



Developing coordinated
public-private partnerships
and systems for financing
health in **Africa**

Experiences from Africa and India



AFRICAN DEVELOPMENT BANK GROUP



Public-private partnerships in healthcare financing and delivery offer significant opportunities for accelerated improvements in health service access in fast-developing economies such as those found in Africa. This book acts as a resource for countries in Africa seeking ways to leverage private actors in the achievement of public goals. It traverses the knowledge and experience of health-related public-private partnerships on two continents, Africa and India, to accelerate the transfer of knowledge in their accountable design and implementation. The book provides information on how to regulate and implement health-related PPPs using case studies from India and South Africa.

INDIA-AFRICA PARTNERSHIP
MADE UP OF THE AFRICAN
DEVELOPMENT BANK, HEALTH
SYSTEMS RESEARCH INDIA
INITIATIVE (HSRI) AND
THE UNIVERSITY OF THE
WITWATERSRAND

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ABSTRACT

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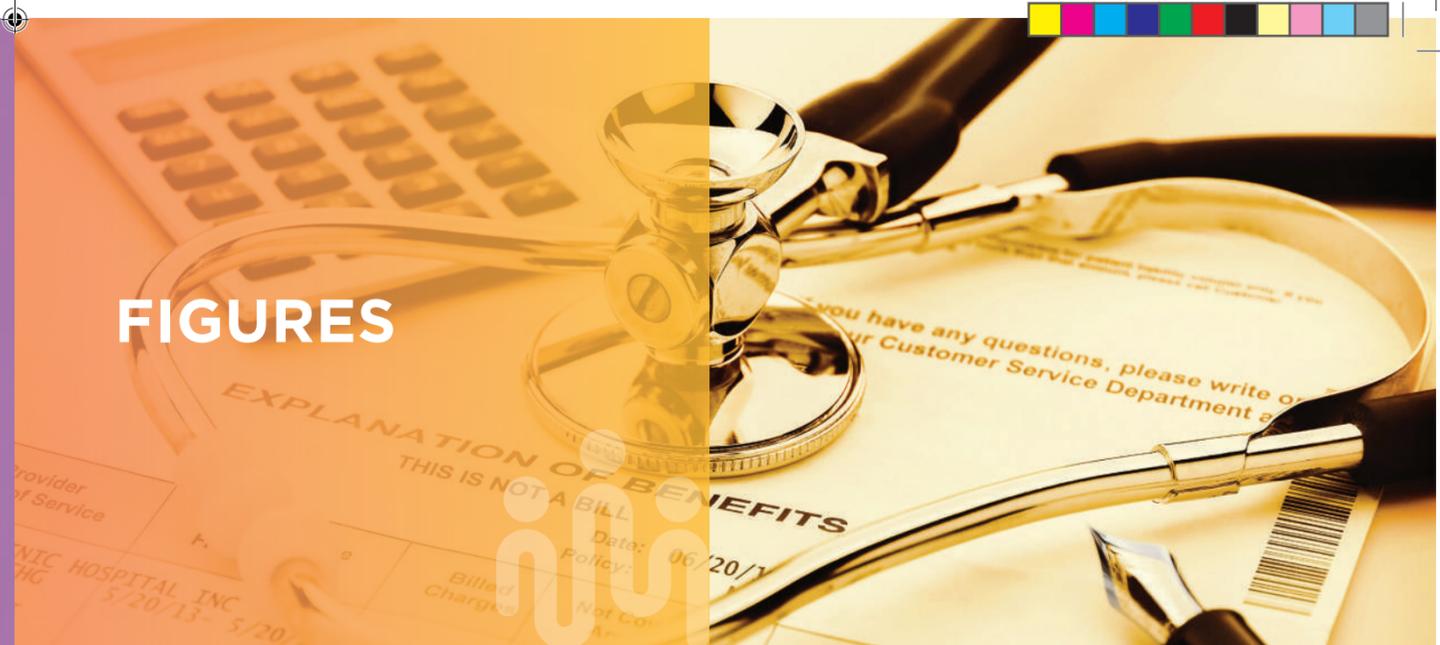
