, analysing the files through peer evaluations and penalties in case of abuse.
2. The level of equity proposed in a given society depends largely on the willingness of the population to pay taxes and their perception of the extent to which the government uses taxes in ways that have a visible impact on the population.
3. Allocative Efficiency: how to distribute money among different activities => at the primary, secondary and tertiary levels => Among the 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 when the need to create health insurance schemes.
7. Entrepreneurship and innovation at the level of supply-side actors is an important economic resource for improving the efficiency and effectiveness of social systems.
8. A social provider (public or private) must always seek to make a profit in order to invest and improve quality. The failure to create profits or even to generate structural debts should be countered with the threat of bankruptcy.
9. Providers should not forget to include in their expenditures the fixed costs or the depreciation of infrastructure and major equipment.
10. The marginal cost is related to economies of scale (the optimal number of a specific activity such as the External Consultation or the number of people to be served by a CDV Agency). A good economy of scale (whereby the marginal cost = zero) means that the average cost is at its lowest point.
11. The economy of scope is comparable with the economy of a supermarket whereby consumer in a store or the patient in a health facility has access to several products. A good economy of scope means that the average cost is at its lowest point.
12. Compulsory health insurance is good but has a relatively high administrative cost.
13. Voluntary (mutual) health insurance has a high administrative cost, the contribution rate is often low, suffers from moral hazards and benefits above all the wealthy => Health insurance systems must develop co-payments to combat the moral hazard.
14. General free health care systems such as in the former Soviet Union and Great Britain has a relatively bad reputation in terms of quality of care.

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 stimulating the market to function 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 assuring 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 health provision, the purchase of 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 Cabinet of the Minister 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 assure that there is an adequate budget for PBF of USD 4-7 per person per year by transforming existing input budgets into performance ones. The committee must also assure that the administrative costs of the PBF program 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 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 organise patient perceived quality surveys among patients. 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 above the carrot X stick approach in particular when providers depend to a large extent for their revenues on the PBF subsidies.
- In many countries in which PBF is practised*, peer group review* has become the preferred choice to evaluate quality in hospitals and ministry departments. Peer group evaluations are not hierarchical but rather an exercise among equals or "peers" in which a team from one entity evaluates another entity. The aim of such inter-collegial visits is to advise rather than impose unilateral instructions.
- During all quality reviews the actors should fully respect the *confidentiality* of patients.

6.1 Definitions

Regulation: Rules designed to control the conduct of those to whom it applies. Regulations are official rules, and have to be followed;
Norms: The collection of criteria which define – in a SMART manner – the desired quality levels that need to be achieved in a given service or activity, while avoiding any dangers;
Procedures: The processes, which aim at achieving the norms;
A **health system:** Comprises of all organizations, institutions and resources devoted to producing actions whose primary intent is to improve health;

Quality assurance: The set of activities, which 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, which should result from a democratic and 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 both in assets and intellectual.*
- *Promote public goods and positive externalities*
- *Protecting the public and the environment against health hazards, pollution and other negative externalities*
- *Assure the stability of prices* to prevent inflation. This to encourage business transactions and willingness among citizens 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 the above aims, most countries have adopted the *free market economy* as the preferred means to distribute limited resources. Once accepted, it implies that government must defend the public interest and develop laws against monopolist behaviour and the creation of cartels both in the public and in the private sector. These laws are equally important in low and middle-income countries to promote economic development and to protect 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 are often based on the following goals and values:

1. Improve the ***health status*** of the population by providing ***quality*** services that are ***accessible*** that assures access to health services. This objective is also based on human rights principles that guarantee access to health services.

   However, for reasons of budget control, it is important to define exactly to which packages at primary and hospital levels the community has the right and how to target the vulnerable while the wealthier part of the population will still have to pay. So, this Human Right 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 the more efficient PBF health system, this may be lower.
3. Ensure that the ***proportion 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 is 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 and thereby create 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 such as those concerning minimum salary scales per 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 tend to have difficulties in implementing the above core regulatory roles of promoting social objectives based on democratically agreed values and norms.

The following issues may cause these problems:

- Senior civil servants and decisions makers may not concentrate on their regulatory and stewardship role to defend the public interest due to conflicting interests such as their direct involvement in input management, managing funds 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 into a central command and control type of relationships with providers.
- Low salaries paid without connection to performance may impair the performance of civil servants. They are often employed for life and lack intrinsic motivation to defend the public interest.
- Regulatory instruments, such as SMART job descriptions, may be either inadequate or lacking.

If governments aim at effective health reforms and change towards achieving social aims such as the Sustainable Development Goals and Universal Health Coverage then the above problems and conflicts of interest, need to be addressed.

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

- Assure 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*
- Assure the efficient distribution of public funds and break the vicious cycle of poor government performance leading to poor health and even economic catastrophe => *Apply the PBF best practices of competing for contracts, public-private partnerships, decentralisation and separating functions to promote transparency and good governance.*
- Break the vicious cycle of scepticism among citizens about the state and restore their belief in the state's ability to develop effective strategies => Show *convincing results through well-designed PBF pilot programs*.
- Assure that *at least 70% of national funding* will be channelled directly *towards the "front line"* such as to health facilities, schools and community activities.

6.5 Role of the National PBF Steering Committee

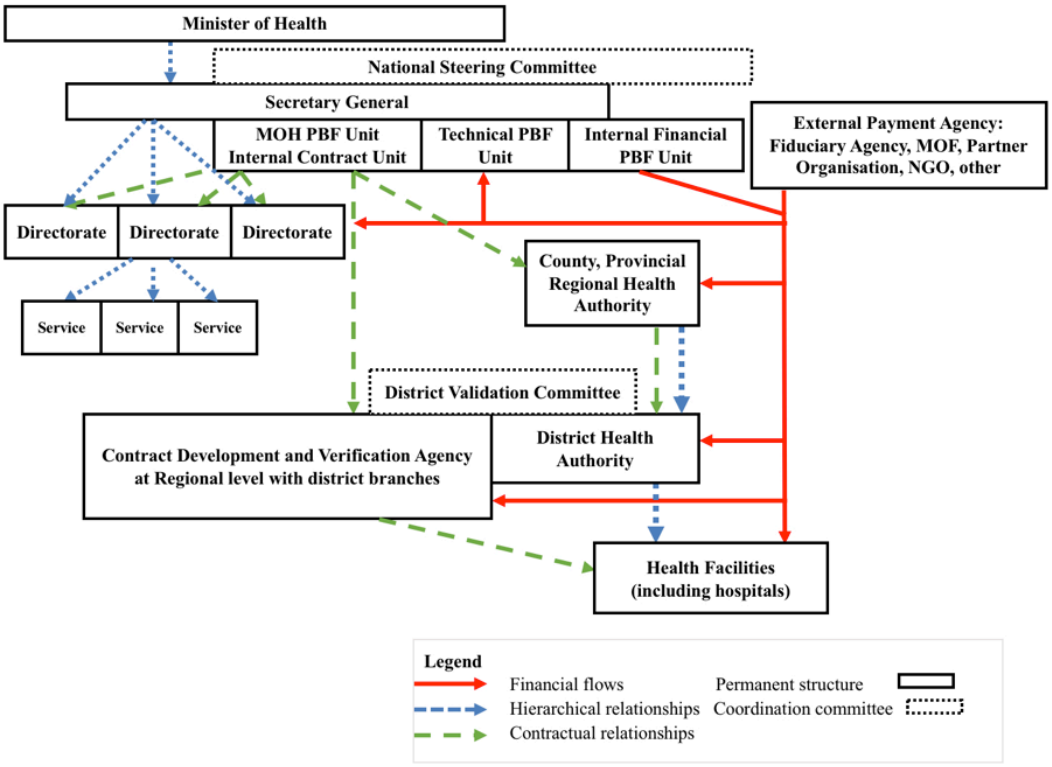
The National PBF Steering Committee oversees and guides the PBF reform approach and may meet once per quarter or more often if necessary. These Steering Committees may have members from the general directorates but also from other Ministries such as Finance and Planning. Often its members are selected by the Minister of Health but it is important to select them based on knowledge and skills such as good knowledge of PBF, economics, public health, good governance and conflict resolution. They should also be convinced that PBF promotes reforms of the health system and 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, regulation is 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 put in the following institutional framework:



The PBF Unit may be attached to the Minister's Office or to the Secretary General of the Ministry. This 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 a competitive remuneration to prevent private interest behaviour. The remuneration consists of a fixed part (civil servants' salary, salary of PBF Unit or paid by an external agency) and a variable part linked to the performance of the PBF Unit in general and each employee in particular. The variable part may be larger than the fixed salary in case 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 the MOH departments, Regional Health authorities and Regional CDV Agencies.

6.6.1 The tasks of the PBF Unit

1. *Strengthen the sustainability* of PBF by ensuring that at least USD 4.00 of public money per person per year is mobilized. The Unit identifies financial gaps preferably one or two years in advance in order to take remedial action on time.
2. *Promote PBF* among relevant stakeholders from national level and partner organisations.
3. *Revise* regularly the *primary and hospital level output and quality indicators*, their subsidies and conduct *the costing* of the program accordingly.

4. *Revise the output, quality and equity indicators* of all *regulatory* authorities at central, regional and district level 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 take several days. Based on these evaluations using SMART criteria the payments of those actors will be made by the payment agency.
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 randomly and for the other party according to a reasoned choice (suspicion of cheating, results too good or very bad). This counter-verification may also be done by the Inspectorate General of the Ministry or an external organisation
7. Maintain *the PBF portal* and analyse the data of health facilities, regulatory authorities and CDV Agencies. Provide feedback on the performance of the actors and give 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*, in particular the questionnaires of the business plans at the different levels, the quality reviews, the indices management tool, and the TOR of 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 the sustainability and for the coordination of the team;
- The deputy coordinator plays the role of coordinator in case of absence and may as specific task organize the evaluations of the regional health directorates and regional CDV Agencies and organize 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 organises training sessions;
- PBF experts may be added by partner organisations to reinforce 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 autonomously manage its resources. It should operate a bank account with signatories such as 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 on the basis of their output activities on top of which a quality bonus may be paid. The PBF Unit can start operating with an advance to start 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 with 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 status of implementation of the Business Plan in terms of its quality indicators, as defined in the table below, and the application of the Indices Management Tool. The score obtained by CTN will serve as a basis for the calculation of its global quality bonus and its performance bonus.

The quality indicators for the PBF Unit	Points
Good disbursement of the PBF budget - *The PBF system spends between 90% and 110% of planned spending in costing*	15
Ensure availability of the PBF budget - *USD 4.00 - 7.00 (or the amount indicated in the costing) per person per year for PBF in the program area.* - *Availability of up-to-date information on budgetary monitoring (budget still available, trend of evolution and estimates of any problem with funding);*	10
Promptitude of the regional / provincial structures - *Promptitude (45 days maximum after the end of the term) and completeness (100%) of the evaluation of Regional Health authorities and CDV Agencies*	10
Promptitude of the central structures - *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*	10
Prompt confirmation of the PBF invoices entered in the PBF website - *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);*	15
The status of the implementation of the recommendations of the steering committee is up to date - *The evaluator reviews the recommendations and checks with the relevant officials if their status is correct*	5
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* - *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 if there is no running water*	5
Cleanliness of the courtyard - *Absence of papers and other garbage in the courtyard;* - *Maintenance of the yard (cut grass - well maintained garden, no animal excreta, no stagnant water puddles)* - *Availability of non-full garbage cans in the yard and accessible to visitors*	5
Hygienic conditions in offices - *Waste bins available in each office* - *Clean dust-free windows, window curtains clean and no spider webs in the rooms* - *Clean floor* - *Dust free cabinets and shelves, without spider webs* - *All documents tidy on desks and in shelves and cabinets*	5
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);* - *Statutory reports (financial monitoring, internal audit, external audit, procurement, monitoring and evaluation) are produced within the prescribed deadlines;*	5
The system of monthly calculation of performance bonuses exists and is known by the personnel - *Criteria for the calculation of the performance bonus established with all the personnel and calculated in the indices management tool;* - *The calculation of the performance bonuses are conducted in a transparent and participatory manner;* - *Ask 2 to 3 people at random.*	15
TOTAL	**100**

After the evaluation of the PBF Unit an invoice is established and 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 indices management tool will also be used by the PBF Unit. Criteria for payment of individual performance bonuses will be established by the PBF Unit. Criteria to be used may be promptness in the execution of 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 application of the index tool by the PBF Unit.
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 actually received.	50	**50**
TOTAL		**100**

6.7 Other Directorates and Programs in the Central Ministry

The Directorates and programmes of the ministry will have performance contracts for the implementation of 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. This Unit can be supported by the CTN-PBF.

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 and it would be difficult to develop new contracts and payment criteria for each directorate.

There are therefore eight contract subjects: 1. Advocate for change in favour of PBF, 2. Conduct special visits with clear TOR, 3. Conduct training sessions following 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 such 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. ** NB: The topics may concern changes in strategic documents, legal texts, output or quality indicators, business plan templates, indices tool, stakeholder evaluation grids.*	$ 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;	$ 120 / day / person

	- 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 - 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". *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.*	
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. *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.*	$ 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. *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.*	$ 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. *NB: This indicator may include means of transport, printing of training materials, purchase of equipment, computers, furniture.*	$ 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 ware about the indices management tool and knows how much they receive and on the basis of 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 assists the various directorates in the development of their business plans and performance contracts. The evaluation grids of the technical directorates will be updated quarterly by the General Secretariat in collaboration with the PBF Unit and the directorates concerned, depending 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 shows 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** - *Accounting documents held well, tidy and accessible in less than 5 minutes, (retained for at least 5 years);*	5	
	TOTAL	**100**	

The quarterly evaluation of the performance of the directorates and program at the central level is carried out by a pair group team composed of the different departments of the Ministry. After the invoices are prepared, the Secretary-General validates the results of the evaluation and sends the invoices to the financial department for payment. Each directorate must have its own bank account. After validation by the General Secretariat the Payment Agency has 15 days to process the invoice until payment.

6.7.4 Indices tool for the Directorates and Programmes

The indices management tool will also be used by health directorates and programs for transparent and participatory management and for 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 be used such as promptness in the performance of tasks, 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 *The evaluation team checks:* - 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 *The evaluation team checks:* - 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 *The evaluation team checks:* - 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: *The evaluation team verifies the existence of the following criteria:* - The responsibility bonus - Seniority bonus - Additional hours per month - The individual performance of the staff. - The penalty on the basis of administrative problems.	10 points, if correct	….
	5. The distribution of bonuses was done in a participatory manner *The evaluation team checks:* - 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 PAYMENT AGENCY

The payment agencies are responsible for paying the invoices of all actors. 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, a 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 sources of financing and based on the negotiations with different partners of who pays what. Excellent experience has been developed in Burundi with 13 sources of financing but with only one data collection Ministry of Health website that process the invoices from the internal contract unit, regional and district authorities and CDV Agencies.

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 confirm 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 the payments of the other PBF actors such as the regulators at all levels, the regional CDV Agencies, consultants, etc.

The role of the Payment Agency is similar to a bank and pays the bills of different PBF actors and within a time limit of for example 7 days. The payment agency checks whether the budget is available according to the budget lines (provider subsidies separate from administrative costs) and ensures the administration of the payments such as maintaining financial records of the project 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 performance in terms of its activities realized such as for each bank transfer that is made within a period of 7 days.

6.9 Roles of the Regional Health Directorates

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 into the PBF portal the scores of the hospital peer group reviews and the District Health Management Teams evaluations;
8. Counter verify the quality reviews conducted by the District Health Management Teams;
9. Organize the quarterly coordination meetings of the PBF activities.
10. Ensure periodic reporting and ensure 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 regional Business Plan (BP)

In order to carry out its activities, a quarterly performance contract is signed between the National PBF Unit of the Ministry of Public Health and the RHD. The BP accompanying the contract is a quarterly work plan that outlines the strategies needed to achieve the objectives set for the analysis of problems over a period of time. These two documents must be finalized and sent to the PBF Unit 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 activities of the RHD will be evaluated every quarter by the PBF Unit with the Central Directorates of the Ministry of Public Health.

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

The contracts are negotiated and signed for a period of three months between the RHD and the DHMT after validation of the business plans of the latter. These two documents must be sent to the RHD by DHMT 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 DHMT have bank accounts to receive transfers. The RHD transfers the details of the DHMT bank accounts to the

PBF Unit or other payment agency after the signature of their first PBF contract accompanied by a copy of their first contract or if a modification of the account number occurs.

6.9.3 Evaluate the District Health Management Teams

The RHD evaluates each quarter 100% of districts under PBF by the 5th of the second month of the following quarter. This assessment determines their performance on the basis of which the performance bonuses of 15% of the EDC will be paid. The criteria for quarterly assessments of health districts by the RHD are in the following paragraphs. At the end of this evaluation a payment invoice for the DHMT is produced and countersigned by the evaluation team leader and the In-charge of the District. This invoice will be validated by the PBF Unit coordinator before transmission for payment.

Copies of the evaluation done by the RHD of the DHMT, copies of the evaluations done by the DHMT of retail pharmacies (signed by the Pharmacist or Pharmacy Technician of the DHMT and of pharmacy inspected), the quarterly report of the health facility quality reviews by the DHMT and the reports of the DHMT quarterly coordination meetings will be attached to the invoice produced prior to its validation and transmission for payment.

The PBF Unit and MOH team conduct quarterly counter-validation visits to at least two districts to validate the assessments conducted by the RHD. The choice of one district will be random and another district is selected based on for example suspicion of cheating. If the PBF Unit score is higher than that of the RHD, this difference can be attributed to the implementation of the recommendations made by the PRSP to DHMT. If the CTN score is more than 10% lower than the RHD score, the RHD will lose 20 points in the quality score. Quarterly DHMT payments will be made as follows: 1) a variable part calculated on the basis of five output indicators realized and verified by the RHD X a fixed geographical equity bonus; (2) An additional 15% variable portion after EDP performance assessments by PRSPs.

6.9.4 Check the Investment Units for Health District infrastructure

Investment Units will be awarded to the health district and health facilities based on the proposals in their Business Plan. The audit will be conducted during the quarterly EDC assessments no later than the 25th of the first month of next quarter. The verification will be done by the civil engineer of the RHD, who will ensure compliance with the standards of the Ministry of Public Health and the 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 Community audits of local NGOs.

At this meeting of the Validation Committee chaired by In-charge of the district or its representative, the Regional CDV Manager or his / her deputy, a representative of the RHD, who also conducted the hospital peer review in that district, the verification officers of the CDV Agency, a representative of the Health Facilities in a rotatory manner and a representative of the local NGOs in a rotatory manner. The representative of the RHD presents at the meeting the quality data from the peer review. The presence of all members is mandatory. The invoices generated from the validation at the portal level of the output indicators, the technical quality, the index tool and the local NGO surveys will be printed in triplicate and signed by the District Manager or his representative and the Manager (or Deputy Manager) of the CDV Agency. The three copies are handed over to Health Facility, the Validation Committee and one to the CDV Agency. A summary of all HF invoices produced by the Validation Committee will be signed by all the members who took part in the meeting. This synthesis is scanned and uploaded to the portal. A report must be written and signed by the rapporteur and the chairman of the meeting with a signed

attendance list. Copies of the report must be maintained by the district, the RHD and the CDV Agency. A copy of the invoice with attached the verification form is signed by the Health Facility Chief and the verification officer and is kept by Health Facility, the District and the ACV.

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

Historically, hospital quality evaluations were often done by specialist doctors working in national reference hospitals. This was not a very realistic approach due to the shortage of specialists, who do not have enough time to conduct regular visits in many hospitals. Furthermore, hospital managers may not perceive such hierarchical inspections as constructive.

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

Peer group evaluations are done by at least two other hospitals each represented by for example three people such as the managing doctor, administrator and nursing manager. The peers of both hospitals may be selected by the RHD or sometimes by the PBF unit in smaller countries. A representative from the local health authority and the CDV agency may also be invited. The visits should be disciplined so that participants arrive on time and do not waste each other's time. The exercise may begin by reviewing the recommendations of the previous evaluation. The doctors may review the medical technical aspects; the administrators, the financial-administrative performance and; nursing directors may focus on nursing aspects. The atmosphere of the visit should be frank, sincere and transparent without a "seeking for errors" attitude but rather to find strategies to improve services together.

The results must be treated with *confidentiality* to avoid that hospitals hide information, but also to protect the individual confidentiality of patients such as People Living with HIV. By the end of the visit, a joint meeting should be organised to discuss findings and recommendation.

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 HF must have a score above 80% during two consecutive quarters for the quality review conducted by the DHMT or by the peer group evaluation of the hospitals. The RHD conducts a counter-verification to check whether the quality reviews by the DHMT are done according to standards. The person doing this counter-verification must be a technical staff with the level of at least a Registered Nurse with experience in District Health. In each District 2 health facilities may be selected randomly or oriented. 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 In-charges of the District and representatives of the hospitals in the region, the Manager and the Deputy Manager of the ACV. The RHD may invite any other actor deemed useful. At the end of the meeting, a report showing the main problems identified and the solutions proposed shall be drawn up with the attendance list.

6.9.10 Provide periodic reporting and ensure proper documentation and archiving

The Regional Health Information and Planning Department should elaborate and transmit to the MOH the different reports of the health programs according to the different deadlines. Reports from other

activities, such as validations, evaluations, coordination and supervision, are not only forwarded to the hierarchy but also shared with other actors in the Region.

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. The shelf life of documents is at least 5 years. All other documents must also be properly classified in the various offices. All important documents in soft must also be in hard copies and archived.

6.9.11 Ensure management of human and financial resources

For the proper management of human, material and financial resources, the RHD must apply the good governance tool of the PBF, which is the indices management tool. It is a transparent and participatory management tool that allows to analyse the revenues, to identify and to plan the expenses of the structure and to distribute the profits which can be transferred in the form of a performance bonus to the personnel. The indices tool and the criteria of performance and individual evaluation are understood and used by the staff of the RHD.

6.9.12 Inspect pharmaceutical wholesalers

Inspection of all wholesaler should be done semi-annually. However, the RHD can do 50% of wholesalers per quarter. The number of wholesalers of this quarter will then be recorded in the contract of the RHD. The first step is to 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 standards of the Ministry concerning infrastructure, the documents authorizing to practice, authorizing the importation of the drugs and attesting the effectiveness of the quality control of its medicines, the storage conditions and the source of drugs 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 a 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 the local authorities must have a plan for the closure of these structures. At the end of the review of pharmacies, the RHD will draw up a list of validated wholesalers who are authorized to distribute drugs to all Health Facilities and with a copy to Districts and CDV Agencies.

6.10 Questionnaire for the inspection of pharmacies

	ACCREDITATION QUESTIONNAIRE FOR (WHOLE SALE) 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 *SECURITY STOCK = 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.	Cholhexidine	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 – *bought by health facility*			0
Delivery Kit – *bought by health facility*			0
Caesarean Section Kit – *bought by health facility*			0
Emergency Kit – *bought by health facility*			0
TOTAL - Maximum 15 points		**… / 15**	**…. %**
OBSERVATIONS COMPONANT			

C	HYGIENE, STORAGE, TEMPERATURE, HUMIDITY	Points	Score
1	**Electricity supply available 24/24, 7/7** - *Verify whether there is electricity in all store rooms* - *Verify that there is a back-up power supply (generator or other source of electricity)* - *Verify that alternative power supply is in good working order.*	**10**	….
2	**Hygiene and Sanitation within building and surrounding area** - *Floors and shelves should be clean and free of dirt and cobwebs.* - *Premises are safe, clean, properly maintained* - *Premises has toilets with running water*	**3**	….
3	**Storage area is sufficient compared to the volume of stock** - *Verify that the area is tidy with adequate aeration;* - *Area is not saturated and congested.*	**3**	….
4	**Products are arranged in alphabetical order with stock cards** - *Stock cards are available for each product;* - *Products arranged in alphabetical order*	**3**	….
5	**Products well stored and not placed under direct sunlight.** - *Verify that there are no commodities stored in direct contact with walls or floors* - *Records are updated up to date of supervision.* - *Verify that stockrooms are designed to shield products from direct sunlight.*	**2**	….

6	**Management of damaged and / or expired goods** - *Damaged and / or expired goods are segregated from useable stock* - *Goods are destroyed in safe manner so that they cannot re-enter the supply chain.* - *Verify documentation of destroyed goods*	**5**	….
7	**Products stored with consideration given to expiry dates** - *Inspector randomly check products* - *First enter, first out principle applied (FIFO)*	**2**	….
8	**Store temperature and humidity monitored with mechanisms to manage fluctuations** - *Verify temperature and humidity charts* - *Verify that entries are up-to-date up to supervision* - *Check presence and working condition of dehumidifiers, fans and air-conditioning units*	**2**	….
9	**Fridge for storage of refrigerated commodities with equipment for transportation** - *Verify presence of fridge, stock and temperature records* - *Temperature readings should be 2 degrees to 8 degrees centigrade* - *Verify that there are water-filled ice packs or cooler bags/boxes*	**5**	….
	TOTAL Points - 16 points maximum	**35**	**…. %**
OBSERVATIONS COMPONANT			

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

	QUALITY CONTROL ASSESSMENTS	**Points**	**Score**
1	**Random quality control assessments conducted – physical inspection** - *Inspector conducts visual inspection physical characteristics identity, expiry, uniformity*	**5**	
2	**Random quality control assessments conducted – laboratory tests** - *Inspector takes random samples for quality control in regional or national laboratories* - *Inspector takes samples each quarter or takes random samples e.g. with new consignments*	**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. It is signed by the RHD and the PBF Unit. 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 to analyse the revenues, to identify and to plan the expenses of the RHD and to distribute the profits which can be paid in the form of a performance bonus to all staff.

4. EDC quality evaluation grid:
It is a grid that is used by the RHD to evaluate the performance of the EDC.

5. Pharmaceutical Inspection Grid:
The grid includes several parts which evaluate: inspection of procurement documents, availability of medicines, storage conditions & hygiene, stable electricity, cold chain, safety, and drug quality tests.

6. Evaluation questionnaire for health facilities at hospital level:
This is a hospital quality review questionnaire that uses a list of SMART composite quality indicators. A composite indicator may contain several items that must all be satisfied to win a point. The value of the indicators can be 1, 2, 3, 4 or 5 points and this depends on its importance. This tool proposes, at the end, corrective measures to the problems identified.

7. Evaluation questionnaire for health facilities at primary level
This is a quality review chart of health facilities at primary level that uses a list of SMART composite quality indicators. A composite indicator can contain several items that must all be satisfied to win a point. The value of the indicators can be 1, 2, 3, 4 or 5 points and this depends on its importance. This tool proposes, at the end, corrective measures to the problems identified.

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

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

The quarterly payment of the PRSPs will be made as follows: (1) A fixed part on the basis of 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 output indicators and the quality review questionnaire of the RHD are given in the following tables. The prices of the output indicators and the equity bonuses of the PRSPs are defined by the PBF Unit.

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

The RHD will be evaluated by the PBF Unit with the technical directorates of the Ministry no later than the 25th of the second month of the following quarter. The evaluation will examine the status of implementation of the Business Plan. 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 evaluation questionnaire of the DHMT is completed and is signed by the representative of the RHD, who conducted the evaluation, and the In-charge of the District. (*NB A copy of the evaluation grid must always remain at the Health District and the RHD. In case that differences are observed between the 2 copies the payment will be cancelled);* - The invoice of the evaluated district is made, signed by the team leader and the In-charge of the District, and validated by the RHD. 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 RHC report submitted to the MOH includes recommendations for District Health Services to improve qualitative and quantitative performance.
2. Participation in a District Validation Committee	- The representative of the RHD, who attends the District Validation Committee is the person who also conducted the peer group evaluation of the district hospital(s) or the superior to which he/she made the feedback of the evaluation; - The hospital quality evaluation results were presented to the district validation meeting and were entered in the portal. - The RHD has a copy of the report of the district validation meeting 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, contains recommendations made to the hospital, and is signed by the hospital director and all members of the evaluation team with their name and their qualification. *(NB A copy of the evaluation grid must always remain in the hospital and in the RHD. In case of verification and differences are observed between the 2 copies the payment will be cancelled.)* - 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. The team is led by an official of the RHD. *Check on the list of signatories of the evaluation grid* - 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	- The inspection is carried out by a team led by a pharmacist. - The copy of the inspection questionnaire is completely filled and signed by the Pharmacist of the RHD, who conducted the evaluation and manager of the wholesaler inspected. *(NB A copy of the inspection grid must always remain with the wholesaler before departure);* - 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 report of the RHD.

5. Counter-evaluation of a health facility, previously evaluated by DHMT	- The counter-evaluation team is led by a technical staff with a level of at least registered nurse with 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 *(NB A copy of the Counter-Evaluation grid must always remain in the HF before departure. In case differences are observed between the 2 copies the Counter-Evaluation will be cancelled);* - 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 *(discordances discovered?);* - The RHD report to the MOH includes an analysis of the results of the counter-evaluation 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 calculation of the quality bonus payment may be as follows: the payments for the output activities X 15% X 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**	15	….

	- *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;*		
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** - *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** - *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 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 containing the total quantitative production, the regional equity bonus and the amount of the quality bonus will be established. The production of the RHD will be introduced in the PBF portal at the end of the validation by the PBF Unit. An invoice will be issued and paid within 7 days. The RHD invoice model is as follows:

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

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 by the national PBF Unit to evaluate the use of the Indices Tool by the RHD.

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 actually 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 the district (health) authorities but in Nigeria they are the Local Government Authority and in Gabon these are the regional health departments. We refer in this course book to the District Management Teams (DMT)., usually responsible for a target population of between 50,000 and 400,000 inhabitants. They must assure the quality of providers, retail pharmacies in particular.

A performance contract is signed between the regional department and the district management teams under the supervision of the National PBF Unit and the MOH. The regional departments will conduct evaluations of the activities of the DMT quarterly. The National PBF Unit with the MOH may counter verify the evaluations of the regions on an at random basis by selecting each quarter at least one district.

The roles of the DHMTs are the following:

1. Develop each quarter a district business plan;
2. Conduct annually the mapping and rationalization of the district health map for the primary and hospital level catchment areas without discrimination against either public or private providers;
3. Conduct each quarter technical quality reviews of providers at the primary level;
4. Accredit 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, a quarterly performance contract is signed between the RHD and the DHMT represented by the District Medical Officer. The BP is a quarterly work plan that proposes the strategies for achieving the objectives set after the analysis of the problems in the district. The DHMT develops a business plan which will be an annex to the contract with the RHD. The contract and BP must be sent 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 rationalise the principal and secondary catchment areas

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

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

1. Conduct the mapping of the health facilities in the health district whereby *private* not-for-profit and for-profit providers s*hould not be excluded*.
2. Update the population of the district and the existing health facility catchment areas based on 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 for rural areas and between 8,000 and 15,000 inhabitants for 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 division of large areas into new smaller catchment areas of between 5000 and 15,000.

The district health map showing the catchment areas is then made and accessible for relevant stakeholders and posted at the wall of the DMT. A copy of the list of health facilities with their catchment areas and population should be sent to the CDV Agency and the RHD.

6.14.3 Evaluate the professional quality of providers at primary level

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

6.14.4 Accredit 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% and if regulators would adhere to the standards it would mean closing most health facilities because they pose a danger to the health of the population. This is obviously not possible and would create the emergence of 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 to serve the complete population;
3. Agree with health facilities how they will improve their quality scores progressively towards the desired 80%. During the next review, a follow-up should made in how far previous recommendations have been implemented and at the end of the evaluation, new recommendations should be formulated. A feedback session should be organized for all staff and a report is produced, and a copy should be kept at the health facility and at the district office;
4. Health facilities that have achieved a score of 80% or more during two successive district quality reviews will receive the accreditation. This accreditation must be double checked by the regional health authority and if necessary also by an independent counter-evaluation team. Yet, after obtaining accreditation, if health facilities during two successive quality reviews by the DHMT have scores below 80%, they will again lose their accreditation.

6.14.5 Organize Monthly District Validation Committees meetings

The monthly meetings of the committee to validate the output invoices of health facilities is chaired by the District Medical Officer or his representative and are organized before the 30th of the next month. The meetings are attended by the CDV Agency Manager or his representative and all district medical verification officers. 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 the health facilities.

The validation meeting of the last month of the quarter concerns: (1) The quantitative outputs and invoices of the health facility invoices 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 District Validation Meetings is chaired by the In-charge of the district or representative and attended by: (1) the Regional CDV Manager or his / her deputy; (2) a representative of the RHD, who also conducted the peer hospital review in that district; (3) the district verification officers; (4) a

representative of the health facilities in a rotatory manner and; (5) a representative of the local NGOs in a rotatory manner.

The representative of the RHD presents at the meeting the data from the hospital peer review. The presence of all members is mandatory. 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. Three copies are kept by the health facility, the district and the CDV Agency. A summary report of all health facility invoices with recommendations are prepared by the Health District and signed by the members who took part in the meeting. This summary report is scanned and uploaded in the portal.
The participation of the various actors (transport and per diem if appropriate, other) is covered in their respective budgets. Copies of the report must be kept by the district and the CDV Agency. The costs of the meeting are borne by the DMT.

6.14.6 Inspect retail pharmacies in the district

The inspection of a retail pharmacies is done twice per year. First, the DHMT conducts a mapping of all retail pharmacies (approved or not approved by the MOH). During the inspections, the DHMT team, which should have at least a Pharmacy Technician, uses the evaluation questionnaire defined by the competent structures of the Ministry of Public Health. This questionnaire considers the standards of the Ministry concerning the infrastructure, the documents authorizing the exercise of the profession, the storage conditions and the source of supply of the drugs in stock. Retail pharmacies with a score of 80% or more will be accredited and will be 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 have a plan with the local authorities for the closure of 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 organises a coordination / evaluation / planning meeting on a quarterly basis. This one- or two-day meeting is chaired by the District Medical Officer. During this meeting, the performance of the district and health facilities will be presented and discussed. Training sessions may be done on themes concerning the problems identified during the health facility quality reviews and pharmacy inspections. PBF best practices issues may be discussed. A report showing the main problems identified and the recommendations proposed is written 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 District

For the management of human, material and financial resources, the DMT must apply the indices management tool. It allows to analyse the revenues, to identify and to plan the expenses and to distribute the profits which can be transferred in the form of performance bonuses to staff. The criteria for the indices management tool are proposed by the DMT staff themselves and 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

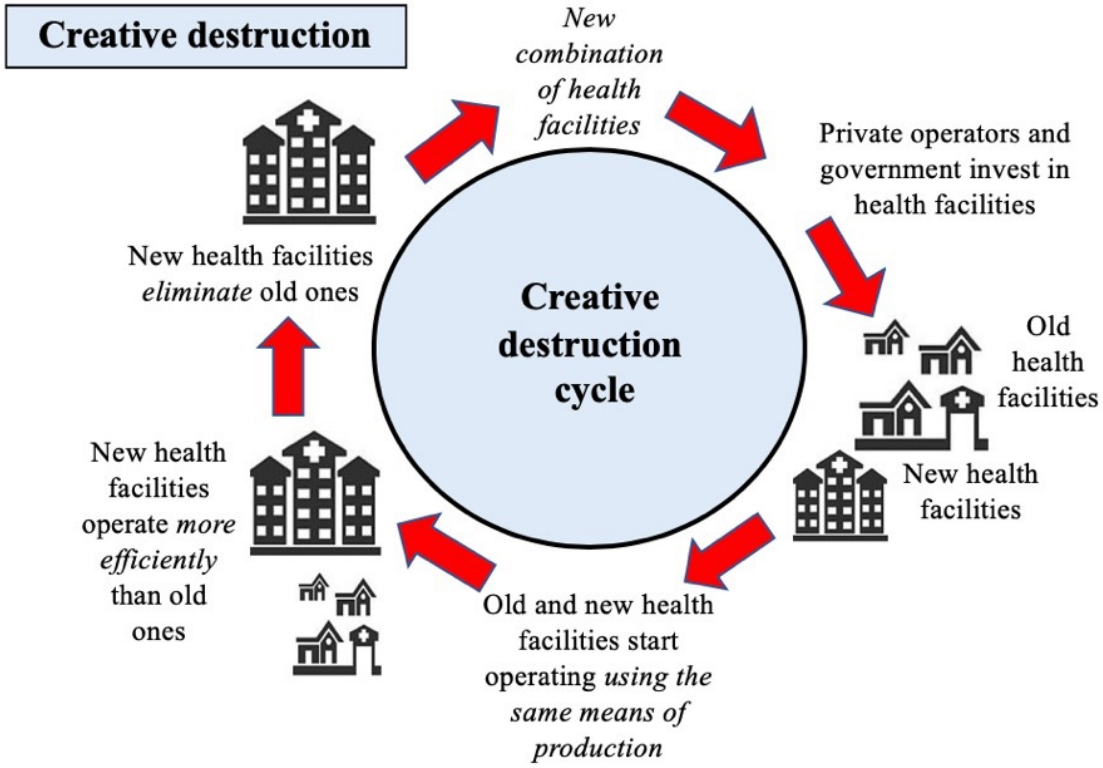
cabinets. Documents should be kept for at least five years. Important documents should be kept in hard and soft copies.

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

The rationalization of health areas at the primary and hospital levels is one of the key roles of the 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 or 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 and allow 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 (often rural) areas the regulator may not find any health structure at all and in this case a private investor or 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 rationalisation process will be carried out as follows:

1. Begin with the mapping of the HF in the health district. The following questionnaire can be used for this purpose. Mapping can be done by interviewers selected from the district management teams, who are familiar with the environment. The mapping includes all formal and informal public and private health facilities. A good approach is to ask the staff of each health facility if they are aware of other previously unknown health facilities operating nearby. The mapping exercise can be supervised by an external expert specialized in public health, PBF and in the mapping. The external expert should also ensure the neutrality of the work and avoid biases in favour or against certain facilities.

	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			

2. Collect information about the population of the district and health facilities. If not the same year as the PBF intervention, then adapt it by multiplying it with 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 HF and district authorities. Check with the participants if the (estimated) demographic data are correct. In case of a difference, the population of the catchment area can be added or reduced.
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 either by merging small catchment areas into larger ones or by dividing too large catchment areas into smaller ones. For a health area with a main contract all activities of the minimum package must be provided or at least the main contractor must have the ambition to evolve towards the complete package.
5. For the hospitals, a target population of between 50,000 and 200,000 people may be applied.
6. Once the areas are identified it is necessary to determine who will obtain the main contract. The choice will be made for the HF that has the highest score for the activities already carried out and the others will be given secondary contracts. In urban areas, typically 70-90% of the main contractors are private structures, but also in rural areas one can find (often religious) private facilities.
7. The CDV Agency (after consultation with the DHMT) may change the primary and secondary contract based on the developments in the catchment area and the quality of services of each facility.

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 criteria for payment of individual performance bonuses for staff will be established by the district. The criteria that may be used are: promptness in the execution of 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 use of the Indices Tool by the DHMT.

If the revenue and expenditure are not balanced, the evaluation of the index tool cannot continue and the DHMT loses everything.		
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 actually 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 to analyse the revenues, to identify and to plan the expenses of the district and to distribute 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 to have the general information (location, distance populations, personal etc.) on the public and private health facilities in the district and which 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 DHMT will be evaluated by the Regional Health Department not later than the 25th of the first month of the following quarter. The evaluation will cover the implementation status of the Business Plan. At the end of this first evaluation, the RHD will make recommendations to the DHMT based on the DHMT quality questionnaire above and the evaluation of the DHMT indices management tool. The two reviews will be used to calculate the overall quality bonus.
An invoice containing the total quantitative production, the equity bonus and the quality bonus will be established. This will be uploaded to the MOH PBF portal at the end of the evaluation by the RHD. 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 which is 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 taking the total of the output activities + equity bonus and multiplying it by 15% X the quality score is based on the indicators presented on the next page. The prices of the output indicators and the district equity bonuses are defined by the MOH.

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. *(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)* - 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. *(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);* - 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* *The office toilets must fulfil the same conditions of cleanliness as those described above*	5
13	**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
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 centres, USD 20 for hospitals and USD 100 per pupil at primary schools.
2. *Managers* must have the *autonomy to use their resources* for quality improvements. This means the autonomy to recruit and fire skilled staff, to buy drugs, equipment and furniture and to rehabilitate the 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 good quality and to discourage poor quality.
6. The regulator uses a quality review questionnaire and may propose for example 80% as the *minimum standard to accredit* the providers. After a grace period, providers, which remain below standard, may have to close.

7. *Competition between health facilities* should assure that there are alternatives in case of health facilities that need to close.
8. The *CDV agencies* negotiate contracts with providers conditional on quality improvement. They may also give providers *investment units* (e.g. USD 1000 for health centres and USD 2000 for hospitals) against infrastructure or equipment improvements proposed in the business plans. These investments units are paid once certain benchmarks are being met and which a CDV engineer or architect has verified. 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 government using PBF apply standard questionnaires of between 120 and 200 composite quality indicators that are used each trimester by regulatory authorities. Patient satisfaction surveys are routinely applied in PBF systems by local NGOs, which check in how far health facility data have not been falsified.

Recently, there have been calls to increase the tools with : 1. vignettes to test staff on their knowledge on how to treat common diseases ; 2. to conduct exit interviews of, and if possible; 3. to conduct direct observations (Fritsche, G & Peabody, J 2018).

The idea behind this latest development in PBF is that *we should make a distinction between structural, process and outcome measures of quality*. Structural measures are the inputs necessary for providing 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 method used for paying the quality bonus may is done through the “carrot + carrot” approach. In the “carrot + carrot” approach, the quantitative results of the health facility or school are rewarded separately from the quality results. So, if the quantity result of a provider over a three-month period was USD 10.000, the quality bonus may be up to 15% (or 25%) of the total output subsidies. When the score is 100% the quality bonus = USD 10.000 x 15% x 100% = USD 1.500. If the quality score was 50% the quality bonus would be USD 10.000 x 15% x 50% = USD 750.

If cash sources of income are diversified and PBF is just one (less than 10%) of several sources of cash income in a given facility, the “carrot X stick” method might also be considered because this creates an even stronger incentive for providers to improve their quality.

Whatever mix of quality assurance tools used, this should first be submitted to rigorous field testing of the questionnaire and the feasibility to apply the tools within acceptable time frame and costs. The testing should assure that both evaluators and providers understand the methodology and indicators. The outcome of the scores should be the same when done by different evaluators and not subject to personal interpretation.

An important criterion is that it must be possible to finish all quality review components within one four-hour visit to the health facility. It should therefore be optional in how far direct observations or patient exit interviews are possible because for example this assumes that there are patients at the moment of the visit. Staff tests with vignettes on their knowledge of common diseases should be possible 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, which must be satisfied to earn a point (or sometimes more than a point). The weighing of indicators may be 1, 2, 3, 4 or 5 points and depends on its importance.

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 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. : ..……..
Sub contracts? 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 sub contracts with secondary health services providers* - *Outreach strategies (EPI, surveillance, FP, ANC, PMTCT, bed net distribution)*	**4**	**0**
2. Business Plan developed <u>with key stakeholders</u> - *Heads of HF departments, health committee members (if functional)* - *Representative (s) of subcontracted Private Clinics or Health Posts (if applicable)* - *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 - *At least in the OPD consultation room, in-patients ward and toilets / latrines*	**5**	**0**
2. Health facility fence available and well maintained - *If grass fence exists => well cut; If made of sticks or wall fence => without through passage*	**2**	**0**
3. Availability of a trash bin in the courtyard - *Bin with a lid and accessible to clients - not full*	**1**	**0**
4. Presence of sufficient latrines or toilets and in good condition - *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*	**2**	**0**
5. Presence of showers in sufficient numbers and in good condition - *At least 3 showers;* - *Shower with running water, or container with at least 20 litres;* - *Evacuation of the wastewater in a sanitation pit.*	**2**	**0**
6. Incinerator and placenta pit within a fence - *Functional incinerator in use and empty* - *Placenta pit with lid* - *Well-built fence with door locked by key at moment of inspection*	**5**	**0**
7. Waste pit for non-contaminated objects - *Hole of min 3 metres depth, fenced, without infected or non-decomposable objects*	**1**	**0**
8. Courtyard cleanliness - *No waste or dangerous objects in courtyard: needles – gloves – used swabs.*	**2**	**0**
9. Maintenance of the courtyard - *Grass cut – garden well maintained – no animal excrement*	**1**	**0**
10. Staff sterilises instruments according to standards - *Sterilizer (poupinel or autoclave) in good condition and functional.*	**3**	**0**

- *Sterilisation protocol displayed.*		
11. Hygienic conditions assured in wound dressing and injection room - *Bins infected objects with lid –security box for needles well positioned and used*	**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 - *With sufficient benches and / or chairs, protected against sun and rain*	**1**	**0**
2. Cost recovery rates are displayed outdoors for the public - *Fees rates easily visible for patients before consultation*	**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** - *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*	**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** - *Note book available and well filled (updated)*	**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** - *Check completed and signed reference cards*	**2**	**0**
2. **Clean consultation room safeguarding confidentiality available** - *Room with closed door– curtains on the windows – no through way*	**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 - *147 doses of DEPO or stock ≥ MMC* - *36 boxes of 3 blisters/cycles of pills*	**3**	**0**
6. **IUD** methods available and staff trained to use it - *At least 5 IUD available as well as a box for insertion / withdrawal*	**2**	**0**
7. **Implants** Method available and staff trained to insert/remove them - *At least 5implants available*	**2**	**0**

8. **Condoms** available (male and female) - *At least 288 condoms (male female) are available*	**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** - *Randomly select 5 clients in the registry and check their individual forms* - *It's mandatory to have the following indicators: blood pressure, hepatomegaly, varicose veins, weight*	**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 - *Evaluator checks the last 2 Sundays in the laboratory register*	**1**	**0**
3. **Results recorded** correctly in the laboratory register and **match** with results in inpatient sheets or OPD laboratory examination card - *Evaluator checks the last 5 results*	**1**	**0**
4. List of all examinations performed **posted in the laboratory**	**1**	**0**
5. Availability of parasites samples - *In a plasticized paper, in a colour book, or posted on the wall* - *Blood smear: Vivax, Oval, Falciparum, Malariae* - *Stools: roundworm, Entamoeba, hookworm, Schistosoma*	**1**	**0**
6. **Availability of a functional microscope** - *Functional objectives - immersion oil – mirror or electricity – slides– slides cover – GIEMSA available*	**2**	**0**
7. Availability of a functional centrifuge machine	**1**	**0**
8. **Cleanliness of preparation table** - *No spider web* - *Material well stored* **Waste disposal:** - *Organic waste in a bin with lid* - *Security box for sharp objects available and in use*	**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 - *Bed with not torn leather covered mattress* - *Mosquito nets, bed linen, bedside tables*	2	0
2. **Good hygienic conditions** - *Regular cleaning, access to drinking water (less than 20 m),* - *Beds well-spaced (at least 1 m)* - *Good ventilation without bad smells*	2	0
3. Ward illuminated at night - *Electricity, solar light or rechargeable battery lamp / generator*	1	0
4. Privacy ensured - *Wards for men, men and children separated –without being seen from outside*	1	0
5. In-patient register available and well filled - *Check for full identity and hospital bed days*	1	0
6. **Monitoring forms available and well filled** - *At least 10 blanks forms* **The evaluator checks 5 filled forms:** - *Temperature, BP, pulse, laboratory examinations well filled* - *Treatment monitoring marked and in complying to protocol, care plan, (specific requirements), planning and execution.*	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** = *Monthly Average Consumption (MAC) / 2* - *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 *Security Stock = Monthly Average Consumption (MAC) / 2*	**Available YES > MAC / 2**	**Available NO < MAC / 2**
1. Amoxicillin tabs 250 mg	**1**	**0**
2. Ampicillin tabs 500 mg	**1**	**0**
3. Artesunate tabs50 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 – *bought by the HF*	**1**	**0**
33. Obstetrical Kit – Caesarean section Kit– *bought by the HF*	**1**	**0**
34. Obstetrical Kit – Emergency box – *bought by the HF*	**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 - *A functional water point or at least a full 20 litres container*	**1**	**0**
2. Delivering ward with light - *Electricity, solar light or rechargeable battery lamp/generator*	**1**	**0**
3. Waste collected properly in the delivering ward - *Bin with trash bag and lid* - *Security box for needles + solution for decontaminating*	**1**	**0**
4. Delivery ward in good condition - *Walls with durable materials and oil painted or tiles* - *Paving in cement without fissures, ceiling in good condition(clean, should not ooze)* - *Windows with opaque windows and functional doors*	**1**	**0**
5. Availability of the partogramme - *At least 10 empty forms*	**1**	**0**
6. **Partogramme completed correctly** - *The evaluator randomly pulls 5 deliveries files and checks their partogramme* - *Identification of the woman - date and time of admission – discharge date* - *Dilatation - descent of the presentation* - *Taking and recording blood pressure every 4 h* - *Pulse - urine volume - FHS (foetal heart sound)* - *Contractions every 30 minutes* - *APGAR*	**5**	**0**
7. Care administered to the new-born - *Vit K, heating and early breastfeeding, eyes' care* - *Evaluator pulls randomly 3 deliveries and checks in the delivery report*	**1**	**0**
8. All deliveries performed by **skilled personnel** - *Identification of attendants/midwives from names and signatures in registry*	**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** - *Trained/Skilled Nurse in its use* - *Vacuum extractor effectively used*	**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
*Minimum/Security Stock = Monthly Average Consumption (MAC) / **2***	**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 - *Presence of a fridge – availability of note books or temperature chart sheet filled in twice a day – including the visit day* - *Temperature remains between 2 and 8 Celsius degree on the chat sheet* - *Evaluator checks the functionality of the thermometer* - *Temperature is between 2 and 8 degree Celsius from the thermometer*	**5**	**0**
2. **No out of stock** of toxins DTC+HEPB, BCG, measles, polio, tetanus, pneumonia, ROTARIX. - *Presence of stock taking control cards* - *Evaluator checks the physical stock in the fridge that has to match with the theoretical stock*	**2**	**0**
3. Vaccines are correctly stored in fridge - *Freezing compartment:* - *Not frozen compartment:* - *1st floor: polio 0– measles- VAA-BCG* - *2nd floor: DTC+HepB, +Hib Pneumo, tetanus* - *3rd floor: diluents* - *More below: Not frozen energy accumulators' batteries.* - *Absence of expired vaccines or vaccines which the temperature indicator changed* - *Labels on vaccine vials easily visible*	**1**	**0**
4. Cold chain condition - *Oil / gas fridge => oil and gas bottle available* - *Solar fridge=> battery in good condition* - *Electric fridge => available back up system in case of power cut*	**1**	**0**
5. Cold accumulators - *Well frozen* - *At least 6*	**1**	**0**
6. **Syringes** available - *Auto Disable– at least 30* - *For dilution – at least 3*	**1**	**0**
7. **Waste** is collected in appropriate bins Waste are collected in bins with bag - *Availability of safety box (container)*	**1**	**0**

8. **Stock of books** or the road to growth card EPI & Pre-School Consultation - *For the woman or the child - at least 10*	**1**	**0**
9. **EPI register** well filled in or form system available - *System able of identifying drop-outs and completely vaccinated children*	**1**	**0**
10. Good waiting conditions PSC and immunization services - *With sufficient benches and / or chairs, protected against the sun and rain*	**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 - *Scale calibrated to zero + Pants available, clean and in good condition*	**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 - *Well calibrated to zero* - *Scale appropriate for ANC Consultation*	**4**	**0**
2. Measuring tape for mid-arm circumference - *Available and in good condition (easy to read)*	**1**	**0**
3. Determination of the nutritional status of any woman in ANC - *Described in the ANC form*	**3**	**0**
4. **ANC form** (*for HF*) available and well filled in - *Evaluator checks 5 forms randomly* - *Examinations: weight, BP, height, parity, LMD, mid-arm circumference* - *Laboratory: Albuminuria - Glucose - Hb* - *Obstetric examination made: FHS (foetal heart sound), FH (Fundal height), presentation, foetal movement*	**3**	**0**
5. **ANC Notebook** (*for mother*) - *Available – at least 10*	**1**	**0**
6. **ANC Register** available and well filled in - *Complete identity, vaccination status, date of visit, and High Risk Pregnancy (HRP) corner well filled including problems and actions taken*	**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** - *Walls of durable material with plastering and painting* - *Ceiling in good condition* - *Windows with glasses and curtains and functional doors* - *Desk with three chairs, shelf*	**2**	**0**
2. Counselling **register** - *Available, used and up to date*	**2**	**0**
3. Presence of a **trained person** providing counselling in VCT	**2**	
4. Availability of blood collection equipment - *In at least the ANC counselling and delivery rooms* - *Equipment: blood sample bottles and needles (at least 20), blood sample bottle holder, tourniquet*	**3**	**0**
5. Hygiene ensured in counselling room (ANC)	**2**	**0**

- *Bins for stained materials with lid* - *Safety box (needles) well placed and used*		
6. Minimal/security stock of reagents - *At least 50 tests of determine and at least 5 confirmation tests* - *Match between physical and theoretical stock*	**5**	**0**
7. Compliance to the HIV testing protocol - *Algorithm of HIV testing must be displayed on the wall* - *Verify in the CDV register for 5 cases*	**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** - *Including for permanent very poor, circumstantial cases and during disasters*	**1**	**0**
2. List of vulnerable in the catchment area of the HF is available - *Accessible within 5 minutes* - *at least 2% of households are identified as poor*	**1**	**0**
3. OPD Consultation for the poor - *At least 3% of all patients to the outpatient consultation are exempted*	**5**	**0**
4. In observation/hospitalized poor - *At least 3% of all patients admitted are exempted*	**3**	**0**
5. Home Visit According to Protocol Conducted - *At least 20 home visits were done during the last month*	**5**	**0**
6. Effect of home visit on FP - *At least 5 new cases in the past month for FP arrived at HF after home visit*	**3**	**0**
7. Effect of home visit on toilets / latrines - *List of houses of the catchment area of the HF showing available toilets / latrines with convincing improvement strategies*	**3**	**0**
8. Malnourished children - *Malnourished children properly identified* - *Supplementary feeding*	**5**	**0**
9. Effects community PBF on the follow-up of TB - *Protocol on the follow-up of dropouts available* - *At least one case of TB*	**2**	**0**
10. Effect of Community PBF on the follow-up of EPI dropouts - *Protocol on the follow-up of dropouts available* - *Evidence that the follow-up program is running*	**2**	**0**
Points TOTAUX – 30 points maximum	**…… / 30**	**XXXXX**
OBSERVATIONS COMPONENT		

SUMMARY OF TE QUALITY ASESSMENT		
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, which promote good governance, assure that provider' results are strictly verified and that subsidies can be paid. They also coach providers in the use of their business plans and indices management tools.
- For economies of scale, CDV Agencies may cover a complete region, state or county targeting up to 2-3 million people. Yet for this to work they most also open CDV Branches at district level with verification officers, who reside there.

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 also patient satisfaction survey are 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 the improvement of infrastructure and equipment. On the basis of progress steps well defined in advance this results in the payment of the quality improvement bonuses (QIB) or investment units. The QIB audit for the Regional Health Department (RHD) infrastructure will be carried out by the PBF Technical Unit. The QIB for the DHMT infrastructure will be audited by the RHD.
- 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 each month a *district validation committee meeting,* where all output, and QIB-data and invoices are validated. During the last month of the trimester the validation committee validates also the quality review data (realised 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 the quality review data in the PBF portal and the Regional Health Department enters the hospital quality review data in the PBF portal.
- 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.
- Synergies are possible between the PBF data collection system and the NHIS. However, NHIS systems as they currently stand often pose problems, notably because they often contain 1000 or more data elements. It is impossible to verify each month so many indicators and therefore PBF cannot be held responsible for their quality. PBF works with a select set of SMART indicators, which are stringently verified.

7.1 Objective and introduction of the Regional CDV Agencies

The overall objective of the regional CDV Agency is to assist with the implementation of PBF. Depending on the administrative set-up of each country the CDV Agency may operate from the Regional level (BF, Cameroun), the County level (Kenya), the Provincial level (Burundi, DRC) or the State level (Nigeria). During the first years of piloting PBF, the population covered by one fixed CDV Agency often operated by international NGOS was usually between 200,000 and 700,000. This due to economies of scale and thereby to spread the fixed costs over a large enough population.

Yet, more recently when PBF system became national policy, further economies of scale improvements were identified. National PBF programs now tend to create District CDV Branches supervised by the Regional (or Provincial) CDV Agencies. The coordinator, deputy, portal and financial managers operate from the regional level, but the regional CDV Agency 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 the costs of traveling and per diems but also improves the accessibility for the district providers and local (health) authorities to the CDV Agency. Each CDV Agency with this approach may cover 2-3 million people.