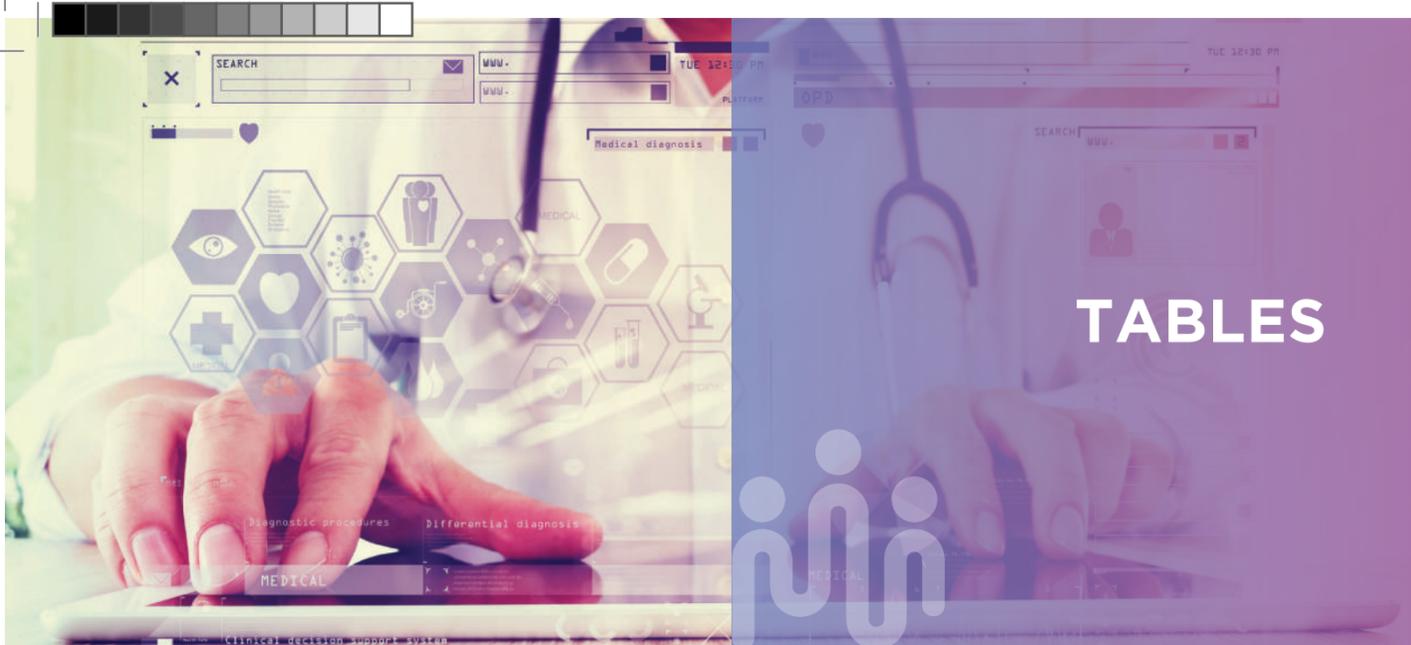


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FOREWORD



DR JENNIFER BLANKE

Vice-President, Agriculture, Human and Social Development,
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Improving the quality of life for the people of Africa is one of the defining priorities of the African Development Bank. And there are few things closer to the quality of life than public health.

Affordable and effective health services are a sign of sustainable and inclusive economic growth, as well as of stable, civilized and peaceful communities.

The challenges of delivering health services may in the past have been ascribed by most to public authorities but today is characterized in most African countries more by an accepted partnership between the public and private sectors working in agreed policy and regulatory frameworks, allowing both public and private approaches to investments in the health sector, and creating many opportunities for private sector engagement where the public sector falls short or cannot maintain the engagement without broader capacity.