The CDV Agencies are selected from (para) state organizations, insurance companies or national NGOs (civil society) that already have legal and autonomous status. A long-term solution must be found for these regional CDV Agencies which includes an entity independent of the regulator and which is under a performance contract with the national RBF Unit. Successful organizations will need to demonstrate that they understand the principles of RBF and are able to mobilize the skills needed to implement the activities.

For this they must have presented a convincing implementation plan before signing their contract. The organizations selected to play the role of CDV Agency must have experience in the implementation of projects and programs in the field and have staff with the qualifications and experience described below for the execution of their mandate.

7.2 The roles of the CDV Agencies

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

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 household together with satisfaction surveys among patient or users of other providers;
4. Verify the improvements in infrastructure-, equipment and human resources, and which 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 on the basis of the mapping conducted by the regulator of the potential providers in the PBF districts. The Manager will visit each district during the month following the end of the quarter for the negotiation and signing of new performance contracts with the health facilities or other providers for a period of 3 months. Each provider must submit a Business Plan, which will be evaluated by the manager. If the Business Plan is convincing, the contract can be signed. For those already under PBF contract, in addition to the evaluation of the Business Plan, the scores of the

technical quality review by the DHMT and the evaluation of the Indices Management tool will be taken into account. The principal contract holder will sign subcontracts with other health facility in the same catchment area but the main contract can be given to the secondary contract holder if the 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 *declare* to the district branch of the CDV Agency their productions in the HMIS forms. CDV medical verification officers visit the health facilities with these forms to verify the entries in the registers. The quantitative results of the secondary contract holders are verified before the verification of the registers of the main contract holders. If the difference between the reported data and the data verified by the verifier is greater than 10%, the subsidies for this indicator will be cancelled. This will create a strong stick, not only to obtain quality PBF data but also reliable HMIS data. After the verification by the CDV officer there should be made two copies of the form signed by the primary contract holder and the CDV officer. Each subsidized activity of the health facility must have a standard register where the activities carried out are recorded and in which one can find the complete address of a patient and / or his telephone number. This usually means that registers need to be adapted to make this information available. Sometimes this is simple, but sometimes it needs designing new registers, which contain the data required for HMIS and PBF.

Registers must be harmonized in the PBF intervention area or nationally when the PBF has become the national approach. Each page must be checked by the medical verifier. No page should be missing and there should be no error in the counting of patients in the registers. The registers then become verifiable documents, which the auditors of government agencies and financial partners can monitor to check the accuracy of the number of patients for whom the subsidies have been paid. The registers must remain in the HF for at least 5 years. In case of non-compliance with the verification criteria of an activity, there will be no payment and the provider is informed.

7.2.3 Organize Community Verification and Satisfaction Surveys

Community verification checks the existence of patients registered by the provider as users of the health facility and collect information about the degree of satisfaction of the users by means of a questionnaire administered in the households. These interviews are carried out by the local NGOs contracted by the CDV Agency and supervised by the CDV Community verification officers.

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

The selection criteria for investigators 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 so that confidentiality is maintained.

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, fully vaccinated children, etc during the previous 90 days of the visit. 50% of the sample may be selected by random sampling and for the remaining 50% the CDV staff may use a reasoned method by selecting the equity indicators (vulnerable hospitalised or undergoing surgery, etc), indicators posing problems or indicators with suspicions of cheating.

Conducting the survey and how to prevent fraud by the NGOs
The CDV community verification officers transfer the information required to be able to trace the household (names, location, telephone number) of the patients to the questionnaire and forward the questionnaires to the interviewers of the local NGOs.

Other information (e.g. sex of baby, what lab tests conducted) from the patient remains with the CDV Agency, which the interviewer must collect. 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 by introducing "phantom patients" in the list to be visited that in reality do not exist. If then the NGO "successfully detects" those patients, it proves that they provide fraudulent results. Another method to prevent fraud is by local NGOs using computer tablets with geo-localization confirming that the interviewer has visited the household.

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

The results on the patient satisfaction survey allows the CDV Agency and the local health authorities to better negotiate the renewal of quarterly contracts with the health facilities. The patient satisfaction score may also be one of the criteria for the calculation of the provider quality bonus. The community assessment score of the health facility may be calculated as follows: proportion of patients found X the average satisfaction of the patients / users.

The evaluation of the 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 could obtain all the prescribed drugs at the pharmacy of the health facility
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 to have benefited from the treatment

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

7.2.4 Analysis of the Community Surveys by the CDV Agency

If paper survey questionnaires are used, then the CDV verification officer must enter the survey data into an EXCEL database. Alternatively, if the interviewers can use tablets it will greatly improve the quality of the data collection and facilitate the analysis. 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 period being studied. This may be the case when staff have copied old data to create contacts with patients, but they are in fact new non-existent cases, and the health facility tries to increase their output data (and subsidies) by false entries.
For the calculation of the proportion of patients, who have been traced at the household's level, compared to the patients declared in the registers of the health centres 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, a number of 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 did they pay (at the cashier or direct 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 health facility

Were patients satisfied with the service provided or not? Did the introduction of PBF have a positive impact on their satisfaction?

6. Suggestions for patients to improve health services.

What suggestions and recommendations have been made by the patients? 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 – 4	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 will coach all providers at least once a year. Coaching in the use of the indices management tool will support managers in analysing their revenue, identifying and planning their expenses and to calculate the profits that can be paid in the form of performance bonuses to staff. Each quarter, the CDV Agency prepares a coaching plan in its business plan on the provider management instruments (Business Plan, indices management tool, and other topics deemed appropriate). These activities will be validated during the quarterly evaluation visits by the PBF Unit and the MOH by checking the 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 in the implementation of 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 according to identified needs. The CDV Agency may request external trainers to assist.

7.2.7 Attend the monthly District Validation Committee meetings

These committees validate each month the quantitative results of all providers or other actors, and assesses the performance of the providers in terms of technical quality, community perception and the use of the indices management tool. The validation committee is composed of the district medical officer (or his representative), the CDV Agency manager (or his assistant), the CDV verification officers based in the district or at sub-region level, a representative of the providers. The committee is convened and chaired by the district medical officer or representative. During the third month of the quarter the district validation meeting, the committee will be strengthened by a representative of the regional health department or other sectors and with a representative of the local NGOs.

The committee has also the task to arbitrate in any possible conflicts between all 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. Fraud may have been identified during the quantitative verification visits by the CDV Agency staff or by the community surveys conducted by the local NGOs. Cases of fraud will be punished according to the criteria defined in the contract.

7.2.8 Enter data into the MOH PBF portal

CDV Agency staff must upload to the online PBF portal of the MOH 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 data are validated by the District Validation Committee, the CDV Manager and the District Medical Officer validate the data in the PBF

portal for 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 results of the hospital quality reviews and the results of the direct evaluations are entered in the portal by the Regional Health Department.

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

The topics for action research concern the strengths and weaknesses of the PBF system and to test the operational modalities of the PBF subcomponents. This research action can be carried out with technical assistants with proven experience in research. The research budget is hosted at the CDV level, but any PBF researcher may propose to conduct the research. The district validation committee may propose topics and the PBF Unit validates the results of the research.

7.3 Quality Improvement Bonuses (QIB)

7.3.1 How do QIB operate

In order to solve various problems of infrastructure or equipment, providers can request one or several QIBs with a value of for example $ 1000 for the primary level and $ 2500 for the hospital level.

In PBF, it is the responsibility of the managers of facilities to organize the construction activities and the purchase of the equipment. The CDV agencies and the local health authorities verify the results and ensure that the infrastructure has been built according to the standards of the Ministry.

Improvements to infrastructure and equipment structures can be achieved as follows:

- Health facility managers must reserve a proportion of their income for minor rehabilitations, in order to improve the quality of services.
- When the overall condition of the infrastructure is so bad that the construction of new health facilities is necessary, the PBF budget should include a significant amount for infrastructure improvement of 10 to 30% of the total budget. Infrastructure improvement will be included in the business plans of the providers and can be negotiated with the CDV Agency. Rehabilitation can be carried out in several phases, so that the verification of the work by a CDV Agency engineer can be done after an intervals of a few weeks. When the previously agreed infrastructure benchmarks are achieved, a Quality Improvement Bonus (BAQ) or Investment Unit can be put in the monthly invoice according to 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 this from a microcredit institution, a bank or from another donor organization.

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

1. *Improvement of the infrastructure:* Rehabilitation of the infrastructure, construction, staff houses, fences, incinerators, latrines ... The estimate must be presented and validated by the consulting engineer of the AAPRC. After completion by the FOSA, 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, bicycle, vehicle, motorized canoes .... ;
5. *Recruitment of qualified personnel;* In order to solve problems of staff shortage, the provider can request a QIB when this provider has recruited a qualified staff of a level at least equal to a Health

Assistant. Once the provider has recruited the staff, it declares it to the CDV Agency. The validation criteria are: the recruitment report, an employment contract of at least one year, the 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. Increase the ceiling for the proportion of vulnerable people to be exempted form payment. 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 any opportunity for cost recovery must continue to be seized by the provider. Cost recovery remains important for: increasing the revenue of health facilities; decreasing the 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 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, equipment, etc improvements they wish to obtain a QIB ;
5. The business plan is then negotiated by the CDV Agency through staff deemed capable to negotiate and do the coaching of the health facility.
6. The quarterly contract is signed by the CDV manager or the deputy.

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

1. The infrastructure business plan must be convincing and that demonstrates the need for a QIB. The plan also demonstrates the entrepreneurial spirit of the staff;
2. The correct application of the indices management tool (consult the score of the evaluation of the indices management tool)
3. How much does the providers or its community contribute for the achievement of the improvements?
4. What progress did the provider achieve in improving its *quantity* indicators? The CDV Agency may calculate the progress of the health facility during the last two quarters using the 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 progress of the health facility during the last two quarters using the data from the PBF portal.

Table 1: Favourable 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 *Indices Score 60% - 80% (1p) ; > 80% (2p)*	3. Contribution of own resources for the achievement of the QIB *0% (0 p) -25% (1 p) - 50% (2 p) -75% (3 p)*	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 equal or above the average determines the granting of QIB s among the providers in each district. However, in the event of the opening of a new health facility or the reopening of a health facility after a crisis, this structure will have priority.
The QIBs are proposed by the CDV Agency for validation during the District Validation Committee meeting.

7.4 The CDV Agency Team Profiles and Assignments

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 population of 600,000. Sub-regional supervisors may be considered for the deputy manager. If the Quality Improvement Bonus or Investment Unit program is active, 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 population) for the medical verification officers and 1 / 200,000 for the 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 ....
- Be able to work under pressure and in a team

2. Responsibilities of the Manager

- Advocacy 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;
- Coordinate 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;
- Assures that contracts are signed with health facilities, local NGOs or other structures;
- Addresses any emergency or force majeure and takes precautionary measures to assure the smooth running of the CDV Agency;
- Preparation of quarterly reports on the activities of the CDV Agency;
- Preparation of the annual budget and supervision of the preparation of the CDV Agency financial statements;
- Organize the recruitment and management of the CDV Agency
- Management of the movable and immovable property, tangible and intangible assets of the CDV Agency in compliance with the procedure so the organisation in charge of the CDV Agency;
- Acquisition of 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 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. Is able to work under pressure and in a team environment.

2. Deputy Manager Assignments

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

- Coaching of health facilities, including monitoring of the application of the business plan and the indices management tool;
- Ensures 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;
- Attend CDV Agency coordination meetings;
- Training and coaching of medical and community verification officers and health facility staff / other actors;
- Substitution of the Manager in case of impediment to the activities in particular the meetings of district or sub-regional centres validation committees and the signature of the contracts in the districts / sub-regions;
- The performance of any other tasks entrusted to him by the Manager.

7.4.3 An Accountant

1. Skills Required

- Has at least a master's degree in accounting;
- Has at least 3 years' experience in accounting / financial management;
- Maintained the accounting activities within a company, NGO or project;
- Good knowledge of Internet, 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 within his or her ability to be 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 a good knowledge of the 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

- Ensure the processing, monitoring and archiving of incoming and outgoing mail and other documents;
- Plays the role of payment agent;
- Monitor 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, power point);
- Is able to work under pressure and in 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.
- Attend 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 official language;
- Is able to 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 in a database and analyses the results of the community surveys;
- Writes the report of the community verification and patient satisfaction surveys;
- Attend CDV Agency coordination meetings;
- Enters the data of the community surveys in the PBF "cloud computing" portal.

7.4.7 Quality Improvement Bonus Verification Officer

Depending on the size of the population 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 engineer.
- Experience in infrastructure activities;
- Have at least one "A" driver's license;
- Master computer (Word, Excel, Power Point);
- Master at least one of the official languages;
- Be able to work under pressure and in team

2. Duties of the BIQ verification officer

- Assist the health facilities to prepare specifications for infrastructure and medical equipment in their Business Plan. This is to ensure that the standards of the Ministry of Health are respected.
- Check the progress of the works 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 of 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 QIB according to what was agreed during the negotiations in the Business Plan and the results achieved.
- The BIQ officer should also stimulate the health facilities to obtain resources from other sources of financing for the construction, the purchase of equipment such as from the government, community, 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, has at least three years' experience in the field, and has a good knowledge of the region.

He must also be able to work under difficult conditions, master the routine maintenance of the vehicle and filling the logbook, be respectful, keeps information on the CDV Agency confidential.

2. Maintenance Staff
Must have experience in this field. He or she must keep information on the CDV Agency 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 information on the CDV Agency confidential. Is able to 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 manager, assistant manager and accountant will be recruited by organization in charge of the CDV Agency according to the terms of reference defined above. The recruitment files of the manager, deputy manager and accountant must be validated by the PBF Unit before publication. Recruitment results must be submitted to the Minister of Health for approval. The CDV Agency Manager will recruit the other staff; recruitment files must be validated by the organization in charge of the CDV Agency. All calls for recruitment of personnel must comply with the terms of reference contained in the PBF manual.

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

The various tools used by the CDV Agency are: Health Facility or other structures and ASLO contracts, business plan, declaration forms, index tool, summary sheet of payments, sampling sheets and questionnaires.

The contract: Is signed with the *agent*, which can be a health facility / a local NGO / other structures); It is a document linking the CDV Agency to the agents under contract. The signatories are the manager of the CDV Agency and the direct daily manager of the agent. 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.

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 analysis of the agent over a period of time. The Plan covers the implementation of all performance activities and indicators.

The declaration / validation sheets: contain the production of the agent per indicator. It is signed after verification by the In-charge of the agent and the medical verification officer.

The indices management tool: is a transparent and participatory management tool that allows to analyse the revenues, to identify and plan the expenses of the organisation and to distribute the profits in the form of a performance bonuses to the personnel.

The sampling form is a data sheet containing the demographic data (name and surname, patient location, telephone number) of a sample taken of patients / clients that used a health facility (or other provider) and describes which services were used.

The questionnaires include the demographics of patients / clients using a health facility / structure services, reasons for use of services, level of patient satisfaction, cost of care, availability of medications, and proposals for the improvement of the services

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 during 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 during 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 pop	Training is carried out with report and recommendations. Participants took a test
1 Mission AT - action research per year for 200,000 pop	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, a performance contract is signed between the CDV Agency and the PBF Unit for a period of 3 months. The CDV Agency will be evaluated by the PBF Unit accompanied by the Technical Directorates of the Ministry 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 score to the CDV Agency using the following questionnaire and indices management form below and which will be used to calculate the overall quality bonus of 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 less than 15.000;* - *For a population of 10.000, the CBO should conduct per quarter on average of 30-40 interviews at primary level and 40-60 interviews at hospital level;* - *Community verification is conducted during the next quarter (e.g. T2) concerning the activities of the previous quarter (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 done of CDV medical and community verification** - *The PBF Unit team selects during the regional evaluations 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) visit 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 reduction of the total quarterly payment by 3%. In case of a second case of fraud, the CDV Agency will be sanctioned with a reduction of the quarterly payment by of 10%. In case of a third 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 district committee are discussed and validated;* - *The District Medical Officer or representative chairs the monthly validation meetings. The other members are 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 are attended by same team as for monthly meetings + a representative of the Region and the CDV community verifications 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	**Invoices health facilities and indicator data submitted to PBF portal** - *Medical Verification Officer submitted to the PBF portal the output data and invoices before the last day of the following month;* - *Community Verification submitted to the PBF portal the community survey scores (which is the percentage of patients found x the average patient satisfaction score).* - *Medical and community date 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 potentially available PBF funds are known by the CDV Agency for the primary level (MPA), the hospital level (CPA) and the quality improvements bonuses (BAQ). The information about the available funds are provided by the National PBF Unit;* - *The sum of invoices submitted to the PBF portal for the last quarter are known by the CDV Agency;* - *Between 90% and 110% are submitted to the PBF portal compared to the potentially available PBF funds per region.*	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 quarterly CDV business plan are achieved.** - *Quarterly training and coaching plan is available;* - *Training Plan must contain at least the HF business plan and the indices management tool;* - *Check in 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 are available. Randomly selected staff knows the criteria on 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 necessary, 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 evaluation of the CDV Agency by the PBF Unit an invoice is established and paid within the next 15 days. This invoice includes the quantitative production, the equity bonus and the amount of the quality premium for the LCA. The quantitative results of the CDV Agency will be uploaded in the PBF portal after the end of the regional validation.

7.8 Payment modalities and Invoice Template of CDV Agency

CDV Agency are paid quarterly based on the equity bonus, quantitative and qualitative performance. Once the CDV is under performance, it will receive a start-up advance that corresponds to the estimated quarterly budget for the planned activities. After each quarterly evaluation, the CDV Agency will be paid on the basis of 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 during 1 day (1 x semester / provider)		F 100,000	
Coaching of a provider at hospital level in indices tool and/or BP during 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 indices management tool will also be used in CDV Agencies. The criteria for payment of individual performance bonuses will be established by the staff of each CDV Agency. The following criteria can be used such promptness to do the verification, coaching and training visits, the quality of the coaching, the promptness of submission of invoices in the PBF portal etc.

Revenues	Amount received	%
Bank resources at beginning of period		
Half-yearly advance		
Quarterly Payment		
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		
Sustainability Indicators		
Depreciation and amortization accounts for at least 80% of depreciation for the period		
Ratio Performance bonus / Performance bonus + Salary		
Ratio Performance bonus + Salary / Total Revenue		
Reserve in bank (money in bank / average expenses per month) x 30		

Each CDV Agency develops its own indices management tool and will be evaluated by the PBF Unit 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 in the form of a common 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 represents 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)	> 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 there are several advantages of obtaining a PBF contract such as better services, higher staff remuneration, or being coached to improve quality and client satisfaction.

Yet, CDV agency managers and regulators may also apply a number of *"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 and thereby use pressure for improvements.
2. Cancel (temporarily) a contract. 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 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, when developing the PBF data collection system, this should also strengthen the NHIS and therefore there are potential synergies. There should be no problem for those indicators whereby the NHIS- and the PBF indicators are the same. In that case, the CDV verification officer will only need to verify the NHIS data declared by the provider. 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 cancelled. 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. It is impossible for the verification officers to verify 1000 or more output data and therefore PBF cannot be hold responsible for the quality

of the non-PBF NHIS data. Moreover, the PBF list of 25-35 output indicators *must be strictly verified* as subsides depend on them and need therefore an accurate audit system.

Thus, while it is desirable that PBF also improves the quality of the NHIS data collection systems, this requires first for the NHIS system to address 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 leads to over-burdening of the facility and health workers, who then simply choose which forms to fill in.
b) Sometimes NHIS forms are not SMART, poorly understood by staff and wrongly filled in.
c) Health workers are not motivated to collect quality data when they do not see the benefit. This is the case when programs demand data without assuring that they are also useful for the providers.
d) Feedback systems on data provided often lack and this further de-motivates provider staff.
e) Managers may deliberately under-report data to avoid taxes. In DRC, providers must pay district managers between 5-30% of their revenues and this can be calculated if there are 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 simply not be accounted for but for this staff will also not report the activity for which they obtained money.
f) Monthly NHIS reports and files may be missing because there was a change in staff or because it is unclear who is responsible for the NHIS data collection.
g) District NHIS officers may make mistakes with the analysis of the health facility and therefore forward wrong data back to the health facilities and to national levels.

Comprehensively addressing the above problems may not be realistic in the short term and therefore only those NHIS data can be verified which are also required for PBF.

7.12 Collecting data through PBF websites and links to NHIS

PBF data collection in some 20 PBF countries is done through national Ministry websites habitually managed by the National PBF Unit. The regional CDV Agencies with the District Branches usually upload the PBF data. National, regional, district authorities and provider staff have access to these website data, from which they can also extract and calculate the coverage per indicator compared to the target for each provider, district, region or country. The verified data improve the quality of the data collection and assists providers to improve their performance. The general public may also have access to the data. They may for example verify the quality score of their local provider. If this quality is poor, the population may start frequenting other providers with better scores. This mechanism will pressurise providers to improve the quality of their services.

By linking the national PBF data website to the NHIS system this may also improve the NHIS data quality but then it is important to reduce the number of NHIS monthly output data elements to not more than 50. The other required NHIS data may be transferred to the PBF quality indicator lists with 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. PROVIDER – COMMUNITY INTERACTION & SOCIAL MARKETING

René Queffelec, Juvénal NDAYISHIMIYE, Claude WILONDJA

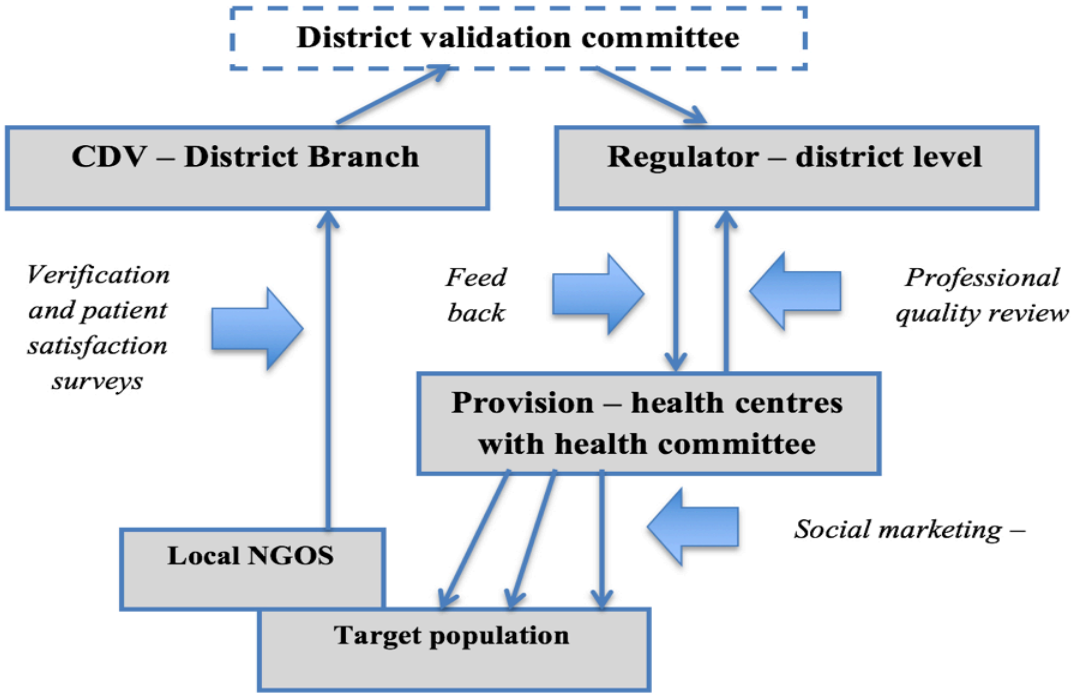
Main messages of the module

- It is unrealistic to assume that the implementation of community activities can depend on volunteers.
- In community PBF, providers can conduct social marketing with incentivized staff or committee members. The bonuses should be performance based.
- Community satisfaction surveys and the verification of provider activities are done by separate community based organisations, without links to the providers.
- In community PBF activity too, quality should come first. This requires adequate incentives and sometimes also qualified staff for effective social marketing activities. Non-qualified staff should *not* conduct curative community activities.

8.1 The community participation approach of Alma Ata

According to the community participation approach of *the Alma Ata Conference on Primary Health Care in 1978,* there was an important role for provider committee members elected by the community. They became the interface or *bridge* between the provider and the community in two ways: (a) brought services to the population; (b) involved the population in managing the provider.

They were supposed to be volunteers. Criticism of this *traditional* interpretation of community participation was that although health committee members were *supposed* to defend the community interest voluntarily, *in practice* they were more linked to the health facility for their own interests. Another often observed problem was that in free care system committee members "policed" in how far staff indeed applied free care and therefore they were often given management power. They then became volunteer administrators controlling books, treasurers or even drugstore keepers. However, in practice, they were not qualified to effectively perform such roles and their unpaid status caused much confusion. It created tensions with health workers about power and money. In conclusion, the traditional community participation approach did not achieve the expected results.



PBF then developed another approach whereby health committees are more seen to strengthen the providers including for social marketing and that a complete different organisation should strengthen the voice of the community by conducting regular interviews with patients.

Health committee members are in the PBF approach no longer directly involved in the management but may meet once per trimester to monitor the progress and to solve problems or conflicts when necessary. The health committee of each facility may also discuss with the community the user fee tariffs and propose what seems reasonable. In this logic, health committee members are no longer police officers. Thus, in PBF, qualified and correctly remunerated personnel are responsible for daily management.

8.2 Consumer empowerment and community verification

In PBF, there is a need to verify and audit at household level in how far services, which are subsidized, indeed took place and are not falsified data in facility registers. Therefore, local associations or NGOs verify every three months at household level in how far the activities indeed took place. The verification is done 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.

Besides this verification role, it also allows community group interviewers to simultaneously review *in how far patients are satisfied with the 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*.

8.3 Social marketing

In the late 1960s and early 1970s a number of academics and social workers wondered how the Coca Cola Company managed to distribute and market so successfully its soft drinks. Coca Cola succeeded also in the most remote areas of Africa despite that the population had a different taste and drinking habits. What methods, what 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 was then born as a pragmatic approach, using tools developed for private business marketing to attain 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 an analysis done by professionals and by conducting population studies.
- Turn the key messages and change topics in SMART community indicators such as a home visit protocol and other specific indicators such as TB patient drop out recovered or by follow up on a couple that uses family planning, etc.
- Providers should be given the flexibility as to how to which strategies to apply for implementing the 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 much 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 indicators outputs.
- Ensure the quality of the community interventions by allocating enough financial resources and by the promotion of the involvement of qualified staff.
- Prohibit non-qualified community volunteers to conduct curative activities such as the distribution of antibiotics, contraceptives or anti-malarial drugs. In most African countries, there is not a shortage of qualified personnel, but rather the problem of unequal distribution between urban and rural areas. It is better to solve the human resource distribution problems rather than to invest in for example community health workers to become government authorised village doctors.

8.4 Community PBF - household visits following a protocol

The PBF program in Cameroon, financed by the World Bank, introduced in 2011 a new national indicator, which was defined as *"household visit following a protocol."* During 30 minute encounters a team of 2-3 people may cover systematically a number of health issues. The responses were favourable. Different countries have now adopted the same indicator but action research is required to adapt the indicator to the local circumstances. This indicator is added to the minimum package of activities in the PBF program and constitutes up till 15-20% of the total PBF budget.

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 *(interviewer must directly observe)* 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 death 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 baseline situation in the household is examined and recorded in a register. The team discusses what specific measures the household; the staff of the health centre and local administrative authorities will take during the next two months. A household "business" or action plan is developed.
2. During the second visit the objective is to monitor in how far the plan is implemented. Are the vaccinations for children less than one year or family planning visits done? Did the household obtain a hand washing device or bed nets? Were toilets or latrines improved? Medical staff may also discuss changes in behaviour when the environmental health officer provides more binding recommendations, including in extreme cases penalties. If the results during the second visit households are satisfactory, that concludes the visits to that household.
3. If there are still problems at the second home visit, a third visit may be proposed and so on.

However, it should be noted that household visits will be very participatory and must be made in the direction of behaviour change communication. Household visits will take a friendly approach to population to improve health-seeking behaviour and to promote healthy population.

The services carried out at the visited household by the staff of health centres, ideally accompanied by a community health worker or community members (to be determined) will be paid by PBF. During the consultation, households will receive information about available health services, and best practices in preventive health behaviour at the household level. The home visits may also address the nutritional status of children and to assist with determining vulnerable families in need of benefiting from the individual equity bonus for curative care.