The Bank provides support for policy dialogue and capacity development to enable private sector engagement in health service delivery and finance at the country level. Through collaboration underpinned by the India-Africa Partnership, the African Development Bank, together with the Health Systems Research Institute of India and the University of the Witwatersrand of South Africa, has collected together and here presents best practices in effective health public-private partnership (PPP) platforms, the result of a two-year program of health systems value chain reviews.

This publication illustrates the effectiveness of South-South cooperation as it draws on the experiences of India, South Africa and other African countries—Burkina Faso, Malawi and Zimbabwe—now piloting health PPP platforms as a result of this collaboration.

This book will be an important reference for other African countries looking for ways and means to harness PPPs to improve responses to national health priorities on the basis of sound regulatory and good governance principles.

Indeed, platforms for public-private collaboration in health will be critical to attaining the 2030 goals set by African countries to build the efficient health systems necessary for universal health coverage throughout the continent.



DEDICATION

This book is dedicated to Dr Varatharajan Durairaj, fondly known as Rajan, who as part of his functions at the African Development Bank, motivated for and set up the partnership. His untimely and tragic passing during the course of the project was a cause of great sadness both to those who had worked with him for many years in India as well as those who had come to know him only during his time at the African Development Bank. His wisdom and enthusiasm in the emerging field of health economics will be greatly missed – both in Africa and India.

Rajan was born in Pethanadarpatti, a village located in Thirunelveli district near to the southern tip of India. After completion of schooling in his native village; he pursued his undergraduate degree in mathematics at the Hindu College Thirunelveli and a postgraduate degree in econometrics from Madurai Kamaraj University. He further obtained a PhD in health economics from Indian Institute of Technology, Kanpur and was a Tekemi post-doctoral fellow at Harvard School of Public Health. He was awarded the Nick Prescott Prize by Asia Pacific Health Economics Network for his paper published during the fellowship.

He had an outstanding career as an economist and academician starting out at Madras Institute of Development Studies and Indian Council of Medical Research. He later joined Sree Chitra Tirunal Institute for Medical Sciences and Technology, an institution of national importance under Government of India; where he rose to the position of Additional Professor (Health economics and policy). During his tenure at the institute, a period of over a decade, he taught hundreds of students in public health and guided the doctoral research of several others, many of whom currently occupy senior positions in public health in India and with international agencies.

He also served as a health economist with World Health Organization in Geneva, Switzerland for several years before moving to the African Development Bank as Chief Health Insurance and Social Protection Officer in March 2015 and was based in Cote d'Ivoire. He passed away tragically in a car accident at Abidjan in August 2015 while serving at the bank.

Rajan is survived by his wife in India and his two sons who are pursuing their studies and careers in North America. He left behind a vast network of former colleagues, friends and students spread over India, Africa and other parts of the world. Rajan conceived of and was in the process of executing the "Developing Coordinated Public-Private Partnerships for Financing Health in Africa" project at the African Development Bank when he passed away. This book is an output of the project as envisaged by him.

ACKNOWLEDGMENTS

This publication represents the outcome of the India-Africa Partnership between the African Development Bank, the Health Systems Research India Initiative (HSRII) and the University of the Witwatersrand (Wits) based in Johannesburg, South Africa. The partnership was an initiative of the African Development Bank, which also took on the role of overall project manager.

A particular and special acknowledgment is also due to Dr Varatharajan Durairaj who, as part of his functions at the African Development Bank, motivated for and set up the partnership before his untimely death.

Many individuals have contributed to the making of this book. They include Prof Alex van den Heever (Wits) who acted as final editor and who also contributed the South African content. Health Systems Research India Initiative (HSRII), which coordinated and participated in the various workshops forming part of the activities of the partnership, also contributed expertise and content for all the Indian case studies provided in this publication. They also supported the development of the three African pilot proposals included in the book. The Health Systems Research India Initiative (HSRII) team included: Dr Muhammed Shaffi, Dr Ranjith Menon, Dr Subodh Kandamuthan and Arun B Nair.

We also express our sincere gratitude to the India-Africa Economic Cooperation Fund for funding the activities of the Partnership. We also acknowledge the important technical support and guidance received from the Public-Private Partnerships (PPP) Cell, Department of Economic Affairs (DEA), Ministry of Finance (Government of India) for conducting the project activities in India. The project activities and knowledge exchange visits would not have been taken forward without the support of Sharmila Chavaly, Joint Secretary (Infrastructure and Energy), DEA and Abhilasha Mahapatra, Director, PPP Cell, DEA, and Seema Jain, Deputy Director, PPP Cell, DEA who provided continuous guidance and support.

Certain technical inputs for chapters 3, 4, 10 and 11 made use of work performed by Maxwell Stamp PLC for the African Development Bank.

From the African Development Bank, a special thanks is owed to Bineta Ba-Diagne, chief health economist, who took over the project management of the partnership after the passing of Dr Varatharajan Durairaj. Thanks is also owed to support provided by Sunita Pitamber, the director of human development at African Development Bank, under whose oversight and ultimate direction this partnership fell.

In addition to the core team, a substantial number of delegates representing different governments in sub-Saharan Africa contributed toward the ideas contained in the book and the specific development of pilot proposals for their respective countries. Special mention is made of the following; from Burkina Faso: Dr Hien Diedon Alain, Sanou Alphonse, Dabire Gustave and Dr Martias Joshua; from Malawi: Arthur Kaviike Chiphiko, Lucius Chipendo and Dr Titha Dzwela; and from Zimbabwe: Dr Robert Mudyiradima, Jacob Gamu, Rolland Mlalazi and Lucy Mary Marowa.

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ABBREVIATIONS

ADB	African Development Bank
AIDS	Acquired immune deficiency syndrome
ALS	Advanced life support
BLS	Basic life support
BOT	Build, operate, transfer
BPL	Below poverty line (refers to programmes in India)
BW	Biomedical waste
CAT	Computed tomography
CBOs	Community-based organisations
CHAM	Christian Health Association of Malawi
DRG	Diagnostic related grouper
EMRI	Emergency Management and Research Institute
FASPB	Federation of Professional Associations of Private Health of Burkina Faso
FDHS	Fixed day health services
ffs	Fee-for-service
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross domestic product
GNI	Gross national income
HIHL	Advice Health Information Help Line
HIV	Human immunodeficiency virus
HLFPPT	Hindustan Latex Family Planning Promotion Trust
HMRI	Health Management Research Institute
HPV	Human papilloma virus
HSRII	Health Systems Research India Initiative
IAEA	International Atomic Energy Agency
ICT	Information and communication technology
ILH	Inkosi Albert Luthuli Hospital
KCH	Kamuzu Central Hospital
LDOH	Limpopo Department of Health
LPH	Lentegeur Psychiatric Hospital
MGHN	Merry Gold Health Network
MMUs	Mobile medical units
MOF	Ministry of Finance (South Africa)