8.5 The role of the non-professional community in PBF

When speaking of the community in health systems this often in rural areas refers to community health workers, traditional midwives or members of the health facility committees. In urban areas they may be often volunteers, interns or qualified agents without wages.

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. PBF FEASIBILITY, KILLING ASSUMPTIONS & ADVOCACY

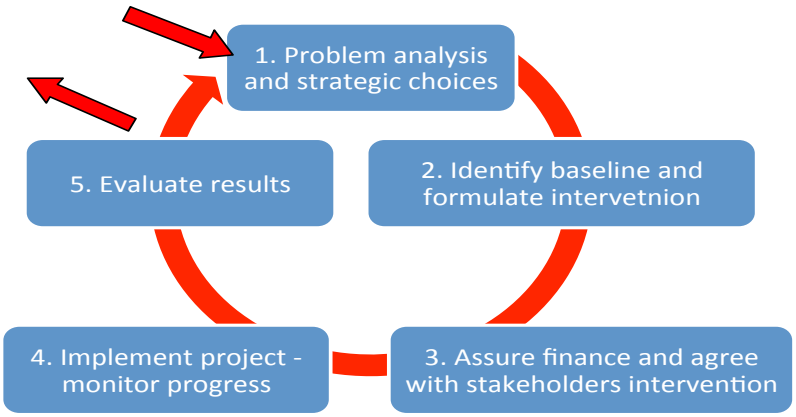
Sosthène HICUBURUNDI, Michel BOSSUYT

Main messages of the module

- This module goes into the *question of the feasibility* of a PBF program and how to make it as "pure" as possible to maximize the opportunities for success. An important skill for PBF advocates to move forward is to effectively manage the change process and inform decision-makers about best practices and instruments to introduce.
- PBF programs have long term (3-5 years), medium term (6-18 months) and short-term (three months) management cycles, which facilitate the flexibility in adapting strategies at each given time.
- To increase the probability of success, PBF promotors must design interventions that apply the 11 PBF best practices and instruments and avoid killing assumptions such as a too low budget of below USD 4 per capita per year or that accept to operate through input monopolies.
- PBF will influence change on procurement, government procedures and how to manage providers. In this advocacy, it is important to prepare clear and concise messages, to give proper time for messages to sink in, to identify allies and adversaries and to refrain from 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 project and monitor progress (5) Evaluate results and either end intervention or re-enter with 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.

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

1. Background – problem analysis, feasibility scan
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 scans: Programme contains how many PBF elements?

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 establishing in how far government or main stakeholders are ready to accept the changes that make PBF programs successful.

When preparing the new PBF intervention and after collecting as much information as possible the initiators review in how far the PBF best practices and instruments are included in the proposal. Is the intervention "pure". The following criteria may be applied. Some authors consider a proposal only a real PBF program if the score is 80% or above (40 points). When the score is lower one may suggest conducting negotiations and discussions so that the proposal comes closer to the 80% score.

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 intervention with many equity elements) per capita per year of which at least 70% is used for provider subsidies, local NGO contracts and infrastructure input units	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 project has at least 25 output indicators for which facilities receive subsidies and a system of composite quality indicators with incentives	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 the district regulator, the CDV Agency and one or more representatives of the providers for the validation of the invoices	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 Bonuses	2
13. The project introduces the indices tool for autonomous management of the revenues, 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. The PBF system has infrastructure & equipment investment units, which are paid against achieved benchmarks based on agreed business plans	2
21. Public religious and private providers have an equal chance of obtaining a contract	2
22. There are geographic and/or facility specific equity bonuses	2
23. The project provides equity bonuses for vulnerable people	2
TOTAL	**50**

Thus, a programme with basic and complementary packages of three years with a budget of $ 3 million can only reach: $ 3,000,000 / 3 / $ 4,00 (if you include overhead) = 250.000 inhabitants.

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 but the intervention may also become more effective in achieving the SDGs. For example, a 2010 feasibility study in 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 in how far a given program may become successful. It is then necessary to improve the design of the program.

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 than for example central government 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-USD 1.00 per capita per year is required for the administrative costs only. If for example a total of USD 1.00 is proposed, then 50-100% will be spent on administrative costs. If USD 4 is available, the administrative cost will reduce to 20-25% of the total project expenses. If USD 4-6 is available, the administrative costs may further reduce.
- 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. This to be able to claim administrative costs or even siphon off money for kickbacks, which they negotiate with the suppliers during the tender procedures. These inefficiencies are obviously harming the interests of the providers and the society.
- Decisions makers may be reluctant to change the existing set up of the system, the existing procurement or government administrative procedures on how to manage the providers.

How to deal with killing assumptions?

A killing assumption blocks the successful implementation of a project and the main reason may be lack of knowledge, which can be easily removed by providing information. This allows changing the design so that the killing assumption is removed. If this is not possible the initiator may wish to cancel the PBF project. If decision makers insist on continuing the project while not removing the identified killing assumptions, the project cannot be labelled as PBF. This label should be reserved for those proposals that contain sufficient PBF best practices and without killing assumptions. Sometimes it is better to diplomatically agree that there is a killing assumption but to propose to restart negotiations after a few

weeks or months and to ask in the meantime for advice from other ministries or successful PBF projects on how they solved similar problems.

Yet there are also few examples of PBF programs such as in Zimbabwe that started with killing assumptions but which were removed during the course of the program. Yet, there are also examples of PBF pilots (Katanga, DRC and Uganda) with killing assumptions, which indeed became failures.

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, which contains the outline of the intervention. A detailed description of the proposal is not the first 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 the annual per capita budget, the geographic location and which organisation plays the role of 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. Such a broad and more flexible outline of the PBF intervention has the advantage that it allows for the adaptation to external factors during project implementation. It is a relational contract (see also module 4). It is then wise to propose an approach of regular reviews, internal and external evaluation and the acceptance that lessons must be learned from both good results and problems during project implementation. Adequate technical assistance may be built in the proposal and the design should allow for changes to be made during project implementation. This also applies in particular 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. It is recommended that PBF advocates start to explain the **PBF best practices** and a few 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 to specify for themselves 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** also searching to innovate or to 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 make the balance swing towards one decision or the other.

Based on the **power dynamics** between the main actors, PBF advocates may develop strategies:

a) Reinforce support for PBF among the allies and to enter into alliances;
b) Neutralise the opposition by either information campaigns or pressure;
c) Inform and convince the undecided.

Appropriate communication channels must be identified to get messages to the target audience such as conferences, technical work groups, public debates, PBF courses, or direct meetings with decision-makers. Short conferences and one-to-one sessions may be more appropriate for decision makers, who

are usually short on time. To the contrary, facility managers, NGO technical staff and civil servants involved in the more technical aspects of PBF may be more appropriately invited to 14-day PBF courses to explain the more detailed aspects of PBF. Facility managers and CDV agency staff may also be more interested in the technical instruments of PBF such as how to collect data, the application of the business plan and indices tool. Advocates regularly **monitor and evaluate** the activities and objectives related to the advocacy plan and in 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 feasibility score for PBF and in how far there exist killing assumptions for a (potential) PBF program in your country, region, province or district. Propose strategies for how to deal with them. The results of the analysis will be included in the country or subject presentation during the course.
2. Role-play. Prepare in groups of 5-7 participants a role-play on a lobby for PBF. This role-play focuses on the style, the environment and lobby tools. Half the group favours PBF and the other half are either sceptical of undecided. There is one senior decision maker in the role-play (a Minister of 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:
   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 while, 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?

   Preparation 20 minutes – time per role-play 5 minutes.

10. CONFLICT RESOLUTION and NEGOTIATION TECHNIQUES for PBF

Freddy BATUNDI, Silvain MUNYANGA & Godelieve Van HETEREN

Main messages of the module

- Some changes proposed in PBF may lead to conflicts, which need to be managed carefully. Some conflicts may be avoided or given in because they are not important enough while other important problems need to be handled by a careful process of confrontation and negotiation, or even enforcement.
- Experience in PBF shows that resistance to change often stems from fear of the unknown, lack of information or the feeling among key actors that one is not part of the new approach. Involving key decisions-makers from the start and assuring that key actors such as civil servants are given new job descriptions with performance contracts can help to manage such resistance.
- Understanding the arguments and motives of the "opponents" enhances the success of negotiations and will help to arrive at the best possible area of agreement. In negotiations one must diplomatically indicate what are the positions of retreat or the non-negotiable points.

10.1 The importance of conflict resolution and negotiation skills in PBF

PBF has similar social aims as the traditional health system approaches of Primary Health Care and the Bamako Initiative. However, the strategies and instruments to achieve these aims greatly differ and therefore PBF requires changing concepts, skills and instruments as well as sometimes the attitude of those who must implement it. It requires reforms of how organisations and individuals do things and anxiety and conflicts are then inevitable. This chapter aims at best managing such conflicts and negotiating the best possible outcomes.

While we believe that many change issues can be handled with careful management, 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 points of view are to be respected but this according to PBF advocates will block the efficient management of public resources and may therefore even obstruct achieving those social goals. The change process, unfortunately, now becomes a "battle". A democratic process to arrive at a conclusion can best solve this. Leaders with a great vision may also influence this. They may explain why the change is necessary, and thereby change the mind-set of the population or specific target groups.

10.2 Some definitions concerning conflicts

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

Conflicts may be:

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 of interests** concerning the differences in point 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 everybody can understand rationally that change will improve a given situation, it may not be welcome emotionally. This is even more the case when there are good reasons to fear that the change may indeed threaten the interests of somebody.

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** (= against) **us**. The more people feel they have the power to influence decisions; the more they are likely to accept them. So change agents should be sensitive that individuals wish to control events and their life.

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 the perception of the differences and it may then become a source of the conflict. However, the conflict may only be a misunderstanding, which can be solved by taking the time and effort to inform.

3. The "surprise" effect
People resist change when it surprises them. The logical reaction to something completely new and unexpected is "no". Just giving information may then not be enough because the process is also important and new ideas should be given time to "sink down". Sometimes it is good to present a new idea without immediately asking a response. After a few days, the same topic may be brought up and this gives time to the other person to nuance her position or opinion.

4. Loss of face
Change creates resistance when it gives the impression that people have done things wrong previously. Nobody likes to admit this and to "lose face". To increase the chance that new ideas are adopted it is wise to put the previous behaviour in its historical context such as the lack of modern means of communication, no access to internet to exchange data, etc. Loss of face may be avoided by saying that "those days are over" and then people may claim that they are strong and flexible.

5. Worries about future competencies
Sometimes people resist change because they wonder whether they will be capable of adapting or obtaining the required skills. It is important to assure that the new system will be properly explained so that there is no need to 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 or projects and personal activities. Therefore, change may be refused but for the "wrong reasons". A good manager of change is sensitive to such considerations and shows flexibility. For example, a manager could postpone a transfer of an employee until the new school year so that it does not disturb the children's education.

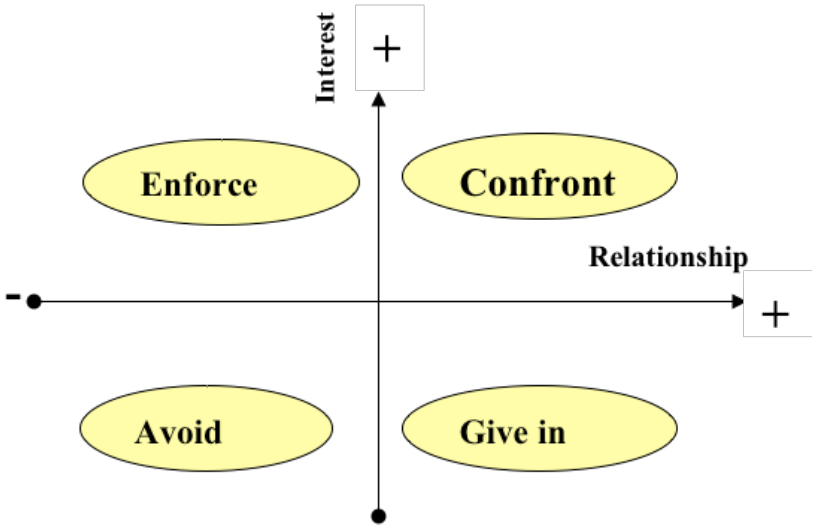
7. Change means more work
Change may require a learning process when it means moving away from easy old routines. This may mean more work, such as when facilities must start new PBF subsidized services and thereby attract more patients. Staff may consider this as a threat, in particular when the rewards are not clear or not high enough. Such scaling up of 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 and that is when the threat is real. Stakeholders may lose their jobs, are forced to move away from easy moneymaking or a powerful position. Whether this is socially just or not this has to be taken into consideration. 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 behaviour and financial incentives should not play a role to motivate 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 managing 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 there is a weak relationship between individuals or groups. Authority may come in to settle the conflict. This may be the case when somebody violates the law, conducts dangerous behaviour 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 of the conflict. In addition, in PBF, there are 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 sterilisation should be punished so that the public interest is defended.
- **Avoid**. People deny or avoid conflict because they consider the issue at stake not that important that it is worth the trouble or energy. This is the likely outcome when there is also no direct relationship between the opponents. They simply ignore each other, the problem is tolerated and communication about the issue with the opponent is avoided. For example, when drunken people shout insults to 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 the individual is aware of the problem but also wishes to save the good relationship. The issue can then best be minimized. This may be the case with the irritant behaviour of a child or a partner. Giving in, however, also implies that important facts or attitudes may be overlooked and that they are not discussed. It may lead to new conflicts in the future, as the underlying causes were not removed.
- **Confront and collaborate to find a solution**. The individual or the group faces a problem, confronts the other but aims at finding a satisfactory solution to all; a win – win situation. This is usually the case when two entities have an interest in finding a common solution because they work for the same organization or because they have a direct personal relationship. This will work best in a favourable climate whereby both parties agree to avoid autocratic behaviour to influence the process. The people or groups are willing to express their needs, requests and feelings to the opposing party. They are open for new ideas, change and opportunities because they are motivated to find a solution. Here negotiation techniques will be very helpful to reach a compromise.

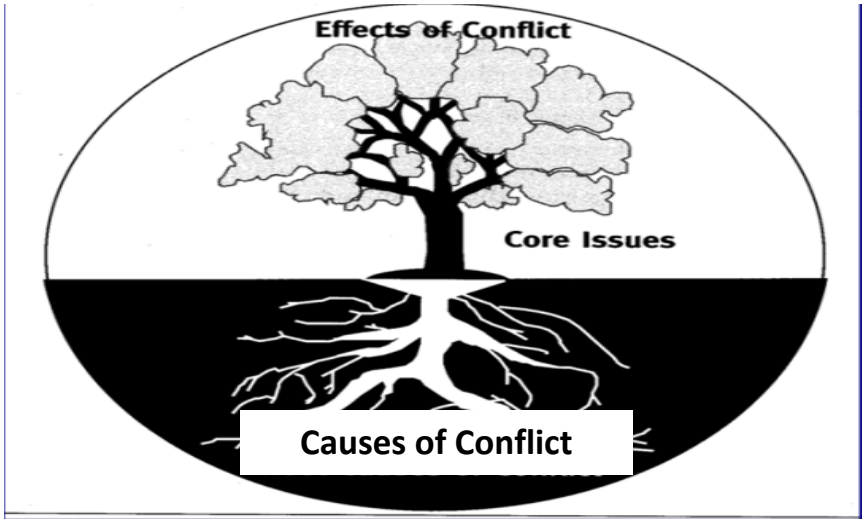
10.5 Negotiation techniques and seeking compromise

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 act* of discussions with the aim to *reach an agreement*. It means getting involved in a *dynamic process* whereby 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 taken into account.

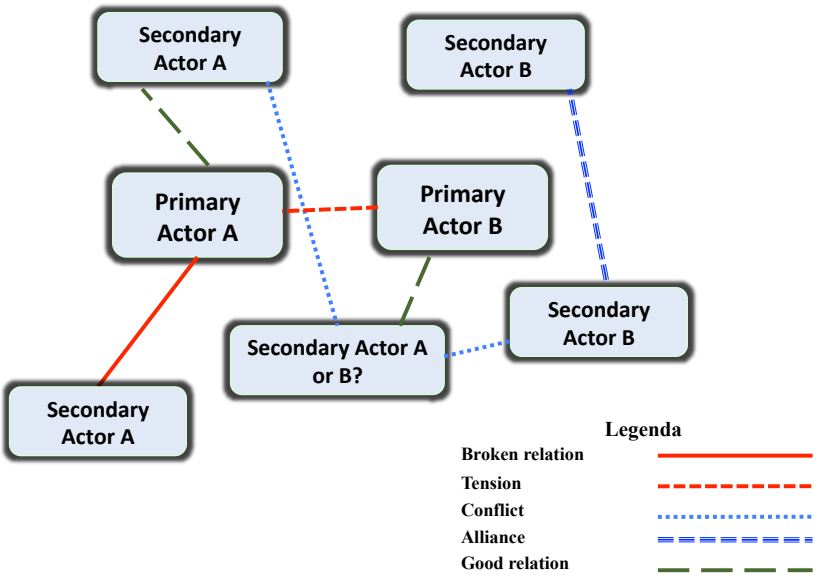
10.5.1 Preparing negotiations

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? What space is there to change your standpoint but also what are the non-negotiable points or your position of retreat from the discussions? A conflict is often part of an underlying network of sub-conflicts, which needs to be understood. Sometimes we only perceive the effects without seeing the root cause of the conflict.

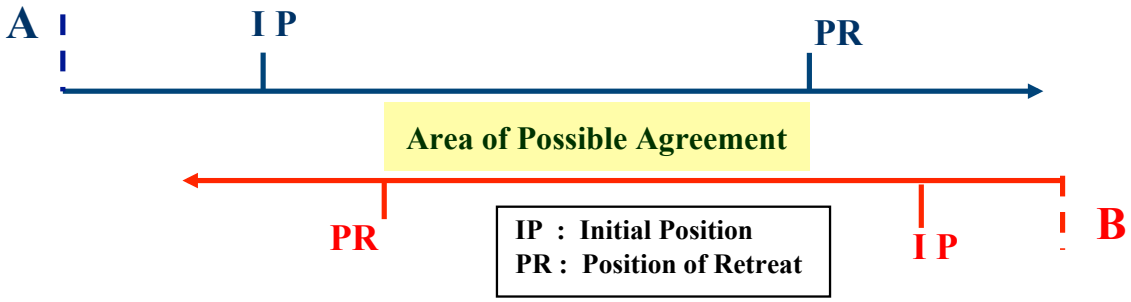


(2) Who is your opponent and who are the negotiators? What authority and decision-making power do they have? Are they motivated to reach an agreement? What are their likely points of view? If there are more entities how do they interact, who is at the centre of the conflict but also what are the positive or negative relationships between the belligerents.



10.5.2 Conducting negotiations

The first stage is to establish the standpoints (key best practices of PBF, target population, complete package, there should be enough funds, etc.) and who are the likely stakeholders that may either oppose or support those standpoints. The next step is to *consult* and to confirm with the other entity what are their standpoints, 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 with their initial negotiation positions and position of retreat, where the entity stops negotiating and withdraws from the discussions. In the middle, there is the Area of Possible Agreement (APA) where the two entities can reach an agreement.



The next step is the confrontation whereby the wishes, needs or requests are presented to the opponent and whereby there should be active listening to the viewpoints of each other. The next step is to construct the compromise with points to give away and others to win.

The characteristics of a good negotiation agreement:

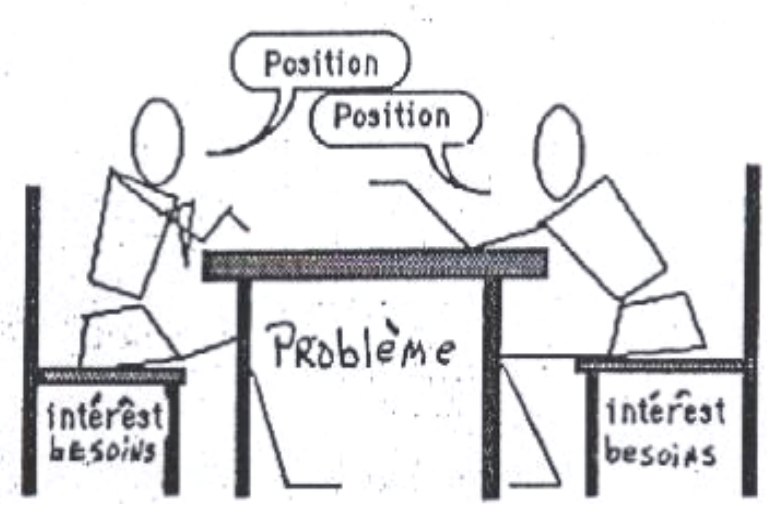
- It should satisfy the interests of all parties and be the best possible option and legitimate;
- It should help to build good relations between the parties and develop an effective form of communication;
- It should contain well-understood, realistic and operational commitment.

The results of the negotiations should be "validated" in a memorandum of understanding or contract. At this point, *there should not be more 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.** It is important in change processes to involve as many stakeholders and partners as possible as early as possible in the PBF transition process and thereby to seek acceptance and ownership for the change. This may be done by presentations, sending Power Points or scientific papers to key individuals, or by conduct PBF courses and conferences.
- **Inform decisions makers.** This is particularly important for the opinion leaders and decisions makers during the first stage of the change process. Organise exchange visits to other countries or visits to in-country pilot projects so they can observe the opportunities for reforms.
- Obtain **reliable** information about the **standpoints** of the **other entities.** Information may come from various sources: documents, Internet, meetings, telephone discussions, etc. The information may be contradictory and it may be useful to verify the information and to avoid misunderstandings.
- **Identify champions.** For PBF advocacy there is a need to identify the "leaders" or "champions" to explain the new system, which may at the same time, 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 focusing on process and negotiations.
- **Create ownership.** Stakeholders should participate during the preparations for 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 on basis of "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 **favourable moment and atmosphere** for negotiations. Provide adequate means of communication and logistics and a pleasant negotiation environment (accommodation, some entertainment). Assure practical tools (meeting room, audio-visual equipment, and work schedule).
- **Negotiate on content.** Negotiations should take place on issues of content (principles, best practices) and not on positions (statements). Problems should be dissociated from conflicts between individuals as much as possible. Try therefore to negotiate issues concerning content and persons or relationships separately.



- **Active listening** techniques are very important to help identify uncertainties and possible misunderstandings. This requires the listener to be patient and to carefully absorb what the other person is saying. Avoid already giving answers before an adversary has finished talking. 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 insights may be provided that also changes your own position or point of view. All this requires competent negotiators, but such techniques can be learned through role-plays and training.

- **Maintain friendly relationships.** Aim at developing good relationships by effective communication, even when the negotiations did not arrive at 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 change 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 work 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**. This should not be done even when the opposition presents irrational or dubious private interest behaviour. The question should then be asked: How to 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 a given province do not seem to be open to the changes. The negotiators may then communicate that they intend to start negotiations in another province (plan 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 to 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 also actively seeks economic multiplier effects and the involvement of the private sector so that those who are open to change may find there are several opportunities to make a new living.

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 four 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 from the DOs and the DO NOTs in negotiations skills and instruments.
4. Both groups start with a one-minute opening statement of their starting position and then enter into a debate of 5 minutes. Both sides should *apply active listening skills.*
5. Five-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 national, provider and household level are important investments to direct public resources to the real problems in a given country or region.
- In social science, systematic biases are more difficult to control than statistical biases.
- Well-designed studies with small sample sizes which produce results within a couple of weeks may be as effective as large impact studies, which are complex and take time to produce results.

11.1 Baseline and evaluation studies during PBF interventions

In many programmes, baseline studies are not done so that resources may be spent on projects without knowing where one came from and 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 the 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 include also non-health indicators?
- Are there motivational problems for provider staff or other stakeholders such as regulators? Is there a discrepancy between takes home salaries and what would be reasonable to achieve as a minimum standard of living?
- What are the existing community empowerment and patient feedback mechanisms?
- PBF baseline studies may be part of impact studies that aim to collect scientific evidence in how far the intervention also "works". This may be needed to guide decision makers and politicians but also to share the results of the PBF intervention at international conferences and or for publications. For this to be effective the same study may be repeated after 2-3 years and it may include control areas to compare with.

Baseline studies assist the PBF initiators to select relevant SMART indicators, to identify the baseline situation and their targets as well as the subsidy 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 facilities managers, regulators, NGOs and administrative authorities.

It is unwise to conduct PBF interventions *without* baseline studies, because this 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, for a few hundred households, and target a limited number of facilities. These may be conducted by NGOs or bilateral organisations that carry out PBF interventions for a target group of 300,000 to 1 million people. The cost of such studies of for example 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 for example financed by the World Bank and may cost as much as USD 500,000 per study.

One should further decide whether information is mainly sought to better orient the PBF intervention or whether the results also aim at comparing the results scientifically. When fulfilling scientific standards it must conduct power calculations as estimated baseline means, standard deviations, intra-cluster correlations and estimated treatment effects in order to produce the required sample size for minimum power of test of 90% with 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 alternative strategies proposed which were already applied 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 analysed as much as possible with the stakeholders who must implement them. The study design should contain a strategy for dissemination and advocacy. Main stakeholders may only be presented with the crude findings, which would allow formulating conclusions and recommendations together, instead of leaving this to the researchers only.

11.3 Who should conduct PBF baseline studies?

There may be two options:

- **External research organisations** conduct the studies autonomously with their own researchers, supervisors and interviewers. The advantage is that the studies do not disturb the local stakeholders from carrying out their daily routines and that they are independent. The disadvantage may be that there is little dialogue with the implementers of the PBF intervention. This may create problems because the study may not answer the operational questions of the implementers. Furthermore, researchers tend to be more academic and inspire their study objectives more on debates in the literate while implementers have operational problems to solve. If such study objectives are not well managed, findings may not be understood by implementers, they simply ignore them and lack ownership for the results. Thus, the impact is limited.
- **Study organisations conduct the study together with the PBF implementers.** These may be organisations 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. Together with the study organisation, they learn from the fieldwork and they thereby better own the findings and recommendations. However, there should be a balanced trade-off between sample size and what is feasible so that daily routines of the local stakeholders are not disturbed. The disadvantage of this approach is that the study organisation is too closely involved in both study and implementation and this creates a bias. This may indeed be a risk but when aware of this and by requesting external specialists to review the methodology and results, this risk may be reduced. First producing crude findings and leaving the interpretation to a working group may further reduce it.

  Over the last 15 years Cordaid – SINA Health have conducted some 15 of this type of studies in countries such as Rwanda, Burundi, 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 persons;
- 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 simultaneously the data entry and cleaning;
- Produce cross tables with main findings and apply statistical tests to establish their significance;

- Organise 2-5 day workshops to analyse the findings with the main actors leading to recommendations based on the findings
- Distribute the report – conduct advocacy – make the report available on a web site.
- 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 for preparation and data collection, while the analyses and sharing of information 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.

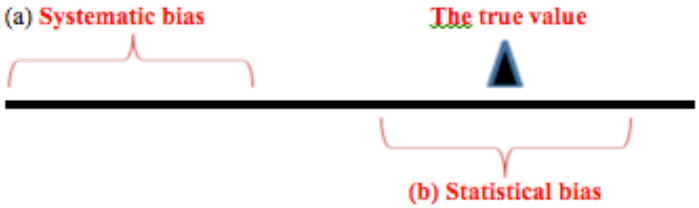
11.5 Study biases

Bias is a term used to describe a tendency towards a particular perspective, ideology or result, which 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 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 with the aim to reduce statistical bias may in fact *increase* the risk of systematic bias and therefore be counterproductive. When for example the number of teams and interviewers is large, this increases the chance of systematic bias due to the complexity of assuring that all interviewers apply the same methodology compared to a situation whereby there are only 2-3 field teams. Study organizers should therefore aim at the *smallest possible sample* that still *produces significant results* and invest heavily in the quality of the data collection to prevent systematic biases.

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 biases, the sample size of the study becomes irrelevant because the interviewers will consistently measure the wrong value due to a systematic 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 in comparison with the text in French or English. 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. Analysing thousands of open-ended answers is impossible.
2. **Respondent's bias.** The respondent may give wrong information for fearing to be considered ignorant, when believing that a certain answer is socially expected or because they expect rewards when giving certain information. The respondent may hide information concerning assets or income fearing that the survey will lead to taxes. 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. Approaching households unannounced in studies in Africa may lead to a non-response rate of as high as 30%. The factors that play a role in

differentiating non-responders from responders are frequently cultural factors, type of profession and mental and physical capacities. For example, non-response households are likely to have a higher average income and this may bias the outcome of the study. Equally, when conducting facility surveys the manager in-charge may be absent and if the other staff members answer the questions, this may produce different answers.

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.
   Avoiding this type of bias may be achieved by selecting an equal distribution of male and female interviewers. It is also better to select already skilled and experienced interviewers. Depending on the experience of the interviewers, a training course may be organized of between 2 and 5 days. Conducting role-plays during the training can reduce interviewer bias. When supervisors have doubts about the data of an interviewer, they may directly observe an interview. Supervisors and coordinators of the study should always check the questionnaires the same day and data entry should start immediately, so that 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 certainly prevent that neighbours or friends attend the interview.
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 the wrong interpretation of the results. This may be the case when the researcher tries to prove a certain hypothesis. Peer group review of the results and the 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. To the contrary, 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 to 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 20-80%) a relative small sample will suffice. When the event is rare (such as maternal mortality), there is a need for a much bigger sample.
c) If there is a high variety in outcomes, it may be necessary to select a bigger sample.
d) The sample size further depends on the required level of accuracy for a given study. The higher the accuracy needed the larger the sample. For example, if the significance sought is 1% instead of 5%.
e) When a cluster sample design is chosen for reasons of efficient data collection this will reduce the statistical strength of the findings and may require a larger sample to be selected.

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, who occupy the same accommodation and who share the same resources and particularly the same kitchen. A household may also contain domestic staff such as a cook or cleaner.

The objective of a household survey in PBF interventions is usually to obtain a better understanding of the health or education seeking behaviour of the population. The household survey may wish to identify

the unmet demand for basic service activities such as malaria prevention by distributing bed nets, institutional deliveries, family planning, etc. The survey may also collect information about patient satisfaction with the services rendered by facilities such as waiting time, respect by staff, etc.

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 subsidised by the PBF program. The output indicators concern the Minimum Package of Activities (MPA) at the health centre level and from the Complementary Package of Activities (CPA) at hospital level. The MPA includes curative care such as external consultations, hospital days, 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 further seek information on *equity* matters such as the proportion of health expenditure compared to household income. This proportion should be compared for the different socio-economic groups or quartiles in order to review whether the poor have difficulties to pay. The average cost per consultancy or in patient 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 600-1000 households may be sufficient to get the statistical significance for events with certain regularity such as deliveries or disease episodes.
PBF household surveys are often stratified random cluster surveys whereby the clusters of 25-30 households are chosen randomly. The clusters may be selected either from statistical demographic units or from provider catchment areas. Studies usually stratify the population per province or district as well as by rural and urban population. Thus, if the population in one district is twice that of another district the first district will also double the number of clusters. If 33% of the population lives in an urban setting then also 33% of the clusters should be urban.

The cluster design. Assuming that 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 pen in the air and randomly choose a direction from the middle of the village or district). The households are chosen progressively by respecting a step of two or three houses until five households are interviewed.

11.7 Facility quality surveys

The objective of baseline quality surveys in facilities is to establish the starting point concerning professional quality of care in facilities in the intervention area as well as in a control area. The indicators are not exhaustive but they should give a good impression concerning the quality in facilities. In Burundi, CAR, Cameroon and DRC, a questionnaire with 57 composite indicators was used. The same indicators should then also be used for the evaluation after 2-3 years so that a comparison can be made.

11.8 Interview with managers of facilities

These "semi-quantitative" surveys are often conducted with provider managers. The objective is to collect additional information concerning supervision aspects, costs recovery, external support and the financial aspects of the providers. The study also provides important information about the presence of qualified personnel compared to the standard and what would be reasonable to pay staff as the sum of 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 not be less than 25 or exclude any main service, but should also not exceed 40 to avoid making the (monthly) verification process too complex.
- In low and middle-income countries, most of the time the PBF subsidies only constitute 10-30% of total provider revenues. In such situations, PBF subsidies should be focused on activities with positive externalities, public goods characteristics and targeted exemptions towards 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, which indicates the degree of achievement (level of fulfilment) of an objective. It points out the progress towards the set target.
An indicator must be **SMART** = **S**pecific; **M**easurable; **A**chievable **R**ealistic and; **T**imely.

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:* is realistic to measure, given the available resources (valid).
5. *Timely:* It has the possibility to be collected in 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, an outpatient consultation. Strictly speaking, these are not indicators although this term if often used.

PBF subsidies may be paid for: (a) output (or quantitative) indicators; (b) quality indicators and; (c) equity aspects. The **output indicators** at health centre (minimum health package), hospital (complementary health package) levels are usually not less than 20 and not more than 35. Fewer indicators may imply that the PBF system becomes a vertical program and more than 35 indicators makes the system too complex and difficult to monitor. At school level, they 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 many up till 200.

Quality indicators in health and education may be many because they are only reviewed at most once per quarter. The quality bonus is paid also every three months according to the summary score of all indicators and not per indicator. This makes it easier to collect and calculate (see also module 6).

Process indicators measure ways in which program services and goods are provided such as the number of meetings, staff following courses, number of reports produced, etc. Such process indicators are intermediate measures towards achieving outputs, quality and impact. They are therefore less suitable for subsidy payments. They may in fact draw the attention away from the real objectives of a program. Improvements in **impact** indicators are obviously important to attain but they 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 that 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 (LDC, CAC - school, tertiary hospital, special programs). One can start with the list of MPA and CPA indicators from another country and adapt them to the specific realities of the country. With a group of experts one can make the choice and in case of debates apply the method Turning Point. Every 12-18 months a review can be made of the indicators to adapt them to the national experience developed.

The next table contains activities (or indicators) that are often included in PBF interventions at provider level. The target for the output indicators is *always* set at 100% also if the baseline study shows a poor performance for the activity. This has the advantage that all stakeholders are aware what they are supposed to achieve in the long term. However, when costing the activity for the PBF budget assumptions are made about the target achievement during the course of the project in order to calculate the approximate required budget. The target achievement is then expected to improve over time so that 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	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 new born baby from HIV+ mother	Pop x 4% x 4.2% / 12 x 70%	The new born 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 an / 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
57.2	Major surgery (not C Section) - indigents	Pop / 12 x 0.5% x 10%	On average, 0.5% of the population requires major surgery every year / 12 months x 10% indigents
58.1	Minor surgery	Pop / 12 x 7% x 10% x 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	Pop / 12 x 7% x 10% x 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	Pop / 12 x 0,5%	0.5% of population each year requires a transfusion in a hospital
60.1	Normal delivery	Pop x 4% / 12 x 8% x 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	Pop x 4% / 12 x 8% x 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	Pop x 4% / 12 x 5% x 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	Pop x 4% / 12 x 5% x 10%	80% MPA - 20% hospitals => 8% normal and 12% difficult. Among 12% difficult, 5% CS and 7% other (non-CS) x 10% indigents

Code	CPA indicators	Formula target	Description of the target
62.1	Obstructed childbirth (vacuum, forceps)	Pop x 4% / 12 x 12% x 7% x 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	Pop x 4% / 12 x 12% x 7% x 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	Pop x 23% /12 x 15% x 4 x 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	Pop x 23% /12 x 4% x 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	Pop x 23% / 12 x 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	Pop x 4.5% x 10% / 12 x 30% x 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	Pop x 4.5% / 12 x 4 x 10%	4.5% pregnancies / 12 months / 4 antenatal contacts per pregnancy x 10% in hospitals
68.1	IPT1 or IPT2 or IPT3	Pop x 4.5% /12 x 3 x 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	Pop x 10% /12 *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	Pop x 4.5% x 4.2% / 12 x 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	Pop x 4.5% x 4.2% / 12 x 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	Pop x 4.2% x 30% x 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	Pop x 4.2% x 30% x 50% / 12 x 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 *with complication*	Pop x 15.5% x 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	Pop / 12 / 50,000 x 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 centre and hospital packages may contain between 25-35 activities or indicators. For each of these indicators planners must make an estimation concerning its subsidy. Different from insurance systems, PBF does *not* routinely reimburse the full cost of these activities but only aim at creating the right incentives and thereby also taking into account other sources of income such as from government or partner contributions, user fees and or insurance schemes. The subsidy will therefore usually be lower than the cost for the facility to produce that activity. The subsidy per activity is not fixed and can be changed every three months, which should be clarified in the contracts signed between the CDV agencies and health facilities.

The following factors may play a role for the establishment of the subsidy per indicator:

a) **Availability of funding**: With adequate funding, the subsidies may be increased to the desired level but also *not more* to prevent the risk of moral hazard and supplier induced demand. When for any reason, the overall budget must be reduced the subsidy per indicator may also have to reduce 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 patients 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 assure that staff will also make more efforts to reach the TB patients.
c) **Public goods** (everyone benefits, but nobody can be excluded) such as social marketing for healthy behaviour or for activities, which are 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 government consider a priority will receive higher subsidies in comparison with 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 for which government provided 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 reduce. To the contrary, 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 well legible with all columns filled in. The column header formats are mandatory. If information is lacking so that 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.
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 1st week and 6th 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, report 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 counselling 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 felt satisfaction on 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 month) by health authorities?

From the indicators that are not output or quality indicators, are they important to be measured? Yes / no. If yes, explain why and how?

5. **The indicator 'serious illness referred' is important, but also poses verification problems. Discuss the following examples and suggest what subsidy could be paid and why?**
   Acute Malaria? Cataract? Hernia? Hypertension crisis of the village chief? Complication during delivery?
6. **Should impact indicators be paid? Intra-hospital mortality – maternal mortality? Yes / No. If not, why?**

7. **Analyse the following activities (indicators) and suggest which proportion of the production cost should be paid through external subsidies? 0 %, 10 %, 25 %, 50 %, 75 %, 100 % or more?**

   Explain your answer by taking into account if they are public goods, have externalities.

   - TB Patient who correctly receive the DOTS treatment for six months
   - A severe 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 household
   - A fully vaccinated child.

12.6 Exercise 2: The case of Ibo Health Centre

The population of your health facility is 10,000.
Exercise 1: From your target population and formulas in Table 2 below, calculate 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 for the next quarter the expected number of patients?
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 new born 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	Population / 12 x 80% x 90%
02	Outpatient Consult - doctor	Population / 12 x 20% x 90%
03	Outpatient Consult - indigent	Population / 12 x 10%
04	In patient days	Pop x 0,5% x 30 x 90%
05	In patient days - indigent	Pop x 0.5% x 30 x 10%
06	Minor surgery	Pop / 12 x 7% x 90% x 90%
07	Minor surgery - indigent	Pop / 12 x 7% x 90% x 10%
08	Referred patient arrived hospital	Pop / 12 x 1%
09	New AAFB+ PTB patient	Pop x (150/100.000) /12 x 50%
10	PTB case treated and cured	Pop x (150/100.000) x 2/12 x 50%
11	Completely Vaccinated Child	Pop x 4% / 12
12	2 - 5 Tetanus Vaccination of Pregnant Woman	Pop x 4.5% / 12
13	Household visit following the protocol	Pop / 6 / 12 x 2
14	VIT A Distribution	Pop x 16.5% / 12 x 2
15	Normal delivery	Pop x 4% / 12 x 80% x 70% x 90%
16	Normal delivery- indigent	Pop x 4% / 12 x 80% x 70% x 10%
17	Assisted delivery	Pop x 4% / 12 x 80% x 30% x 90%
18	Assisted delivery - indigent	Pop x 4% / 12 x 80% x 30% x10%
19	Postnatal consultation	Pop x 4% x 2 x 80% /12
20	FP: New or old acceptance for pills or injectable	Pop x 23% / 12 x 15% x 4 x 90%
21	PF: implants or IUDs	Pop x 23% /12 x 4% x 90%
22	MVA after spontaneous abortion or therapeutic abortion	Pop x 4.5% x 10% /12 x 30% x 70%
23	ANC1 or ANC2 or ANC3 or ANC4	Pop x 4.5% /12 x 4 x 90%
24	IPT1 or IPT2 or IPT3	Pop x 4% /12 x 3 x 90%
25	STI cases treated according to protocol	Pop x 3% /12 x 80%
26	Voluntary counselling and testing for HIV / AIDS including pregnant women	Pop x 10% / 12 x 70%
27	HIV+ Pregnant woman put on ARV prophylaxis protocol	Pop x 4.5% x 4.2% / 12 x 70%
28	Treatment of new born baby from HIV+ mother	Pop x 4% x 4.2% / 12 x 70%
29	Quality Improvement Bonus QIB	pop / 10,000 x 1 QIB primary level F 600,000

Please arrange in groups of 5 to 6 people.
Analyse some indicators. Add Equity and Quality Bonuses

13. COSTING in PBF

Gyuri FRITSCHE – Robert SOETERS

Main messages of the module

- PBF costing assists in articulating the budgets that are available for performance contracts with the most cost-effective providers (including for investments), CDV agencies, regulatory authorities, community based organisations 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 the health or educational services at provider and community level at 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 3.00 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 4.00 or USD 5.00.
- If governments propose generalised free health care for curative care such as for malaria, reproductive health, delivery care, children, emergency care the cost will be much higher than USD 5.00, since free health care indicators will need to be 'covered'. Such policies may also render the system inefficient and of poor quality and thereby counterproductive.

13.1 Introduction to costing in PBF

Traditional accounting and budgeting procedures have limitations. They are oriented on checking paper work, conducting tender procedures for the purchase of inputs and centralized salary administration. Costing, to the contrary, aims at creating a framework in which best practices and PBF instruments can be applied. It identifies and analyses the costs that are needed 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) are budgeted. These are linked to one summary sheet, allowing calculating the financial consequences. If changes are made in one of the sub-sheets the results in the total budget immediately appear. Many budget lines in the sub-sheets are standard and based on experience in other PBF projects and countries. Therefore, also less experienced PBF initiators may conduct a PBF costing, analyse the likely results in terms of cost and negotiate changes with relevant stakeholders.

13.2 Seeking efficiency gains

The main components of a PBF program are the variable costs for the subsidies of the packages of activities at the primary and hospital levels. With a good set-up of the PBF program the subsidies of the two packages represent at least 70% of the PBF budget. If this is less than 70% probably there is a problem with the set-up of the program.

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, construction of buildings, purchase of medicines, no quality outputs have yet been achieved and it will be uncertain whether the desired results will ever be achieved or not.

Further efficiency gains in PBF costing are potentially achieved by:

1. Selecting *health package indicators* with the highest effectiveness related to cost. For example, immunising children has a lower cost to prevent a death or disability than for cardiac surgery interventions. The opportunity cost analysis may help whereby one searches the value of the best alternative that was not chosen. Opportunity cost analyses was introduced by the World Bank in the World Development Report 1993 with the concept of the Disability Adjusted Life Years (DALYs).

PBF has further fine-tuned this DALYs concept and today most PBF projects contain 20 to 30 cost effective indicators or activities.

2. Selecting the most cost-effective *providers* in a given catchment area. Until some years ago governments tended only to support the government system and would construct facilities also when there were already private ones. Today, the importance of public – private partnerships and the non-discrimination principle against the private sector are better embedded in most countries.
3. Select *optimum subsidy levels per indicator* that also take into account *other* facility revenues. This implies that CDV agencies review the effects of increasing or reducing the subsidies on the desired outputs, compare them to the targets, and whereby quality standards are respected.
4. Assure that facilities also pay *performance bonuses to their staff so* that their efficiency improves. This is done through the indices management instrument. The government subsidizes the providers based on their results while the facility management motivate their staff through the variable bonus payments.
5. *Economies of scale.* Assure that health centres, hospital and CDV agencies serve the optimum target population. For health centres the target population on average is 10.000, for hospitals 150.000 and for CDV Agencies between 200.000 and 700.000 but up to 2-3 million if the regional CDV Agency also introduces district CDV branches with permanent staff.
6. *Economies of scope.* Assure that the package is holistic and not vertical. The full range of health centre activities should be incentivised 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 for the costing of projects creates potentially efficiency gains of a factor 4 to 10 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.

13.3 Overhead costs

The administrative costs of a PBF program are for the strengthening of the regulatory activities and the implementation of CDV Agencies. The costs for regulation guarantee the quality of Health Facility, pharmacies, the mapping of the PBF catchment areas and coordination. The costs for the CDV Agencies are for the work of 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 cannot be considered as administrative costs, but a result that benefits the population directly because of the economic multiplier effects for the local economy when injecting money directly into the community groups.

13.4 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 for the CDV agencies and cannot be reduced proportionally to the population. CDV Agencies should therefore not serve populations smaller than 300.000 because the relative cost to put into place a fully equipped and qualified team then becomes too high. The budget for a fully-fledged PBF health program was $ 3.00 per person per year but gradually with the introduction of the targeting of the vulnerable, nutrition indicators and community PBF USD 4.00 to USD 5.00 may be more realistic. This includes support for the primary health centre level and hospital levels and may provide bonuses for disfavoured regions, health facilities and individual vulnerable people. Therefore, a three-year project for one million people would come at 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 starting condition of infrastructure and equipment. An additional budget may then be planned of $ 0.50 to $ 1.00 to provide start-up subsidies for infrastructure.
- Non-availability of national qualified staff. If it is difficult to find qualified national staff for example because PBF is new in a given country, there may be the need to recruit international expertise.
- An intervention in a remote and scarcely populated area will increase the cost for the 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 with a lower per capita cost in US $ than in a high cost of living country such as Nigeria.

13.5 The costing tool

1. A "proposal" sheet or a summary sheet that is connected with links to other sub-sheets. This summary sheet allows the examination of the consequences of all the changes made in the other sheets. The summary sheet presents the annual per capita budget of 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 has to be reduced or the target population has to be reduced. If the budget is already set at a certain amount, but an increase in one of the components of the budget is proposed, then this has to be offset by a reduction in another component.

	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 Agenci	€ 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 & qu	€ 401.458	€ 473.304	*€ 874.762*		46,9%	$ 1,69
	3.2	Subsidies Hospital Package (+ vulnerable + q	€ 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 Managament 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%**	**$ 3,60**
			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 and that should not exceed 30%. Overheads offer the necessary costs for purchasing agencies and technical assistance.
The following table shows a proposal. All budget lines come from the other sheets. The total cost for a PBF target population in 2017 of $ 10 million is $ 4.25 per person per year. The proportional cost of the budget that directly supports claimants and the population is 81.4%, which consists of investment units for beneficiaries, beneficiary subsidies, community audits and training for the PBF program.

2. The second sheet is the table with the exchange rate with the different currencies used in the program. EXCEL allows to work with different currencies and it takes only in one cell to change the exchange rate and it will recalculate in all the leaves of the consequences. Often the main currency is the currency used by the humanitarian organization such as US Dollar (World Bank) or Euro (European Union).
3. The third scaling sheet presents progress in the introduction of PBF in new districts in the next 4 years.
4. The fourth sheet contains the equity bonus for health districts.
5. 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. Of subsidies for the primary and hospital levels constitute 70% of the total budget.

What is the information needed for these two health package sheets?

a) What indicators should be included in basic and hospital packages? This is often done by making a selection from a list of standard output indicators produced by the World Bank, which contains some 50-60 indicators that have already been tested in several countries. A group of experts can then make a selection adapted to the specific needs in a given country or region.
b) What is the subsidy for each indicator? The choice is first made for the index indicator, which is 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 to give 20 times more value for a delivery compared to an external consultation: = 20 x $ 0.20 = $ 4.00.
d) If the value of the index 1 is increased 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 it is on the basis of this consultation for an External Consultation $ 0.28 that the budget is calculated).
f) At the bottom of the spreadsheet of the total budget per quarter for all indicators, an additional bonus may be added by 15-25% for the quality premium.
g) The following table shows which budget for monthly subsidies will be needed if the PBF project would reach 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 the extent to which the proportions seem reasonable. For example, only for new consultations, which is only one of the indicators, 22% of the budget may be needed.

2.1 Paquet Minimum d'Activités - PMA

Taux croissance population par an:	2.5%
Population total Cameroon 2016:	850,000
Bonus de qualité:	15%
Moyen bonus inter- et intra district (0% et 80%):	40%

	Indicateurs niveau primaire - PMA	Cible par mois Cameroun	Valeur indicateur	Subside F CFA de base 0%	Subside en USD 0%	Subside USD moyen = +40%	Budget mensuel, si achèvement 100%	Poids en % chaque indicateur
1.1	Consultation externe nv - infirmier	51,000	1.0	F 150	$ 0.26	$ 0.36	$ 18,360	8.2%
1.2	Cons externe nv - médecin	12,750	2.0	F 300	$ 0.51	$ 0.71	$ 9,053	4.1%
1.3	Cons externe nv - indigent + épidemie + crise humanitaire	10,625	4.0	F 600	$ 1.02	$ 1.43	$ 15,194	6.8%
2.1	Journée d'hospitalisation	11,475	1.33	F 200	$ 0.34	$ 0.48	$ 5,508	2.5%
2.1	Journée d'hospitalisation - indigent	1,275	5.3	F 800	$ 1.36	$ 1.90	$ 2,423	1.1%
3.1	Petite chirurgie	3,570	2.5	F 375	$ 0.64	$ 0.90	$ 3,213	1.4%
3.2	Petite chirurgie - indigent	397	10.0	F 1,500	$ 2.55	$ 3.57	$ 1,417	0.6%
4.1	Références arrivées à l'hopital	708	4.0	F 600	$ 1.02	$ 1.43	$ 1,012	0.5%
5.1	Cas IST traité selon le protocole	1,700	2.0	F 300	$ 0.51	$ 0.71	$ 1,207	0.5%
6.1	Enfants complétements vaccines	2,833	12.0	F 1,800	$ 3.06	$ 4.28	$ 12,125	5.4%
7.1	TPI1 ou TPI2 ou TPI3	3,188	1.5	F 225	$ 0.38	$ 0.53	$ 1,690	0.8%
8.1	VAT2ou VAT3 ou VAT4 ou VAT5	6,375	2.0	F 300	$ 0.51	$ 0.71	$ 4,526	2.0%
9.1	Distribution VIT A	23,375	0.266	F 40	$ 0.07	$ 0.10	$ 2,338	1.0%
10	CPN1 ou CPN2 ou CPN3 ou CPN4	11,475	3.0	F 450	$ 0.77	$ 1.08	$ 12,393	5.5%
11	Accouchement eutociques	1,339	13.0	F 1,950	$ 3.32	$ 4.65	$ 6,226	2.8%
11.2	Accouchement eutociques - indigent	149	52.0	F 6,000	$ 10.20	$ 14.28	$ 2,128	1.0%
12	Accouchement dystociques	446	20.0	F 3,000	$ 5.10	$ 7.14	$ 3,184	1.4%
12.2	Accouchement dystociques - indigent	50	60.0	F 9,000	$ 15.30	$ 21.42	$ 1,071	0.5%
13	Curetage après avortement spontané (ou indication médicale)	112	6.0	F 900	$ 1.53	$ 2.14	$ 240	0.1%
14	Consultation postnatale	4,533	3.0	F 450	$ 0.77	$ 1.08	$ 4,896	2.2%
15	PF: Nouvelles ou ancienne acceptantes pilules ou injectables	8,798	11.0	F 1,650	$ 2.81	$ 3.93	$ 34,576	15.5%
16	PF: implants ou DIU	587	16.0	F 2,400	$ 4.08	$ 5.71	$ 3,352	1.5%
17	Dépistage volontaire du VIH/SIDA y compris femmes enceintes	7,438	2.0	F 300	$ 0.51	$ 0.71	$ 5,281	2.4%
18	Femme enceinte VIH+ sous protocole ARV prophylaxie	94	20.0	F 3,000	$ 5.10	$ 7.14	$ 671	0.3%
19	Prise en charge du nouveau-né d'une femme VIH+	83	20.0	F 3,000	$ 5.10	$ 7.14	$ 593	0.3%
20	Dépistage des cas TBC positifs par mois	53	15.0	F 2,250	$ 3.83	$ 5.36	$ 284	0.1%
21	Cas TBC traités et guéris	106	60.0	F 9,000	$ 15.30	$ 21.42	$ 2,271	1.0%
22	Visite à domicile selon protocole	23,611	4.0	F 600	$ 1.02	$ 1.43	$ 33,764	15.1%
23	Cas référés par relais communautaire et arrivé (plafond 5% des CE)	3,542	2.5	F 375	$ 0.64	$ 0.90	$ 3,188	1.4%
24	Cas d abandon recuperee (plafond 2% CE)	1,417	2.5	F 375	$ 0.64	$ 0.90	$ 1,275	0.6%
25	Enfant de 6-59 mois PEC pour malnutrition aigüe modérée (MAM)	4,208	4.0	F 600	$ 1.02	$ 1.43	$ 6,017	2.7%
26	Enfant de 6-59 mois PEC malnutrition aigüe sévère (MAS)	1,403	8.0	F 1,200	$ 2.04	$ 2.86	$ 4,013	1.8%
29	Bonus d'Amelioration de Qualité (BAQ)	14	4,000	F 600,000	$ 1020	$ 1428	$ 19,992	8.9%
	Sous total						**$ 223,481**	
	Bonus de qualité 15%					Bonus qualité:	$ 33,522	
	TOTAL					Maximum par mois:	**$ 257,003**	

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 vulnarabilities				
	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	Volontary 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

6. Another sheet contains support for the function of regulation at the central level.
7. 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.
8. The next sheet may contain indicators in other sectors such as education, water and sanitation and rural development.

13.6 Costing Exercise

Participants can manipulate the Costing software on the basis of 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 to change 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)

1. Study the scaling sheet and give feedback on how the worksheet works.
2. Study the "indEquityDist" sheet and give feedback on how the worksheet works.
3. 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.

14. 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 service of good quality. Facility managers are encouraged to promote teamwork in the designing and implementation of the plan.
- Provider managers should be innovative and entrepreneurial and be given the autonomy to find local solutions to achieve results. They should feel the ownership for their facility but at the same time be internally and externally transparent in the use of 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.

14.1 Introduction

In PBF we must identify a different type of managers 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. The decisions they make are their responsibility and there do not exist good or bad decisions as long as solutions are found and they record what they did. No central planner will be able to 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 correctly apply management techniques and thereby becoming effective in using public funds. With this in mind, black box management instruments were developed for PBF. The first one is the business plan described in this chapter. The second one is the "indices" management tool that helps managers to analyse their revenues, plan expenditures, and calculate the individual performance bonuses (see next module). Managers may use these black box instruments or adapt them as they wish, but they should do so in a transparent fashion.

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 does not exist a direct relationship between results and rewards, so that whether plans and targets are achieved does not have consequences. To the contrary, *business plans* has a larger chance of being implemented because the PBF revenues are performance based, and will increase or decrease also the staff bonuses.

14.2 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* concerns the implementation of the business plan. During the *third stage*, the CDV agency, local authorities and community-based organisations 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

14.3 How does the business plan work?

A business plan is a quarterly work plan, which proposes the *strategies* required to reach the *targets* set by government for the minimum package at health centre level, the complementary package of activities at hospital level or the school package. The business plan is a tool to help managers to develop their ideas and innovations. It describes how the subsidised activities will be implemented and is usually made every three months. The business plan is the result of a process whereby provider managers involve as much as possible the different stakeholders in their catchment area such as workers, private clinic representatives and health committee members. The plan identifies the 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 the activities will be verified monthly so that the PBF subsidies can be paid. When results increase, the subsidies increase and thereby the individual staff bonuses. This should improve quality, increase patient satisfaction and better motivate staff.

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

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 and;
- 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? The health facility management can be guided through an initial planning process of how to invest a certain amount of money to upgrade its facility and how to respond best to the 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 knows best what is needed and what level of effort can be provided. This decentralized approach makes the health facility management and its community responsible for the upkeep of their health services and allows them to create local solutions to local specific problems.
- How to assure the *geographical* access for the population? Facility managers may sign subcontracts with other collaborating facilities in order to solve geographical access difficulties.
- How to assure the *financial access* of the population to the services? Considering the production costs including salaries, drugs, maintenance and infrastructure, facility managers must analyse the revenues needed to provide services of good quality with motivated and sufficient staff. The potential to generate revenues from direct user fee payments depends on the purchasing power of the population. The managers may set realistic cost sharing tariffs based on what the population on average can afford. The PBF subsidies are added to compensate for the revenues that cannot be covered by direct user fee payments. Where to find those external, additional resources is the

responsibility of the government and local decision makers but *not* of the facilities. When there are not sufficient government or aid agency funding, the only solution is to increase the 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 behaviours? 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 members of the community or of the health committee, a local religious group, trainee volunteers, etc?
- How many qualified staff should each facility catchment area have? The facility must decide in increasing or decreasing *their staff* depending on criteria such as workload, national standards for qualified staff and the willingness of staff to work overtime or to the contrary to have more free time with a lower salary. When recruiting contract employees, it is important to clearly define their responsibilities but also to clarify their rights, such as in the standard contract in the following paragraphs.

14.4 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 is a contract 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) Programme..

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 Programme (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 activity 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. The payment of this performance bonus or the variable part is conditioned by the individual performance after realization of the profits by the health facility 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;
- The project is based on performance failure to achieve the objectives set after two consecutive months will result in the automatic termination of the contract.

ARTICLE 8: DISPUTES

- The parties agree to settle amicably the cases of dispute and, if necessary, to resort first to the arbitration of 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 .....

…… ……..

The provider
Name: ....

For the health facility of .....
The head of the center: .....

(read and approved)

14.5 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 sub contracted structure**	**Technical Quality Score**	**Previous Community Satisfaction Score**
HF 1 …….		.. %	.. %
HF 2 …….		.. %	.. %
HF 3 …….		.. %	.. %

1. **Component: CURATIVE INDICATORS**

a) 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.
b) 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 %)**
Outpatient (OPD) consultation for > 5 yrs	pop / 12 x 83% x 80%			
OPD consultation for > 5 yrs - indigent	pop / 12 x 83% x 20%			
OPD consult child (0-59 months) – fee paying	pop / 12 x 17% x 2 x 80%			
OPD consultation child (0-59 months) - indigent	pop / 12 x 17% x 2 x 20%			
In-patients days (primary level) - fee paying	pop/1000x 50% x 30 x 80%			
In-patient days (primary level) - indigent	pop/1000x 50% x 30 x 20%			
Minor surgery - (incl. circumcision) - fee paying	pop x 2% / 12 x 90% x 80%			
Minor surgery (including circumcision)- indigent	pop x 2% / 12 x 90% x 20%			
Referral with counter referral slip received Referred patient arrived at the hospital	pop / 12 x 1%			

c) What are the problems patients and health facilities staff are facing that have hindered the achievement of the indicators in the table above? What are the proposed solutions? Make realistic planning **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*: 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 organise 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: *Make an analysis of the 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 feed back on referral of patients. How is the transport organized for emergencies? If through hospital ambulances ensure that there exists a Plan B transport system. Determine the ability of patients to pay for transport and hospitalization and thus the willingness of patients to be referred.*

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Identification of indigents and vulnerable - Emergencies: *Make an analysis of how to identify vulnerable as indigents. Through the village health committee, community relays or other Community mechanisms? Sometimes indigents are sudden like after an accident. In the case of*

natural or humanitarian crisis, CDV Agency must be informed to what extent proportion of exempt patients may be increased towards 50%, 75% or 100%

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2. Component REPRODUCTIVE HEALTH

a) 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.
b) 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 are the problems patients and personnel are facing to achieve 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 for the vaccination to be free for the patients. Identify the problems on how to achieve the target? Choice for 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? Ate 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 make a plan of how to identify vulnerable.

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Is the qualified personnel adequate to assure 7/7 and 24/24 services? Hygiene and sterilisation procedures assured in the delivery room. Is confidentiality assured?

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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 that staff has the ability to make obstructed labour with vacuum extractor, syntocinon and suture great ruptures. Protocol 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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Woman 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? Is the infrastructure and equipment requirements are correct? Is the ability of staff adequate? Need for training or recruiting staff?*

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Family planning short term, medium term: Wh*at are the problems with the spacing of births (oral, injectable, implant and IUD) in your health area? Recruit additional nurses, collaboration with local NGOs, outreach strategies, private sub-contracts, use the 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 to improve the coverage for the pill, injectable, implants and IUDs in your area? What method women prefer? Need for 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

a. 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.
b. 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%			

c. What problems patients and health facilities staff are 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? Are inputs received from any organization such as the government, UNICEF, WFP? Or, alternatively, does the system foresee that the health facility purchases the inputs?

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4. Component COMMUNITY PBF

a) 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.
b) 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			

c) What are the problems patients and health facilities staff is facing with the achievement of the indicators **in the table above**? What are the proposed solutions? Make a realistic planning in the table above for your target indicator for the next quarter. Make a convincing plan.

Who are the people in the area that perform 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. Inspection of latrines, waste pit or proper waste disposal.

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5. HIV / AIDS and TUBERCULOSIS

a) Calculate and enter in column « Target 100% » the target of the seven indicators HIV / AIDS and tuberculosis on the basis of the population in your catchment area. Apply the formulas of the table.
b) 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%/12 month x 70%			
New born 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%			

c) What are the problems patients and health facilities staff are facing to achieve the above indicators? What are the proposed solutions? Make realistic planning **in the table above** for your target per indicators in the next quarter. Make a convincing plan.

What are the problems associated with counselling and testing couples for HIV, testing voluntarily pregnant women in your catchment area? Is there confidentiality in health facility?

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Do you have the capacity to prevent mother to child HIV transmission and follow-up patients with HIV? Need for training - 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 to obtain the inputs?

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6. Component FINANCIAL ANALYSIS OF HUMAN RESOURCES

What were the revenues realised 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 realised 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 realised 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's? 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?
……

The nurse / doctor in charge **The Manager of CDV Agency**

Name and Signature **Name and Signature**
..... **.....**

Copy: - Health Centre
- CDV Agency

14.6 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 text of the report and the action plan is agreed upon by the group, the facilitation team will distribute the report to those persons concerned and may post it on the website of SINA Health or other websites like the 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)

15. PROVIDER MANAGEMENT: The INDICES Tool

Main messages of the module

- The indices management tool allows any organisation to analyse its income, to plan for its essential expenditures, and to calculate the profit that can be paid for performance bonuses.
- This tool enhances the internal and external transparency of the management and creates the right incentives to improve the quality of services, to increase the outputs and income and to reduce unnecessary expenses and corruption.
- This module presents an indices management tool for a health facility of between 3 and 150 employees. A more complex indices tools also exists for large institutions whereby each department (such as paediatrics, 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, which manages the indices tool.

15.1 The objectives of the indices management tool

The indices management tool was discovered in DRC - South Kivu in 2005, has since become an integral part of the PBF management instruments and was introduced as national policy from 2007 onwards in Rwanda, Burundi, DRC, Cameroun, Nigeria and several other countries. Recently Cameroon has also started to develop the indices management tool for the department 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 for 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 by applying public the choice theory presented in module 4.

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 that there is no transparency. Therefore, the indices management tool has also been developed to promote good governance. All the income of the structure is integrated in the form of a “common basket”.

In the following paragraphs the indices management tool is explained for a health facility of between 3 and 150 employees.

15.2 Health facility revenues or income

In PBF we *only* consider revenues that are in cash (= direct cash or through bank transfer). The reception of inputs such as drugs or equipment are not counted as a revenue in the indices tool because they cannot be changed 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 organisations; (4) Fixed subsidies in cash from partners and; (5) Cash donations from individuals or organizations.

The proportion of internal revenue compared to the total revenues ideally should be between 40% and 60%. If the internal revenue is more than 60%, this creates problems because the tariffs may be too high for many patients. For example, private health facilities without any support from the government are for 100% dependent on the direct payments from the patients, which they may not be able to afford. Private facilities will therefore be unable to serve the population with desired free services such as for positive externalities (immunisation, tuberculosis, etc.) and public goods (social marketing of changing life styles) and assisting the vulnerable unable to pay fees. Only public money can solve the financing for such services.

However, on the contrary, if internal revenues are less than 40% of the total revenues, this often creates problems with the stability of the health facility income. It creates a large dependence on external financing that is often unstable. This instability of income tends to create enormous problems of stock outs of drugs and other consumables, inadequate maintenance of infrastructure, and poorly motivated staff leading to strikes. In general, there is poor quality of care.

15.3 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. The external income consists of government salaries, PBF subsidies and other revenues, which make up 59% of the total income. Internal income or revenues account for 41% of the total revenues and are generated from cost recovery, income from contracts with companies and other income-generating activities.

The total monthly income is FCFA 4.02 million ($ 6756), 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% compared to the standard of $ 7.00 that 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 for the number of qualified staff is 1 qualified staff per 1000 inhabitants for the primary level and also 1 qualified staff for every 1000 inhabitants for the hospital level. Therefore, in this example this health facility at the primary level achieves 8 / 20,000 / 1000 = 40% of the target.

Table : Step 1 in the indices management tool: Analysing the income.

Health Facility	May-17			
Population	20,000			
Income Categories	**Amount in $** **1 USD =**	**Amount in FCFA** **560**	**%**	**Analysis**
Salaries paid directly by the government*	$ 286	F 160,000	4%	
PBF Subsides	$ 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
Revenu 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				

In this scenario, the health facility management should aim at increasing its activities (and thereby the revenues) as well as to 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 that does not have any qualified staff can apply for a QIB once the health facility has successfully recruited a qualified staff and after this person has started working.

15.4 Planning for the expenditures and balancing the budget

The next step in the indices management tool is the planning of the expenditures. In the following table, we notice that the expenditures are F 4.02 million, which is equal to 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 the performance bonuses to the staff and it is this variable part that balances the monthly income and the expenditures of the health facility. If income increases, while expenses remain the same, the profit also increases. If expenses go down while the income remains the same the profit increase, etc.

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%**	
tal 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

15.4.1 Basic salaries

In the following table, it shows that the health centre has 12 staff of which 8 are qualified. *The first expenditure decision is how much money should be set aside for fixed staff salaries* either paid for by the government or by the health facility itself.

The total income of the health facility is F 4.02 million FCFA and, in general, around 40-60% of the expenditures spent for the remuneration (= fixed salaries + performance bonuses) of staff 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 salaries are unknown such as in the private sector or when government facilities have a large number of self-employed staff and; (2) When the majority of staff are recruited by the government.

15.4.2 Method one for calculation of fixed salary: The in-charge is the standard

The person in-charge for the health facility is given the standard fixed salary indices value of 100 points. This standard of 100 points allows to compare the 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 is equal to the fixed salary paid by the government. However, if this salary is deemed too high or too low, it may be decided to change the reference salary of the in-charge or director upwards or downwards and this will influence the salaries of all staff.

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 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 X 85 points is F 136,000; The accountant F 160,000 / 100 X 60 = F 96,000; The cashier F 160,000 / 100 X 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**

15.4.3 Method 2 for calculating the fixed salary: Using the government salary indices value

The second approach is to use the government indices value of each employee or the equivalent in case the 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 the categories) and; (2) the number of years worked (expressed in salary increments).

It is the value of the government salary indices value that determines the fixed salary and this is the same for all employees with the same number of indices value 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 indices value is 328, which translates into 328 x F 102 = F 33,456. The highest is 2421 points X 102 = F 246,942. The private sector may use the same salary indices value grid to determine the salaries and use the same multiplication factor of 102 or a higher or a lower factor. Each country has a legal framework for establishing the minimum salary levels applicable to both the public and private sectors. With this salary scale of the civil service each health facility can calculate the basic fixed salaries of the civil servants once they know the category and the increment / step of each staff member.

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
Increm 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
Increm 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
Increm 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
Increm 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
Increm 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
Increm 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
Increm 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
Increm 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
Increm 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
Increm 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 index is the basis for calculating the performance bonuses of each staff member by weighing the performance criteria. For example, for one overtime hour, a doctor in category A1, increment 2/1 with an index value of 1504 receives a bonus that is proportionally higher than a caregiver 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 has an Excel tool, filling the value of the index 358 and the salary is automatically calculated through 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 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 it a temporary contract of 3 or 6 months for example, or it give him a fixed contract that is negotiable but which is based on the same wage scale of the civil service.

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**

15.4.4 Taxes and social contributions

The second expenditure item are the taxes and social contributions. This depends on the laws of each country and therefore needs to be specified in the national PBF manuals.

The following table shows the example of the *tax structure* in Cameroun, which is in FCFA (1 $ = F 595). The basis for the tax calculation is the Gross Monthly Salary, which is the sum of the basic salary, the fixed allowances and the 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%	(Gross Monthly Salary x 70% - BMS x 2.8%-41.667) x 10%
F 310,001	F 429,000	15%	16963+(BMS-310.000) x 70% x 15%
F 429,001	F 667,000	25%	29.188+(BMS-429.000) x 70% x 25%
F 667,001	and more	35%	70.830+(BMS-667.000) x 70% x 35%

The tax formula can be included in the indices EXCEL spread sheet so that the taxes are calculated automatically and that no mistakes are made. This allows autonomous providers such as hospitals to calculate the taxes, which they withhold from their employees and pay the revenue authority.

Social contributions concern pension schemes, insurances schemes and other miscellaneous schemes. These contributions are usually a proportion of the 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.

15.4.5 Supply of medicines, consumables and equipment

The third expenditure item concerns *medicines, laboratory reagents, consumables and small equipment.* This obviously is a priority expenditure for each health facility and, in PBF, their availability is the responsibility of each autonomous structure. The proportion of expenses for drugs and consumables compared to total expenditures usually varies between 20% and 30%. When the expenditure for these inputs is proportionally very high, this may mean that there is a lack of competitive pricing for those products or that there exists another problem in the health facility, such as theft or poor management. In PBF, the health facilities have the free choice to choose any distributor that sells quality medicines and it requires the regulator to ensure the efficient functioning of the free market and to monitor that the accredited distributors provide quality products. By the end of the month, the in-charges of the pharmacy and the laboratory make an inventory. They then calculate the next order and its cost based on the average monthly consumption.

A *15-day security stock* (= average monthly consumption / 2) must be taken into account, 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 consumption of the last 6 months by 12.

15.4.6 Social marketing expenditures

Social marketing expenses in PBF programs are those for promotional and preventive activities and may vary between 10% and 20% of total expenditure. It includes indicators such as home visits following a protocol, the follow-up on drop-outs, and the identification of new cases. Such social marketing expenses are also important for the identification of the vulnerable, family planning acceptors, vaccination, latrine construction and the promotion of the use of mosquito nets. Social marketing expenditures also include the payment of incentives for community health workers and skilled health workers involved in the community PBF program.

15.4.7 Current operating expenditures

These include all other current operating expenses of the health facility such as rent, transport, electricity, office equipment, hygiene equipment, communication cost, etc. Based on the average consumption over the last six to twelve months, staff estimate the average monthly operating expenses to be expected for the month. This item also includes expenses not directly related to the activities of the health facility, such as the contribution to the church activities of a religious health facility. The latter expenditure should not exceed 10% of the health facility revenue.

15.4.8 Investments

Another very important expenditure item are investments to maintain the quality of the 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 that they “own” the health facility because it also constitutes the source of their income. It is therefore important to keep the staff stable to promote this feeling of ownership. The health facility must be attractive (garden, flowers, paintings), surrounded by a fence that avoids the unauthorised entry of people or animals. There must be water and electricity. The infrastructure should also be protected against erosion when the surroundings in a hilly sloping

area. Staff should be involved in the decision-making on the investments because this will reduce the short-term profits that can be paid for staff bonuses. It is easy to convince staff to forego short term bonuses if, for example, the health facility has to 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 easy to persuade staff to invest in home improvement if the staff decides that the performance bonuses will be invested in the construction of homes that can be used by staff.

15.4.9 The payment of the subcontracts

This is the payment of the 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 done. The remaining 20% can be kept by the main contract-holder for the cost of supervision and the administration of the contract. Subcontracts can also be signed for security- and cleaning services of health facilities.

15.5 Assure 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. The health facility income can be low during a month compared to another month. Moreover, unexpected catastrophic expenses may occur such as when there is a fire or another damage to infrastructure or equipment that require immediate replacement. Without a reserve, this paralyzes the health facility.

The reserve should be for three months of operation. 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.

15.6 Criteria for calculating the performance bonuses

When, after deducting all the above expenditures there is still money left, this is the "profit" that the health facility has produced during the month. This can be paid as performance bonuses to the staff. It is the total income MINUS all the other expenses. In the event of a negative result, the staff does not receive a performance bonus. The opportunity to receive the performance bonus aims to create a team spirit. Staff must together increase income and being efficient with spending. This team spirit should also avoid theft and the misuse of equipment, motorcycles or vehicles, and prevent that inputs are bought at uncompetitive cost.

Managers must ensure that the organisation generates enough profit to pay for the performance bonuses. From the total remuneration, the ideal proportion between fixed salaries and performance bonus 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 its 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-duel 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 being used in the Central African Republic, but it is possible for other countries to add or remove certain criteria.

As shown in the following table and explained above the in-charge of the health facility has the salary indices value of 100 points and the other staff receive their indices value points and thereby the 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**

15.6.1 The responsibility bonus

The points for the responsibility bonus are determined by the health facility. One may propose for the manager the value of indices value x 50%. Points for other staff may be determined by the management committee. In this example, points were given for responsibility for the senior health assistant (35 points), for the accountant, the senior lab technician and the registered nurse midwife 20 points and for the cashier 10 points.

15.6.2 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 value weighs 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**

15.6.3 Non-private practice bonus

This bonus is important in a context where staff of the structures tend to do the private practice unofficially and receive money directly from patients. This has a detrimental effect on the quality of services and the revenues of the health facility. The bonus for not diverting patients to the private sector compensates for the loss of money that the staff would generate through private practices or through 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 also other penalties. Each health facility must have a protocol that explains which penalties will be imposed when somebody conducts private practice. For example, in case of a strong suspicion of private practice one may lose 50% of the bonus of not doing the private practice. When there is solid evidence, one loses 100%.

The protocol should also explain the verification mechanisms. For example, a telephone number can be displayed at the reception of the health facility that patients can call when a health worker ask to pay informally or when the health worker asks the patient to go to his 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**

15.6.4 Department Quality Score Bonus

Quality assessments are conducted for the primary level by the District Health Authorities and at the hospital level by peer group evaluations.

The quality criterion for the performance bonus may be linked to the results of 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 is then obtained by multiplying the maximum value by the score of quality of each department obtained. For example, the physician responsible with the index value of 100 points / 3 X the overall score of 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. Depart-ment 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**

15.6.5 Individual Performance Criterion

Another criterion for determining staff performance bonuses is the individual performance assessment of staff 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 (=> taking into account 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. Yet, experience shows that the best is when assessments are done by a team.

Table : Individual Employee Performance Criteria for the Premium

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**

15.6.6 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.....

15.6.7 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. The health facility management then sets the target for the income to be realized 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. The next step is to divide the revenues realized (6d) by the income target of the department (6c) which gives the score of realized revenues (6e). By multiplying the maximum points (6a) X 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**

Besides the 6 positive incentive criteria there are two negative incentives or penalty criteria.

15.6.8 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. This system is generally highly welcomed by staff. It tends to solve inter-personnel problems of 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 control the arrival and departure times of employees 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**

15.6.9 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 either 20%, 50% or 100% and thus the lost points (8b) are obtained. This allows to calculate 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**

15.7 Calculation of performance bonus per employee

As shown in the table above, the total points earned by the 14 employees is 665 points. The profits to be paid for the performance bonuses was F 1.1 million and thus the monthly indices value is F 1.669 per point (= F 1,100,000 / 655). By multiplying the total points per employee by the month index, performance bonuses are obtained for each employee.

15.8 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 the 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, purchase of drugs, etc. If less than 40%. This probably means that it is insufficient to meet the basic needs of staff.
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 amount of the premium must correspond to the amount recorded on the summary sheet of receipts / expenses), signed with Telephone number of staff.
7. **Monthly indices report present with also a viability score conducted**
   - *Indices management tool report present, including the staff attendance list and their signatures*
   - *Report contains recommendations and analysis the report 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

15.9 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 departments of the hospital and from April 2016 also in the administrative departments.

15.9.1 The conceptual approach to solve complex problems

One of the key theories of PBF is system analysis. This theory aims to subdivide complex problems into smaller pieces to make them easier to solve by autonomous and specialized teams. A tertiary hospital is also a complex and highly specialized organization with hundreds of employees and beds and 15-20 departments and a turnover of millions of dollars. In line with the system analysis theory, a tertiary hospital is a black box for the Ministry of Health. In the same manner, the management of the hospital may also consider the departments as "black boxes" and may give autonomy to managers and specialists in each department of the hospital to analyse their problems, plan expenditures including for the payment of performance bonuses. The departments and their employees will equally be paid on a performance basis. However, this does not mean that there is no transparency. The application of the quarterly business plan and the monthly use of the indices management tool ensures that the decisions of department managers are known and documented. Quarterly business plans are proposed and negotiated with the hospital's PBF committee. The monthly indices management tool is documented in reports, accessible for management, external evaluators and preferably also for staff in the departments.

15.9.2 Performance Indicators for Tertiary Hospitals

The Ministry of Health must develop the tertiary package for hospitals. To do this, it is necessary to develop output, quality and equity indicators comparable to those of the primary referral hospitals. Public money is insufficient to pay for all the curative activities of tertiary hospitals and its use is not cost effective compared to primary interventions such as immunisation. The efficiency of public investments in the health sector can be assessed with the DALYs system (disability adjusted life years). This is a standard measure in terms of decreasing mortality,

morbidity and disability. The cost to win 1 DALY through vaccination of children can be around $ 50, but winning 1 DALY through a cardiac surgery procedure will be around $ 10,000.

For the financing of tertiary hospitals, other sources of funding should therefore be found than public funds, such as private health insurance receipts and direct cost recovery. In this way, a person with the means to pay could make sure by insuring that he or she has access to highly specialized interventions for an annual contribution of a few hundred USD per person per year. However, tertiary hospitals also play important roles in research and training.

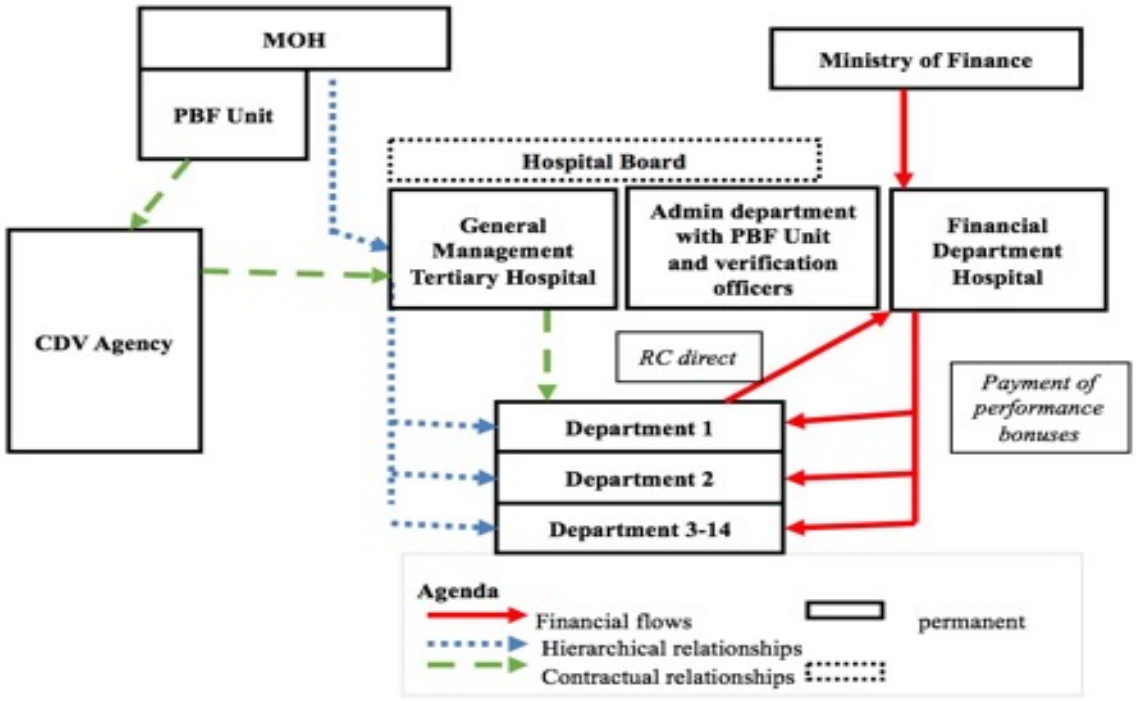
15.9.3 Departmental PBF subsidies within hospitals

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 first come from the revenues and another part from public money. If we take the example of the laboratory, the hospital's internal and variable PBF subsidies constitute 6% of revenues, direct cost recovery 88% and fixed state operating subsidies also 6%. In the example in the table the total revenue is CFAF 36.3 million per month

Departments' managers first pay fixed wages and salaries and medicines, equipment, etc. Next the department contributes a proportion of their revenues to the general operating expenses of the hospital. Thus, in the example in the table FCFA 10 million (28%) is given for the payment of staff salaries; FCFA 9.7 million is used for purchasing reagents and consuming pharmacy and providing office. 35% of revenue is the contribution for the general operation. In addition, they can reserve a part (for example 6%) in the reserve of the department. This is to ensure financial stability when revenue for a period decreases or if there is an emergency e.g. rehabilitation or the purchase of major equipment.

The profit and the proportion that will be reserved for performance bonuses is calculated by the formula: all receipts minus other expenses which is FCFA 1.7 million FCFA, which represent 5% of the total expenditures.

LABORATORY REVENUES	**Amount**	**%**
SUBSIDES 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 REVENU –SUBTOTAL)	F 1,675,264	5%
(B) Total EXPENSES = TOTAL REVENUE	**F 36,328,689**	**100%**



15.9.4 Departments Performance Indicators

The departments of the hospital are considered as black boxes by the management of the hospital. The hospital asks the departments the following performance: (a) Cost-effective use of beds, diagnostic- and treatment capacity. A good utilization of the capacity increases at the same time 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.

15.9.5 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. The subsidy for a simple laboratory test is for example FCFA 300 and which has been given the value of 1 point. A complex surgical procedure such as a mastectomy may be given 200 points, which corresponds with the internal PBF subsidy of 200 X FCFA 300 = FCFA 60,000. The direct cost recovery rates for the same activities are not the same as the PBF subsidies. For example, a subsidy of F 300 may have a tariff of FCFA 1500.
Quantitative verification of the data can be done by the hospital's PBF Unit with, for example, 10 verification officers, who are part of the general administrative department of the hospital. The verification may take a few days for each verification officer per month.
The following table shows an example of laboratory output indicators. The number of activities is first declared by the department and then validated by the verification officers of the PBF Unit. If the error is greater than 10%, the PBF subsidy may be cancelled.

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

15.9.6 Qualitative indicators

Professional verification of quality is done by peer evaluations by other tertiary hospitals.

15.10 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, the revenues were $ 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 improvements by increasing the number of qualified female staff, health promotion and improving the maintenance of the cold chain. The building is in poor condition and there is no permanent light in the health facility.

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%	
Salaries paid by the health facility	$ 1,612	F 959,004	23%	
PBF Subsides	$ 2,017	F 1,200,000	29%	
Cash donations by aid agencies	$ 202	F 120,000	3%	
Other donations from gifts, etc				**Between 40-60% OK**
Sub-Total external revenues	**$ 4,088**	**F 2,432,412**	**59%**	
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%	**Between 40-60% OK**
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 centre has currently 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 staff 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 by 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 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 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, the registered nurse 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 of NOT doing private practice by 50%. 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 of 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 of 0%, for the Health Assistant of 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 overall score of the departments?*

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 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 amortisation: F 350,000. Payments of Sub-Contractors: F 250,000, Social Marketing F 225,000. Other expenditure: F 20,000. Increase of 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 with 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 day-time = 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 day-time = 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?

16. PBF IN EMERGENCY SITUATIONS

Colleagues from Benin, Burkina Faso, Cameroon, Mali and RCA developed this module during the 40th PBF course in Cotonou in 2014, the 41st PBF course in Douala in 2014, the 42nd PBF training in Mombasa, Kenya in 2014 the 43rd PBF training in Bo, Sierra Leon in January 2015.

Main messages of the module

- During emergencies, good results are more likely to be achieved when local providers, health workers or schoolteachers receive (financial) resources to respond to the crisis instead of external emergency organizations taking over the ownership of the services.
- The PBF Units at national level and the main contract holders at primary level should develop emergency response plans based on specific emergency indicators designed to respond to humanitarian or public health emergencies. These plans and indicators should be activated once the emergency occurs. To finance any emergency response, government should reserve emergency budgets or use external emergency support.
- External emergency assistance is welcome but should focus on technical assistance, training and coaching and refrain from centralized input-oriented interventions.
- During a crisis, the National PBF Unit may also be linked to (or extended to become) the national emergency response center.
- During a crisis, government should aim to use accredited national public and private wholesale distributors from which providers can buy their inputs.

16.1 Why a protocol on the role of PBF in emergencies?

The ebola epidemic 2014-2015 in Liberia, Sierra Leone and Guinea demonstrated that systemic solutions and better preparedness are needed. Many experts assumed that PBF is more appropriate to operate in stable environments and that emergencies require a different more input oriented type of intervention managed by external organizations.

Yet, PBF programs during emergencies in the DRC (2009) and the Central African Republic (2014) demonstrated that PBF might produce better results than traditional external NGO oriented input approaches. The basic idea is that it is likely to obtain good results when local providers, health workers or school teachers receive (financial) resources to respond to a crisis instead of that external emergency organizations take over the ownership of the response. An emergency PBF approach will even have better results when there already exist PBF Contract Development and Verification (CDV) Agencies and if they have enough autonomy and budget to respond in a flexible manner. The CDV Agency may then increase the subsidy per patient for indicators such as outpatient- and inpatient care to compensate for the loss of revenue for the treatment of patients unable to pay their bills. Moreover, during public health emergencies new indicators may be introduced such as “suspected ebola case staying one day in a holding center” or “confirmed ebola case receiving care in a treatment center”. Thirdly, to be prepared, providers may propose in their business plans to receive PBF investment units to improve their infrastructure and equipment (for example for holding or treatment center). They may request for investment units *during* the crisis but even better also to be prepared *before* the crisis. The infrastructure of for example holding centers may also be made multi-functional so that during non-emergency periods it will be used for other purposes.

Each PBF principal contract holder (serving on average 10.000 people) in particular in emergency prone countries or regions should therefore have an emergency preparedness plan. For this to work autonomous health facilities should also have access to distributors operating in competition from where to obtain the required inputs such as Ebola kits, supplementary feeding and routine inputs such as essential drugs and equipment. The government should accredit

wholesale distributors from the public and private sectors and already agree with them which drugs and equipment they should stock in the event of emergencies.

16.2 Emergency indicators could be the following

Ebola

- Ebola checkpoint operational during 1 day
  - *Checkpoint consists of at least one qualified health worker, a police officer and 1 support staff*
  - *Equipment available – WHO KIT A – non-touch thermometers*
- Holding center on stand bye during one week (irrespective of the nr of patients)
  - *Protocol for staff mobilization is in place including qualified health worker a police officer and 1 support staff.*
  - *Equipment available – WHO KIT A*
- Ebola suspected patient during one day in holding center
  - *Staff mobilized, suspected case monitored according to protocol*
- Treatment center on stand bye during one week (irrespective of nr of patients)
  - *Protocol for staff mobilization is in place including qualified health worker a police officer and1 support staff.*
  - *Equipment available – WHO KIT A & KIT B*
- Ebola patient treated during one day
  - *Staff mobilized*
  - *Patient treated according to protocol*
  - *Budget available to buy equipment*
- Contact traced through household visit
- Rapid response team ready to withdraw an ebola patient or conduct burial
  - *At least 1 qualified health workers, 3 support staff and 1-2 police officers*
  - *KIT B equipment, ambulance*
- Number of broadcasts on radio and television.
- Number of public billboards installed.

Quality indicators for infectious diseases (ebola)

- HF equipped with protection materials.
- HF applies adequate waste management of biomedical materials.
- Basic protective measures applied such as on hand washing, use of gloves

Natural disasters, wars, displacement

- Increase of the proportion of patients to be exempted from fee paying by increasing the subsidies for the standard curative and fee paying PBF activities.
  - *Assure that emergency budget is available and that payment agencies may either advance cash or pay for the results within a delay of 30 days*

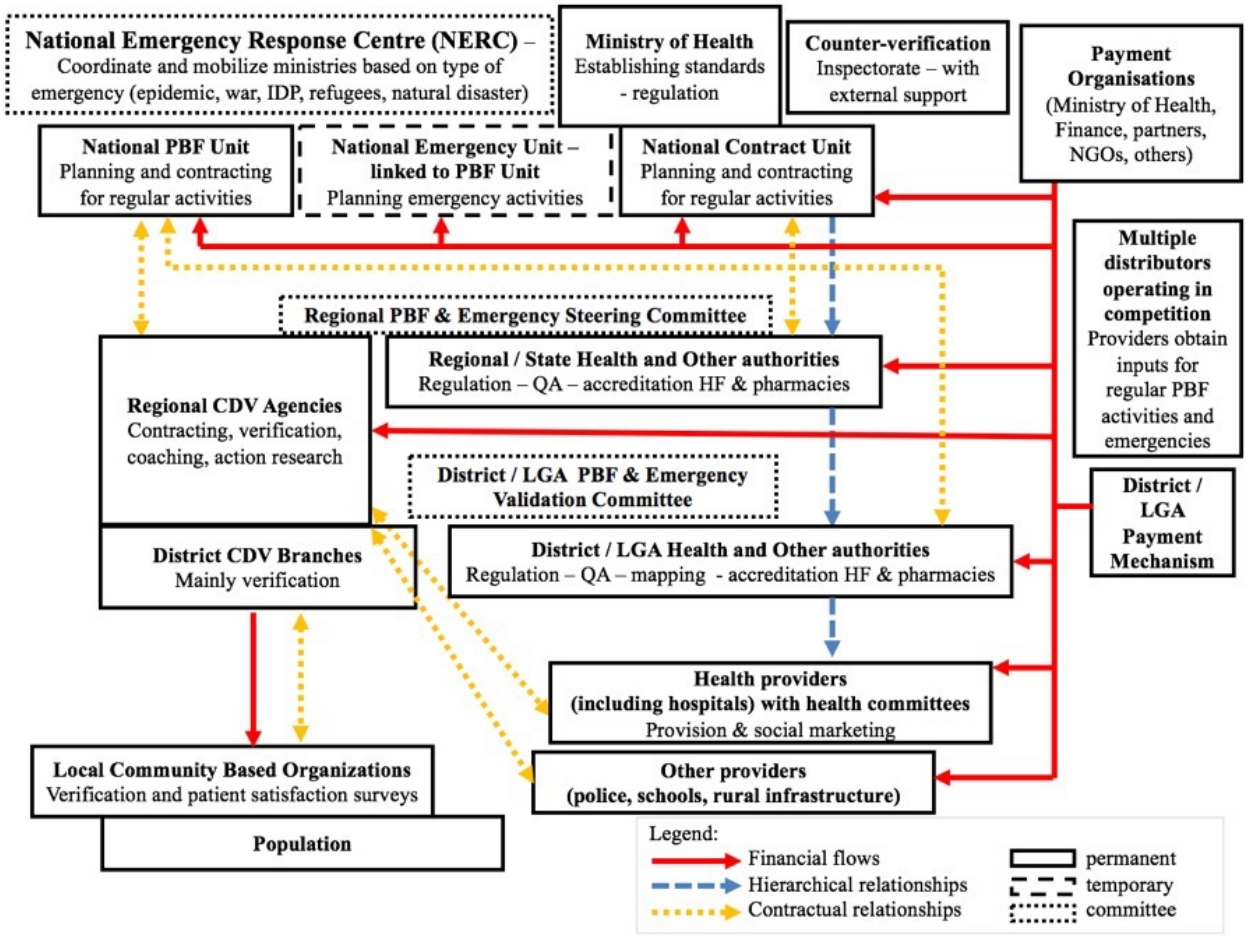
Food shortages as the result of natural disasters, droughts or war

- Supplementary feeding given to affected person

16.3 Role of stakeholders

What are the roles of the various PBF actors during the response of an emergency such as ebola? First of all, also during emergencies one should attempt to stay as closely as possible to the *institutions already in place and in particular if there exists already a PBF CDV Agency.* This will gain much time as it avoids building up new institutional set-ups or waiting for external response teams, which are also not sustainable after that the crisis finishes.

The institutional set-up below was developed during the different PBF courses and adapted to Sierra Leone:



16.3.1 National Emergency Response Centre (NERC)

In many countries, with or without PBF, there are institutions like a National Emergency Response Centre. In the event that such a Response Centre would like to engage with PBF and use elements of PBF and contracting, it could develop a range of activities, which we outline below. The output indicators for the NERC are closely related to their monitoring work: such as field visits, meetings which would follow a particular protocol and would involve the follow-up of prior recommendations, and would also articulate some new recommendations, depending on the progress made. A team from the relevant Ministries, the donors and other stakeholders involved in the fight against ebola or any other emergency could evaluate the performance of NERC members to determine their remuneration.

NATIONAL EMERGENCY RESPONSE CENTRE (NERC)		
COMPONENTS	**ACTIVITIES**	**INDICATORS**
Develop the national policies to integrate ebola activities and other emergencies in the health system (or any other relevant system) at all levels (the national regulator, regional and district health and community levels)	▪ Establishing, revitalizing or reorienting the national emergency response centre (NERC) to integrate the fight against emergencies and formulating the TOR for representatives of involved stakeholders ▪ Ebola: As soon as there is an alert case confirmed, the NERC mobilizes the strategy through the National PBF & Emergency Unit (NPE Unit) with multi-sector rapid response teams. ▪ It establishes the ToR for the functioning of the National PBF & Emergency Unit ▪ Establish the human resources directory. ▪ Determine the number of people to recruit for the NPEU, location (eg Ministry of Health).	▪ NERC with clear ToR ▪ The NERC establishes National PBF & Emergency Unit (NPEU) with a clear ToR ▪ Telephone directory and list of available recruits
The NERC develops the distribution strategy for stakeholder inputs	▪ Preferably demand-driven by contracted providers with multiple distributors. The emergency program may then: (a) provide an operating budget for health facilities and other stakeholders; (b) give investment units or (c) integrate the purchasing of inputs in the variable PBF subsidies. ▪ If supply-driven strategy is required with central distribution of "inputs" (for example for ebola "Astronaut" KIT) indicate who is responsible.	▪ Distribution strategy available ▪ Inputs and budget available
NERC monitors the emergency program	▪ NERC undertakes field visits with clear ToR ▪ NERC organizes evaluation and coordination meetings of activities with partners	▪ Visits conducted ▪ SMART recommendation ▪ Evaluation meetings organized.
NERC 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 on line 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

16.3.2 National PBF & Emergency Unit (NPE Unit)

The Terms of Reference for the National PBF & Emergency Unit (NPE Unit) are linked to the activities of the same PBF UNIT also operational *without a crisis.* In case of a crisis an emergency protocol will become active, which triggers “dormant” indicators and a budget. The same verification and payment mechanisms will be used during the emergency. During a large emergency such as ebola the NPE Unit may need to recruit hundreds of people.

NATIONAL PBF & EMERGENCY UNIT (NPE Unit)		
COMPONENTS	**ACTIVITIES**	**INDICATORS**
Terms of reference available for the National PBF & Emergency Unit (NPE Unit)	▪ Identify and recruit regional CDVs ▪ Develop the necessary budget for the PBF program in general (minimum $ 3 / person / year) and for the purchase of emergency indicators ($1.5 / p / yr) ▪ Ebola: Define and establish the composition of checkpoints, holding centres and isolation centres with equipment and transport means.	▪ Primary and hospital packages identified ▪ Regional CDV identified or established ▪ Budget e.g $ 4.50 / person / year.
Develop a guide for regions, districts, providers, checkpoints, holding and treatment centres	▪ Distribute hard copies and electronic versions of the guide with laminated data sheets	▪ Guides and fact sheets available from the regions, check points and isolation sites.
Ebola: NPE Unit oversees how laboratories are made operational and put them under contract	▪ Equip the selected laboratories with reagents and other materials; ▪ Negotiate performance contracts with the selected laboratories	▪ A well-equipped laboratory available. ▪ Signed contracts available.
Ebola: NPE Unit oversees the equipping of the ebola checkpoints	▪ Ebola checkpoints have sample materials and gear with a triple packaging and KIT A protection for agents.	▪ Sample material, ebola gear and KIT A material available
Ebola: NPE Unit oversees the construction and operationalization of holding centres according to international safety standards for suspected cases	▪ Identify with regional CDVs local organizations which could organize, adapt or construct an isolation site according to the safety norms ▪ To guarantee the availability of trained staff for ebola management ▪ To organize the availability of sufficient sample material, gear, KITs A and B.	▪ Isolation site operational according to the norms ▪ Well trained staff available ▪ Sample and treatment KITs A and B available
Ebola: NPE Unit oversees the construction and operationalization of ebola treatment centres according to safety norms or confirmed cases.	▪ Identify organizations which prepare treatment centres according to safety and infrastructural construction norms ▪ Guarantee availability of sufficiently trained staff for ebola management ▪ 1 KIT B per day to treat an ebola patient @ $1.200 per day!	▪ ETC operational according to the norms ▪ Trained staff available ▪ Sample equipment and Treatment KITS A and B available in sufficient numbers.
War situation: NPE Unit revises upwards the subsidies for the fee-paying indicators so that health facilities can exempt patients.	▪ Identify regions, districts or affected health facilities and increase the proportion of exempted patients from the usual 15% to respectively 25%, 50% or 100%. ▪ Identify from which source the exemption subsidies will be paid	▪ Health facilities identified for higher exemption rates and receive adapted subsidies
Natural Disasters: NPE Unit includes nutrition indicators in the packages	▪ Determine the extend of the crisis and allocate more resources to areas affected for example for supplementary feedings programs	▪ Indicators in place ▪ Budget available
Training of Trainers nationally and regionally	▪ Drawing up a manual for training at national, regional and local levels. ▪ Training of regional trainers by the central level.	▪ 5-day training at central level followed by a test (max 30 persons)
NPE Unit forwards invoices of regional CDV Agencies to the payment agencies	▪ Using cloud computing the NPE Unit forwards the invoices of the regional CDV agencies to the payment agency after a light check. The forwarding delay cannot be more than 3 days.	▪ Invoices sent to payment agency within three days.

16.3.3 Payment agencies at national and / or regional level

The principle task of the payment agency is to pay the invoices, which are sent to them 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 a (inter) national NGO. It should be a financially competent agency, with its own internal auditing system. In order to function in the PBF system, these auditors should understand the PBF approach, which focuses on results and not on paper invoices, tendering procedures, etc

16.3.4 Distributors of inputs

In the PBF system, government, the National Emergency Response Centre and the National PBF & Emergency Unit may negotiate with different *distributors* from the public, private and religious sectors for the quality and price of required inputs, such as essential drugs, equipment, and protective gear, supplementary feeding, etc. The role of the Ministry will be to accredit the various distributors who can prove that their inputs comply with quality standards. Yet the providers buy their inputs for which in case of an emergency they are compensated with increased subsidies for the indicators or through investment units.

16.3.5 District PBF & Emergency Steering Committee (DPE Steering Committee)

The Terms of Reference of the District PBF & Emergency Steering Committee are closely linked to monitoring the implementation of the standard PBF program but also monitors any emergency that has occurred in the district. The DPE Steering Committee can comprise of local representatives from the Ministries of Health, Education and the Police. In the PBF set-up, the DPE Steering Committee works together with the Regional Contract Development and Verification Agency and its District Branches (CDV).
In case of emergencies, the various output indicators and performance payments of the DPE Steering Committee are therefore also connected to their monitoring work. For example, they may implement field visits, meetings carried out according to a protocol, which include the follow-up of the recommendations of prior visits and the articulation of new recommendations, if the expected results are not met quickly enough.

16.3.6 CDV Agency for PBF and emergencies

The regional CDV may serve a population of up to 2-3 million persons, under the condition that it establishes branches in each district serving not more than 500.000 people. The Regional CDV has a certain fixed number of staff (related to the general PBF program) and should have at least a director, a deputy director with preferably a Master Degree in Public Health or Economics and a PBF portal coordinator. The director is mainly involved with contract negotiations and external relations while the deputy may mainly coach the different providers. The PBF portal coordinator together with the verification officers submits the invoices to the PBF portal for payment.

The regional CDV agencies may also have architects and or an engineer who will verify the construction and rehabilitation of infrastructure and large equipment. The district branches will have offices with the medical verification officers (MVO), community verification officers (CVO) and support staff based on around 1 MVO per 125.000 people and 1 CVO 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 strive, epidemics, failed harvests, a large inflow of refugees, etc	▪ Regular PBF work continues ▪ Emergency protocol and indicators are prepared
Ebola: In case of ebola equip *checkpoints*	▪ Map the check points	▪ Ebola checkpoint operational 1 day
Ebola: Construction and operationalization of *holding centres* to take care of suspect cases.	▪ Identify local organisations that rehabilitate or construct holding centres according to norms for infrastructure, equipment and staffing. ▪ Guarantee the availability of staff sufficiently trained ▪ Guarantee the availability of basic protection gear ▪ Establish a protocol for screening, sampling, security (triple packaging) and transport.	▪ Holding centres on stand during one week (irrespective of nr of patients) ▪ Ebola suspected patient during one day in holding centre
Ebola: Construction and operationalization of *treatment centres* to take care of confirmed cases.	▪ Identify the local organisations that can rehabilitate or construct a treatment centre according to norms for infrastructure, equipment and staffing. ▪ Guarantee the availability of staff sufficiently trained in ebola management. ▪ Guarantee availability KIT B for ebola (the costs of 1 KIT B, which lasts 1 day is $1.200).	▪ Treatment centre ready to operate during one week (irrespective of the number of patients); ▪ Ebola patient treated during one day
Ebola: Contact tracing	▪ In case of a confirmed case that requires follow up: establish a list of contacts and develop contact strategy	▪ Contact traced through household visit.
Inform the community, of the alert system regarding ebola.	▪ Mass information campaigns in public places, through radio and television, bill boards etc. ▪ Prepare clear messages at community level	▪ Nbr of broadcasts on radio and television. ▪ Nbr public billboards

16.3.7 Local authorities (regional and District level – quality assurance)

The local health, education or administrative authorities in regular PBF system conduct the role of assuring that national standard are being followed and control the quality of services provided. They are the regulator, the referee in the system who assures that the different stakeholder splay by the rules of the game. In case of emergencies they will play an important role in the District PBF & Emergency Steering Committees.

LOCAL AUTHORITIES (REGIONAL AND DISTRICT) QUALITY ASSURANCE TEAM		
COMPONENTS	**ACTIVITIES**	**INDICATORS**
Rationalise health care map and provide equity bonus to remote health facilities	▪ Assure that contracts are awarded to health facilities covering around 10.000 target population and hospitals covering 100-200.000	▪ District health care maps updated at least once per year
Quality assurance	▪ Conduct quality reviews according to protocol at different level of the system	▪ Quality review conducted at health facility level e.g $ 100 ▪ Ebola: quality reviews at check-points, holding & treatment centres
Quality in pharmaceutical sector	▪ Regional and district health authorities assure that pharmacies sell quality drugs	▪ Quality reviews conducted at wholesale (and retail) distributers and pharmacies

Emergency: Mobilise the local actors capable to combat the emergency.	▪ Play an active role in the District PBF & Emergency Steering Committees	▪ Emergency plan in place and operational
Training of the household visits teams for community surveillance.	▪ Training the household visit teams by trainers of the district or CDV. ▪ Give PBF training subsidy: a forfeit payment per participant.	▪ 3-day training with final evaluation and report (max 30 persons per training)

16.3.8 Health facilities

Health facilities could be paid extra for emergencies on the basis of the following outputs.

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 also hygiene products (soap, alcohol etc) are available in the facility.	▪ Quality indicators (for basic hygiene en protective gear) in place

16.3.9 Police

The police take charge of the security around checkpoints, holding centres and treatment centres.

16.3.10 Community

The health facilities may pay the teams, which undertake the household visits.

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 a feedback to the focal points on the state of affairs 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 LMIC, primary schools are generally extremely underfunded. They lack motivated teachers and school materials. Most systems require increases by a factor 3-4 of 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 for improving quality in schools should therefore not be excluded, but openly included in the system's finances. For children of very vulnerable households (for example 20% of the total) governments may make available extra funds, so that these children can be exempted from fee paying.

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. The goals in education are related 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, a combined health, education and rural development project was initiated. By combining the activities of different sectors by one CDV Agency a better economy of scope could be achieved. 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 evaluation of this multi-sector pilot project in 2010 showed favourable results. As a result, similar education programs started from 2011 onwards in the Central African Republic (Bouar Prefecture), Cameroun (East Region), Burundi (Bubanza Province) and Malawi (Mangochi District).

Free education tends to produce poor quality education with demotivated teachers due to their low salaries of $ 80-100 per month (Burundi, Malawi). Free education services block parents *with resources and willingness* to contribute (financially) to improve the school standards.

PBF proposes a hierarchy whereby *quality* comes first, *efficiency* second and *equity* only third. Adopting this hierarchy in education implies that schools must develop business plans, which explain the strategies to reach minimum government quality standards within a grace period of for example 1-2 years. Yet, for the national standards to be achieved this often requires schools to substantially increase their revenues and staff. Government may contribute some of the required resources by increasing salaries and / or by providing operational school budgets. The PBF program may supplement some 20% of the school revenues, while the remaining financial gap necessarily needs to be generated from parent contributions. This is not so controversial when one takes into account that in most theoretically free education programs there are already substantial informal teacher fees 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, there is also a need to develop a system that assists those pupils who are orphans or who 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 revenues are 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 in Burundi that for each primary school pupil the school must generate a minimum of $ 120 per year. Yet, current revenue is only $ 35 per pupil. In Malawi these ratios are respectively $ 80 and $ 28 per pupil per year. School revenues need to triple to achieve minimum standards.

2. How many informal teacher incomes are generated?
Teacher salaries in Malawi are around $ 1000 per month, which is below the level to sustain a family. Teachers must therefore generate additional income such as through informal teaching. We estimate this to be around $ 80 per month. We postulate that the minimum remuneration (through increased salary + the 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%
Subtotal external revenues	*K 793.574*	*$ 1.867*	*$ 28,01*	100%
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%
Subtotal internal revenues	*K 0*	*$ 0*	*$ 0,00*	0%
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%
Subtotal expenses	*K 793.574*	*$ 1.867*	*$ 28,01*	100%
Variable performance bonus	K 0	$ 0	$ 0,00	0%
TOTAL EXPENDITURE	**K 793.574**	**$ 1.867**	**$ 28,01**	**100%**

The above revenues of $ 28.01 per pupil per year are 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 government accepts that:

- Parents pay voluntary contributions for additional lessons of 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 of 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%
Subtotal external revenues	*K 2.061.630*	*$ 4.851*	*$ 72,76*	80%
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%
Subtotal internal revenues	*K 500.000*	*$ 1.176*	*$ 17,65*	20%
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%
Subtotal expenses	*K 2.011.630*	*$ 4.733*	*$ 71,00*	79%
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 sub division;
- *Contract development and verification* performed by independent and credible organizations with competent human resources;
- *Payment*: An independent Payment Agency that pays the PBF invoices in the bank accounts of schools;
- *Provision:* Activities conducted by schools;
- *Strengthening the parent voice* organized through surveys verifying the satisfaction. These surveys are conducted by civil society 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 to stimulate the desired behavior of pupils and teachers. So while PBF subsidies are a relatively small proportion of school revenues it plays 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 of 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 for administrative costs $ 200.000 then the target population can be set at: $ 600.000 / USD 20 = 30.000 pupils. If we assume that primary school children constitute 20% 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	Contribu-tion / 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
Subtotal boys			*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
Subtotal girls			*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

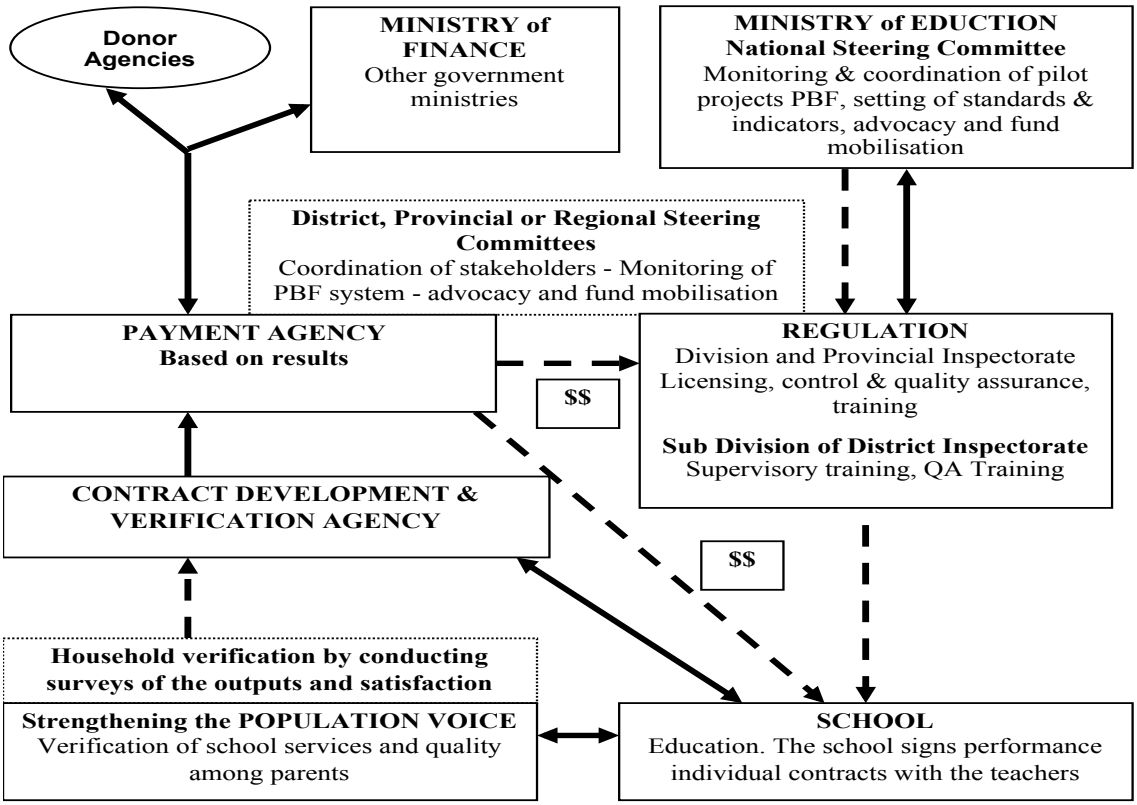
The indices EXCEL tool for the management of the schools analyzes school income, plans for essential expenses and calculates the performance bonuses of the teachers. It is similar to the health facility indices tool and assures transparency in the schools.

		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.

17.5 The role of different actors in the education program



The role of the Ministry of Education and Ministry of Gender
The ministries are responsible for setting the standards of the educational system. They also conduct monitoring visit to the PBF districts. For this there is a need for national PBF units within the ministries.

The role of the District and Zone Education Management Teams
The district and zone educational management teams are the eyes and ears of the national ministries and also work in close collaboration with the District Council. They conduct the quality reviews.

The role of the Payment Agency
This role may be taken over by different payment agencies such as the Ministry of Finance, other aid agencies, a fiduciary agency or project management units. Payment must be done within 7 days of the arrival of the invoices approved by the District Steering Committee and PBF Unit.

17.5.1 CDV Agency

The Contract Development and Verification Agency team in each educational district may consist of:

- PBF project manager;
- Assistant manager;
- School output verification officer; (1 for each 30 schools)
- Community verification officer; (1 for each 50 schools)
- Infrastructure officer and;
- Support staff.

Activities of the CDV Agency

- *Advocacy* for and explanation of what is PBF 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 learner being present during one term when the learner was enrolled; the learner finished the term and was not absent for more than 10 days.
- *Parent satisfaction survey* (organised through the community verification officer). This officer develops contracts with Community Based Organisations to capture an independent opinion of the parents about the performance of the school.
- *Infrastructure and equipment verification* (by an architect or engineer). This officer will assist schools with their infrastructure and equipment development plans and to assure that any new plan is according to standards of the Ministry of Education. After finishing (part of) the construction the CDV Agency may agree that the school is paid an investment unit of for example USD 2000.
- *Coaching of the schools* (all members of the team but mainly the assistant manager). This activity mainly concerns to assist schools with the development of their business plans, to learn the indices management tool to distribute the performance bonuses to the teachers and other staff such as the class assistant teachers.
- *Organise at least once per term PBF workshop* of around 1 week with 2-3 key stakeholders of the schools. The objective of these workshops may be to instruct the participants how to use the PBF tools. Another topic may be that schools present their results so that the participants may study the lessons learned and mistakes committed. The workshops should preferable take place outside the school curriculum;
- Organise monthly PBF district steering committee meetings with the district authorities, zone advisor and a representative of the schools and the community based organisations. This meeting is important to determine the monthly PBF payments to the schools. We suggest that each school receives monthly an 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 organisations will conduct every term of 3-4 months a monitoring visit to each CDV Agency. They will establish the degree of achievement of the CDV Agency and may determine a reduction in payment 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 of the Master Degree level and have good management skills as well as advocacy and conflict resolution skills. He or she is mainly based in the project area but may for purpose of coordination, advocacy and attending meetings spend 30% of the workable days in the capital or other places.

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, whereby he or she should not accept “no” as an answer. Yet, this

person should at the same time 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.* Assuring 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 teaching background with a diploma level with a good understanding of the objectives and instruments of PBF and be pro-active.

The responsibilities of the Assistant Manager are the following:

- Replacing the CDV manager in case of absence;
- Coaching of schools in mastering the business plans and the indices management tool;
- Assists with the organisation 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 with a good understanding of the objectives and instruments of PBF and be pro-active.

The responsibilities of the School Verification officer are the following:

- Verification of school registers and absenteeism lists of learners
- After verification signs the invoice with the head teacher. For payment to take place a pupil must be enrolled and finish the term and should not be absent for more than 10 days.
- Analysing the invoice and submit the invoice using internet or cloud computing

TOR community verification officer
Organises each term verification surveys in the catchment area of the schools with the parents of the pupils. The officer may have community development background with a good understanding of the objectives and instruments of PBF and be pro-active.

The content of the parent survey may be the following:

- Parent and mother group satisfaction surveys which covers 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 behaviour – sexual misconduct, corporal punishments, repeated absence of teachers;
- Problems with learner behaviour such as bullying, verbal and sexual harassments
- The CBOs may also make a follow up on the reasons for dropping outs;
- Satisfaction with pre-school caregiving, the demand and satisfaction with performance.

The responsibilities of the CBO officer are the following:

- Organising the CBO surveys according to the schedule;
- Analysing 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 those schools with infrastructure and equipment development plans and should be an architect or engineer capable of judging the ministry guidelines and to assist schools to make their plans and calculate the required resources. Having a good understanding of the

objectives and instruments of PBF is an advantage and the person should be pro-active. The verification officer may preferable 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 school their infrastructure and equipment improvement plans
- Verification of the quality of the infrastructure and equipment
- The Payment Agency will forward the investment units to schools based on already achieved work 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 organised in groups 2000 to 8000. The group 1000 concerns the quantitative output indicators. Yet the weight of the groups is not the same whereby the groups "Activity Planning", "Teacher and Learner performance" and the "Infrastructure and Equipment items" receive respectively 46, 53 and 80 points. A much lower amount of points was given to "head master supervision", "school–community relationships" and "extra curriculum lessons". If necessary, the weight of the groups 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 – *Infant section*	6	11	
5000	Teacher Performance – *Junior section*	6	11	
5000	Teacher Performance – *Senior section*	6	11	
5000	Teacher Performance – *Pre-school / ECD*	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 V2015

Inspector's team explains purpose visit. Asks that at least 1 teachers of ECD; infant, junior and senior sections attend session. Make available keys head master room, storerooms, teacher 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: *1 teacher per 25*	**…..**	**1**	**0**
2. Teacher – learner ratio Infant section: *1 teacher per 48*	**…..**	**1**	**0**
3. Teacher – learner ratio Junior section: *1 teacher per 48*	**…..**	**1**	**0**
4. Teacher – learner ratio Senior section: *1 teacher per 48*	**…..**	**1**	**0**
5. Security staff: *At least 2 per school*	**…..**	**1**	**0**
6. Cleaners: *At least 2 per school*	**…..**	**1**	**0**
7. Gardener: *At least 1 per school for maintaining the garden (flowers, grass), fence and terracing and school vegetable garden, poultry, other ..*		**1**	**0**
8. Assistant teachers - *At least 1 per class – has at least Junior Certificate Form 2* *a. Maintain punctuality and absenteeism registers* *b. Conduct home visits for absent pupils* *c. Assist with Morning Assembly* *d. Distribute text books and organise group work* *e. Serve food in feeding programme* *f. Assist with marking of exercises*		**3**	**0**
9. Map of school catchment area. *a. Map available and displayed in head teachers' office;* *b. Map shows villages, main roads, natural barriers, special points and distances;* *c. Shows total population and per village.*		**1**	**0**
10. School feeding program is in place *If yes: WFP / Other donor ……. / Effective home grown school feeding program*		**1**	**0**
11. Feeding programme does not interfere with teaching & learning programme *a. If not sure check lesson plan Master Time Table with teachers' lesson plan*		**1**	**0**
12. Male teachers well dressed. *a. Long or short clean sleeves, polished shoes, no jeans, no slippers*		**1**	**0**
13. Female teachers well dressed. *a. No bare backs, flashing & slippers. Dress does not show armpits and over knees*		**1**	**0**
14. School has electricity *a. On grid, or solar able to power computers and allow evening classes*		**2**	**0**
15. School has computers *a. School has at least 3 computers for schedule and record of work, lessons plans*		**3**	**0**
TOTAL		**20**	**….**

2000 Record keeping for activity planning	Protocol Respected	NOT Respected
1. Effective school record keeping. *a. Documents in cupboard, well stored or in box files – accessible within 10 minutes* *b. At least available: Business plan, Calendar of events for term, minutes of SMC-, PTA & Mother group meetings, Log book, Time book*	**2**	**0**
2. Calendar of Ministry of Education displayed *a. School has MOE calendar displayed in headmaster's office*	**1**	**0**
3. Master Timetable displayed. *a. Current weekly master time table contains subjects offered per class;* *b. Shows responsible teachers;* *c. Displayed at head teacher's office and / or staff room*	**1**	**0**
4. Primary School Calendar of Events for the term. *Calendar reflects at least:* *a. Examination days, Sport events, School management-, PTA and staff meetings;* *b. Mother support group, learner's council's meetings;* *c. Business plan meetings & indices management including determination of performance bonuses;* *d. Days of submission for teacher's scheme and records of work.*	**1**	**0**
5. Time book updated *a. Head teacher and / or deputy head teacher verifies presence of teachers in class;* *b. Time book contains names of teachers, arrival time and departure* *c. Time book is signed by teachers;* *d. Absent teachers are recorded in logbook and indicate the measure that was taken*	**1**	**0**
6. ECD calendar of events for the term. *Calendar reflects at least:* *a. Sport events, School management-, PTA and staff meetings;* *b. Parent groups meetings;* *c. Business plan meetings & indices management including determination of performance bonuses.* *d. Days of submission for teacher's scheme and records of work.*	**1**	**0**
TOTAL	**7**	**….**

2000. Meetings for activity planning	Protocol Respected	NOT Respected
1. School Management Committee (SMC) operational: *a. Members were elected or re-elected at PTA level not more than 2 years ago;* *b. At least three meetings per term were conducted (during last 3-4 months);* *c. Minutes of last meeting are accessible within 10 minutes;* *d. At least 70% of 10 members were present during last meeting;* *e. Minutes explain how recommendations of previous meeting were acted upon and of which there is evidence;* *f. Minutes contain new recommendations.*	**3**	**0**
2. ECD school management sub-committee effective: *a. Members were elected or re-elected at PTA level not more than 2 years ago;* *b. At least three meetings per term were conducted (during last 3-4 months);* *c. Minutes of last meeting are accessible within 10 minutes;* *d. At least 70% of the 10 members were present during last meeting;* *e. Minutes explain how recommendations of previous meeting were acted upon and of which there is evidence;* f. *Minutes contain new recommendations.*	**2**	**0**

2000. Meetings for activity planning	Protocol Respected	NOT Respected
3. Staff Meetings operational: *a. At least three meetings per term were conducted;* *b. Minutes of last meeting are accessible within 10 minutes;* *c. At least 70% of teachers were present;* *d. Minutes of last meeting explain how recommendations of previous meeting were acted upon and of which there is evidence;* e. *Minutes contain new recommendations.*	**3**	**0**
4. ECD Staff meetings operational: *a. At least three meetings per term were conducted;* *b. Minutes of last meeting are accessible within 10 minutes;* *c. At least 70% of teachers were present;* *d. Minutes of last meeting explain how recommendations of previous meeting were acted upon and of which there is evidence;* *e. Minutes contain new recommendations.*	**2**	**0**
5. Parent Teacher Association Meeting (for primary and ECD): *a. At least two meetings per term;* *b. Minutes of last meeting are accessible within 10 minutes;* *c. Minutes follow format with at least number of parents present, reporting back on previous proposals and recommendations and parent contributions* *d. Quorum is 25% of the total number of learners enrolled;* *e. Parents were informed about activities during the term and included explanations about parent contribution mechanism;* *f. Meeting produced recommendations.*	**3**	**0**
TOTAL	**13**	

2000 Punctuality and Absenteeism	Protocol Respected	NOT Respected
1. Head master learner discipline. *a. School has a list of rules, regulations and corrective measures;* *b. School has a head masters discipline file & punishment book;* *c. Discipline file & punishment book contains description of offenses and actions taken (counselling, rustication, suspension, internal punishment, exclusion).* *d. Should contain at least 4 cases per month*	**1**	**0**
2. Learner punctuality and absenteeism monitored by class assistant teacher. *a. Each class has a daily attendance register for monitoring learner punctuality and absenteeism;* *b. Punctuality is checked at early morning time and after break according to school time table;* *c. Class assistant maintains the list* *d. Person responsible will produce after break time a list of learners absent for the day and distinguish between explained and **non** explained absenteeism;*	**2**	**0**
3. Effective follow-up on learner punctuality & absenteeism. *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 ;* *b. Learners absent more than a week visited at home by class assistant teacher.* *c. Effective follow-up will be monitored from punctuality & absenteeism book*	**2**	**0**
TOTAL	**5**	

3000 Head Master 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: performance bonuses = income of the month – current school expenditures*	**3**	**0**
5. Monthly performance bonus system is known by staff *- Established criteria for the performance bonus calculation through: Responsibility + Overtime hours - Hours lost + 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 teachers infant section available for teaching at day inspection;* *c. Inspector will verify the presence of at least 1 teachers 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 weeks 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 Time Table*		
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 teachers junior section available for teaching at day inspection; Inspector will verify the presence of at least 1 teachers 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 weeks 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 Time Table*	**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:** *a. School has list of MoE & school employed teachers accessible < 10 minutes;* *c. At least 80% of teachers senior section available for teaching at day inspection; Inspector will verify the presence of at least 1 teachers from the presence list of the school chosen from senior section (= std 5-8)*	**2**	**0**
***2. Senior* 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 scheme of work for subjects (Chichewa, English, Mathematics, Expressive Arts with sports & dancing, Life Skills, Social & Environmental Sciences, Agriculture Science & Technology, Religious Education)*	**2**	**0**
***3. Senior* section. Effective evaluation – 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 weeks record of work contains at least 1 new realistic recommendation*	**2**	**0**
4. *Senior* section. Effective Lesson Planning = "How" to teach a. *Check lesson 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. *Senior* 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 Time Table*	**2**	**0**
6. *Senior* 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 SENIOR SECTION	**11**	

5000 Teacher Performance Interviews – Pre-school / *ECD*	**Protocol Respected**	**NOT Respected**
1. ECD care givers are available for teaching: *a. School has list of employed caregivers accessible within 10 minutes;* *b. At least 70% of caregivers are available for teaching at the day of inspection;* *c. Inspector will verify the presence of at least 1 caregiver from the presence list of the pre-school*	**2**	**0**
***2. Pre-School* Section. Preparation teaching (= "What"): "Scheme of work"** *a. Inspector calls randomly a caregiver to check scheme of work;* *b. Caregiver presents scheme and records of work for each subject for term;* c. *Caregiver presents ECD syllabus* d. *Caregiver presents schemes of work for 3 year olds, 4 year olds and 5 year olds*	**2**	**0**
***3. Pre-School* section. Effective evaluation – Records of work = "Outcome"** e. *Record of work contains at least 1 success and 1 challenge;* f. *Record of work includes follow-up done to recommendations of previous week;* g. *Last weeks record of work contains at least 1 new realistic recommendation*	**2**	**0**
4. *Pre-School* section. Effective Lesson Planning = "How" to teach *a. Check lesson plans of randomly chosen day of last week:* *b. Inspector checks that caregiver has* ***Caregiver's Guide*** c. *Lesson plan indicates which standard, subject, time allocation and topic;* d. *Success criteria for topic;*	**2**	**0**

5000 Teacher Performance Interviews – Pre-school / *ECD*	**Protocol Respected**	**NOT Respected**
e. *Required teaching and learning resources;* *f. Teacher and learner activities – methodology*		
5. *Pre-school* section. Quality of the lesson plan *a. Inspector checks 2 subjects Lesson Plan & verifies quality with Caregiver Guide* *b. Inspector checks that Lesson Plan is in accordance with Master Time Table*	**2**	**0**
TOTAL	**10**	

5000 Learner performance	**Protocol Respected**	**NOT Respected**
Infant section *At least 80% of enrolled learners in standard 2 write exam and pass*	**1**	**0**
Junior section *At least 80% of enrolled learners in standard 4 write exam and pass*	**3**	**0**
Senior section *At least 80% of enrolled learners in standard 8 write exam and pass*	**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. At least three meetings per term;* *b. Minutes of last meeting are accessible within 10 minutes;* *c. At least 50% of members were present;* *d. Mother group involved in development of term school business plan including in resource mobilisation for voluntary extra lessons;* *e. Minutes explain how recommendations of previous meeting were acted upon and of which there is evidence;* *f. Minutes contain new recommendations.*	**3**	**0**
TOTAL	**4**	

8000 Business plan	**Protocol Respected**	**NOT Respected**
1. Knowledge about current revenues. *a. School management knows their current cash budget per pupil per year*	**1**	**0**
2. Effective plan for generation of revenues. *a. School management has a plan to increase revenues to achieve MK 30.000 per pupil per year within 2 years;* *b. Business plan indicates sources of planned revenues (government budget lines, PBF subsidies, parent contribution, extra lessons, exam fees, aid agencies, donations);* *c. Business plan explains strategies to increase revenues*	**5**	**0**
3. Effective teacher human resource management plan. *a. School management has a plan to achieve the standard of 1 available teacher per 48 pupils within 2 year;* *b. Business plan indicates how additional teachers will be recruited;* *c. Business plan explains how school will offer a motivating environment for teachers (housing, school infrastructure).*	**5**	**0**
4. ***Effective support staffs plan.*** *a. Plan for security staff, cleaners, gardener and class assistant teachers*	**2**	**0**

8000 Business plan	**Protocol Respected**	**NOT Respected**
b. Plan should explain remuneration strategy such as using volunteers, small incentives, fixed remuneration, performance based bonuses		
5. Teacher motivation plan. *a. School management has a plan to increase the teacher performance bonuses to on average at least MK 40.000;* *b. School applies indices tool;* *c. Business plan shows the criteria for calculating the performance bonuses;* d. *Business plan explains how the school will distribute the performance bonus in a transparent fashion such as through a committee.*	**3**	**0**
6. Infrastructure development plan. *a. School has an infrastructure development plan;* *b. Plan uses Ministry infrastructure standards;* *c. Plan proposes rehabilitation activities to be implemented for next school term;* d. *Plan explains funding sources for rehabilitation (PBF investment units, own school resources, donations, community contributions or aid agencies.*	**2**	**0**
7. Equipment, furniture & school materials improvement plan. *a. School has an equipment & furniture development plan;* *b. Plan uses Ministry equipment, furniture & school materials standards;* *c. Plan proposes which equipment, furniture & school materials to buy next term;* *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.*	**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. *a. School has for each term a school improvement plan* *b. School generate on average at least MK 200 per pupil per term.*	**2**	**0**
2. Extra lessons program. *a. School organises part time lessons at infant, junior & senior level* *b. At least 50% of pupils are included* c. *School generates at least MK 500 per pupil per month* *d. School may exempt up till 20% of pupils of paying fee if parents are vulnerable*	**3**	**0**
3. Non-private teaching agreement. *a. Teachers accept non-private education agreement* *b. School monitors non-private education agreement*	**2**	**0**
4. Standardized test standard 5-8. *a. Parent pay examination fee of MK 1000 for end-of-year exam;* *b. School may exempt up till 20% of pupils of paying fee if parents are vulnerable*	**3**	**0**
5. Other Income Generation. *a. School has at least 1 other Parent Contribution or income generating activity* b. *School generates at least MK 100 per pupil per term*	**1**	**0**
TOTAL	**11**	

4000 Infrastructure, equipment, LTM ***Disability & gender sensitive and locally produced as much as possible***		

4000. Head Master's Office	Protocol Respected	NOT Respected
1. Office Head Teacher & Staff Rooms *a. At least one head teacher, one staff room and one store room per school*	**1**	**0**
2. Head teacher room with space for meetings up till 6 persons *a. Size: At least 16 m^2* *b. Windows opening surface is at least 20% of the floor space;* *c. At least 50% of the window area is used for ventilation;* *d. Roof should be at least at 2m60 from the floor;* e. *Door has lock and can be closed;* f. *Outside burglar bar protector with heavy lock.*	**2**	**0**
3. Head teacher room. *a. At least 7 chairs,* *b. One desk,* *c. One conference table at least 1 x 2 m* *d. Lockable cupboard or small store room* *e. Soft board*	**1**	**0**
2. Safe record keeping. *a. School has safe cupboard (at least 1.20 m x 0.60 m x 0.40 m) for documents;* *b. Cupboard can be closed with a key for storing confidential files such as personal financial files, disciplinary files, examination papers*	**2**	**0**
3. Safe keeping of valuables *a. School has safe (at least 0.40 m x 0.25 m x 0.25 m) for money and valuables;* *b. Safe that can be closed with a key.*	**1**	**0**
4. First aid kit *a. Contains bandages, disinfectant, pain killers, 1 scissor, gloves*	**1**	**0**
TOTAL	**8**	

4000. Staff room, Store room and Library	Protocol Respected	NOT Respected
1. Staff room infrastructure *a. At least 2 m^2 per teacher (1 teacher per 60 pupils)*	**1**	**0**
2. Teacher lockers. *a. At least 1 locker for all teachers at school (including those on leave)* *b. Lockers can be closed and locked;* *c. Verify at random that teachers have keys (check during teacher's interviews)*	**2**	**0**
3. Staff room furniture. *a. 1 desk with chair per teacher* *b. 1 conference table 1.40 x 2.40* *c. Soft board.*	**1**	**0**
4. Storage room for school equipment and toys *a. Minimum of 1 room per 4 class rooms* *b. At least 20 m^2* c. *Door with lock;* d. *Outside burglar bar protector with heavy lock.*	**1**	**0**
5. Store room *a. Shelves* b. *Up-to-date stores ledger*	**1**	**0**
5. Library for learners *a. At least 58 m2;* *b. With at least 20 chairs and desks* *c. With shelves for books*	**1**	**0**
TOTAL	**7**	

4000. Class rooms	**Protocol Respected**	**NOT Respected**
1. Class rooms infrastructure *a. Have an area of 1.4 m^2 for each child for a maximum of 60 children;* *b. Windows opening surface is at least 20% of the floor space;* *c. At least 50% of the window area is used for ventilation;* d. *Ceiling should be at least at 2m59 from the floor;* *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.*	**2**	**0**
2. Rules and regulations list. *a. List is displayed in class room*		
2. Disability friendliness. *a. Class room should be accessible by ramps*	**1**	**0**
3. Class room maintenance *a. No cracks in the floor & no fissures in the wall* *b. Roof – no leaks when raining – properly nailed - floor to top of wall = 3 m* *c. No broken glass panes & window can be opened* *d. Room painted* e. *Doors in good condition and can be locked*	**2**	**0**
4. Teacher desk 140 cm x 90 cm *a. Teacher's desk with lockable drawers*	**1**	**0**
5. Class bin ***a.*** *Each class room should have a bin*	**1**	**0**
6. Learner's desks: *infant* section *a. Two-seater learners desk for infant section height of table 48 cm height of bench 29 cm, depth 35 cm, width 100 cm* *b. Iron round bars* *c. Desks contains shelves*	**2**	**0**
7. Learner's desks: *junior & senior* section *a. Two-seater learners desk for junior & senior section height of table 54 cm height of bench 33 cm, depth 38 cm, width 110* *b. Iron round bars* *c. Desks contains shelves*	**2**	**0**
8. Pre-school indoor *has 6 areas:* *a. Reading corner with books, story books;* *b. Block & building corner with blocks, tins;* *c. Nature corner with pictures of animals, plants;* *d. Manipulative area with puzzles, etc;* *e. Dolls & Toys corner;* *f. Music corner with instruments*	**1**	**0**
9. Pre-school outdoor *area contains:* *a. Sand pit* *b. Monkey climber, see-saw & sliding facility* *c. Football and netball ground*	**1**	**0**
10. Pre-school sitting, hygiene & first aid kit *a. Pre-school has small chairs and tables* *b. Pre-school areas are hygienic and regularly cleaned* *c. Pre-school has first aid kit*	**1**	**0**
11. Pre-school has hangers or lockers. *a. For storing learner bags with personal belongings*	**1**	**0**
TOTAL	**13**	

4000. Pupils text books ***= 1 book per learner*** *Inspector checks with two pupils per section availability of books*	**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*** *Inspector checks with two pupils per section availability*	**Protocol Respected**	**NOT Respected**
1. Pre-school: Drawing paper, work book	**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. *a. Should at least supply urinals, wash rooms and teacher toilets*	**3**	**0**
2. At least 1 toilet for female teachers and 1 toilet for male teachers *a. Flushing toilet or pit latrine* *b. Floor without fissures with single hole and lid* *c. Closing doors, super structure with roofing – without flies or smell* *d. Recently cleaned without visible fecal subjects* *e. Running water and hand washing* *f. Evacuation waste water in a sanitation pit.*	**1**	**0**
3. School has at least one toilet for the disabled *a. Toilet and wash rooms have wide enough doors and extra seat and grips*	**1**	**0**
4. Presence of sufficient latrines/toilets and well maintained *a. One toilet – latrine per 30 pupils;* *b. Latrines at least 12 meters from other building and on the windward side;* *c. Floor without fissures with single hole and lid;* *d. Closing doors, super structure with roofing – without flies or smell;* *e. Recently cleaned without visible fecal subjects.*	**4**	**0**
5. Urinals	**1**	**0**

4000. Hygiene & sanitation	Protocol Respected	NOT Respected
a. 1 urinal for boys and 1 for girls *b. Should have running water and sanitation pit*		
6. Presence of washroom for girls. *a. Shower with running water, or container with at least 20 litres;* *b. Evacuation of the wastewater in a sanitation pit.*	**2**	**0**
TOTAL	**12**	

4000. Court yard, sports facilities and school boundary	Protocol Respected	NOT Respected
1. Court yard *a. Size at least 2 m2 per child;* *b. Court yard should not have dangerous objects of wood, glass, metal, deep holes;* c. *Swings, see-saw, place for ground games*	**1**	**0**
2. Maintenance of the school grounds *a. Grass cut;* b. *Flowers well maintained.*	**1**	**0**
3. Garbage bins in courtyard and cleanliness *d. Bin with lid accessible to pupils – not full;* *e. At least 4 bin per school* *f. No paper, plastics or other litter in the yard*	**3**	**0**
4. Waste pit available *a. Hole of minimum 3 metres depth and fenced;* *b. Does not contain infected non decomposable objects*	**1**	**0**
5. Football facility *a. Football – School has access to standard pitch 90 x 45 m with goal posts* *b. At a distance of maximum 1 km and has at least 5 balls* *c. Grass is well kept without tall grass, dangerous objects*	**1**	**0**
6. Netball facility *a. Netball - School should have a standard pitch of 25 x 15 m* *b. Has at least 2 balls and with (removable) goals posts*	**1**	**0**
7. Athletic facilities *a. Running track available* *b. Long jump facility*	**1**	**0**
8. School boundary fenced *a. Brick wall fence with 2 meter height / or* *b. Well-constructed non penetrable hedge fences* c. *Fence has gate which can be closed with lock and key*	**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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Fritsche Gyuri, is a Public Health Doctor of Dutch nationality. He worked long term in Zambia, Afghanistan and Rwanda. He currently works for the World Bank and has become a global authority in the field of PBF / RBF.
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Munyanga Mukungo Sylvain, was born in Matchumbi (DRC) in 1952. He is a public health doctor and has a healthcare management doctorate from the University of Tulane/USA. He was the Director of the public health school in Kinshasa and was consultant for the World Bank in Sudan. He is coordinating the Health Economics program at the ESP in Kinshasa.
Mushagalusa Pacific, born in Bukavu in 1973 has a Master's in Public Health and Health Economics. He is coordinating the PBF programs in South Kivu Province including health, education and rural development programs.
Ndayishimiye Juvenal is a public health doctor and currently director of the Bubanza province CDV Agency organization, one of the first in Burundi. Working for Cordaid he has participated in several PBF training courses in the Great Lakes region.
Nkunzimana Canut, is a public health doctor since 1997, Director of AAP Makamba, following the experience of the PBF since its launch in Rwanda in 2002. Trainer on the PBF since the launch of this system to Burundi.

Ntabuyantwa Claude, is a doctor from DRC with a master's degree in public health from Belgium. He was district medical officer for 8 years in DRC and since 2008 Director of the Agency's purchase of Shabunda CDV Agency organization in Shabunda – South Kivu. He initiated the first multi-sector PBF programme in DRC which included health, education and rural development.
Ntiroranya Astyanax Didier, born in 1973, in Burundi. He has a university degree in economics and a postgraduate degree in health economics. He was coordinator for health within the Ministry of Plan in Burundi. He is since 2008 director of the Ruyigi & Karuzi provinces Fund Holder organization and for Cordaid one of the PBF course facilitators.
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Peerenboom Peter Bob, was a medical practitioner in Cameroon (1976-1985). He has a waster's degree in Public Health (1989) and Business Management (1991). He is currently consultant (Tangram ETC) in the Netherlands and francophone Africa (Crystal ETC). His work focuses on the health financing (pre-payment schemes and PBF) institutional strengthening of health services.
Queffelec René, is a project manager, an expert in social marketing and communication. He works for EPOS Health Management in several countries in Africa and Asia.
Schoffelen Ernest has a Master's in Human Nutrition from Wageningen University. He started his career at the Wageningen International Agricultural Centre. He worked for 12 years for UNICEF in Bolivia and Indonesia before joining Cordaid in 2005. Since 2009 he is involved in PBF.
Soeters Robert, has a PhD in public health and health economics and has worked for 15 years on PBF in several countries in Africa and Asia. His work concerns the PBF advocacy, conducting baseline and evaluation studies and he is the coordinator for the PBF courses.
Tsafack Jean Pierre, is a public health doctor and working for UNFPA, Cameroun. He also initiated the first PBF program in Cameroon in the East Region.
Queffelec, René, is a project manager, an expert in social marketing and communication. He works for EPOS Health Management in several countries in Africa and Asia.
Van de Looij Frank, is a health economist (MSc) by education. He has worked as a consultant in several hospitals, focusing on the operational implementation of new financing instruments. After being an administrator in a Kenyan hospital, he joined Cordaid as a programme manager. He is now working for the Ministry of foreign Affairs in the Netherlands
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 mangers 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 in order to influence decision-makers using sometimes-unofficial procedures.

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

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

Memorandum of Understanding (MOU). This is a document developed by stakeholders, who have agreed on the outline of an issue. This may for example be to start a PBF intervention. It summarizes the discussions. The MOU is short (2-3 pages) and does not spell out details but mostly the main principles determining the future cooperation.

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 take into account professional and population-based demand but must also consider the limited availability of government and household resources.

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

Monthly activity report. This is a document prepared by providers summarizing the output indicators subsidized by the PBF program. It serves as a document that can be audited and is countersigned by the fund holder verification officer, the director of the 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 in order 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 an 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 a number of evaluation criteria. It is intended to stimulate providers under contract to improve the quality of their services. The bonus may for example be 15% of the subsidies already paid for the output indicators if the quality score is 100% and proportionally less when the score is lower.

Quality indicators: It is a qualitative measure of the results produced by facilities. One quality indicator is usually based on a number of composite criteria. Quality indicators (between 120-200) are more numerous than output indicators (around 20). Quality indicators are usually evaluated once per quarter. The 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 have to 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.