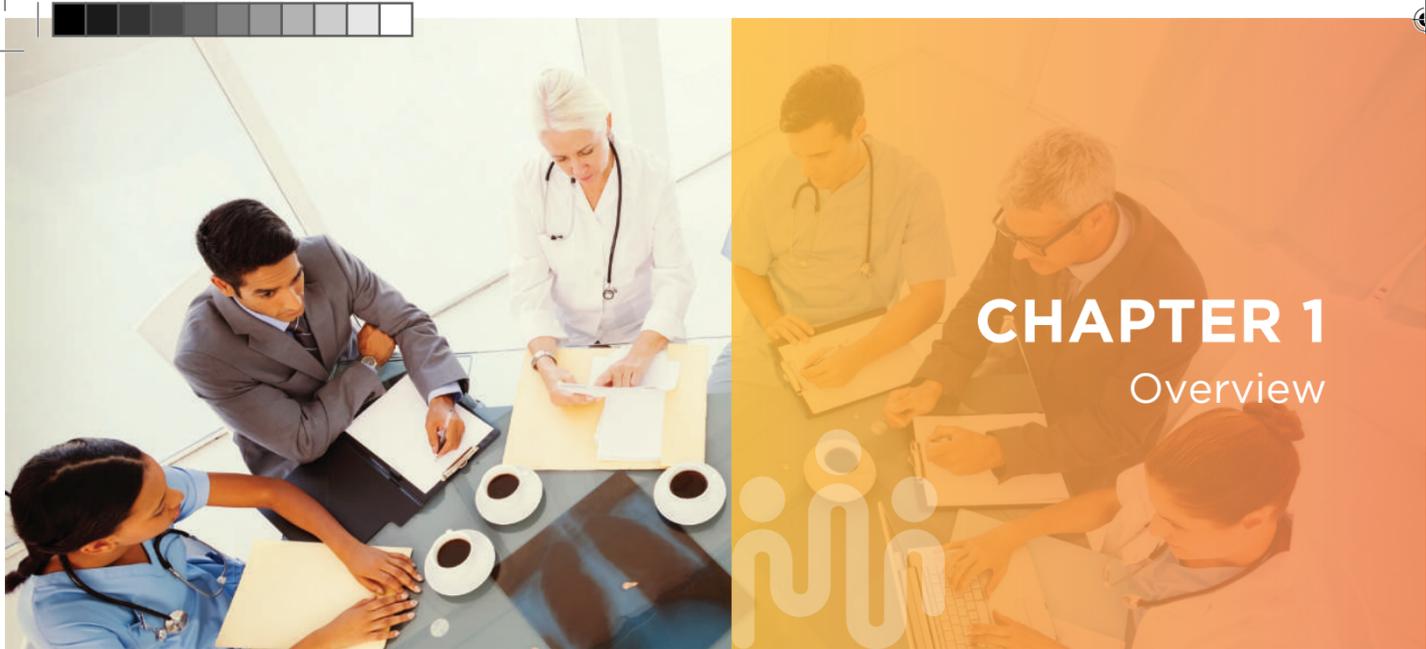
ABBREVIATIONS

MOH	Ministry of Health (South Africa)
MOHCC	Ministry of Health and Child Care (Zimbabwe)
MOHFW	Ministry of Health and Family Welfare (India)
MOHM	Ministry of Health (Malawi)
NACO	National AIDS Control Organization
NACP	National AIDS Control Programme
NBCP	National Blindness Control Programme
NCTC	National Cancer Treatment Centre
NGO	Non-government organisation
NMCP	National Malaria Control Programme
OFID	Oil Fund for International Development
OOP	Out-of-pocket
PET	Positron emission tomography
PFI	Public financing initiative
PFMA	Public Finance Management Act (South Africa)
PHCs	Primary health care centres
PPP	Public-private partnership
RCH	Reproductive and Child Health
RNTBCP	Revised National Tuberculosis Control Programme
RSBY	Rashtriya Swasthya Bima Yojana
SIFPSA	State Innovations in Family Planning Projects Services Agency
TTO	To-take-home
UHC	Universal health coverage
UNAIDS	United Nations Programme on HIV and AIDS
WCRC	Western Cape Rehabilitation Centre
WHO	World Health Organization

Chapters 1 to 4 provide context and background to health public-private partnerships (PPPs) in sub-Saharan Africa. First, background to the book itself is provided in **chapter 1**, including the overall approach and sources of information. Second, the important idea of universal health coverage (UHC) is reviewed in **chapter 2**, together with a high-level overview of the sub-Saharan health context and some discussion of the emergence of PPPs in health. Third, the concept of PPPs is probed in **chapter 3**, together with more detailed discussions on the case for PPPs in health and their potential strategic role for Africa. The enabling environment for PPPs is also examined to clarify the importance of institutional prerequisites for successful PPPs. Fourth, the institutional frameworks for successful PPPs are covered in some detail in **chapter 4**, with specific reference to the institutional architecture, regulatory frameworks and an overview of implemented health-related PPPs.

PART 1

Setting the scene



CHAPTER 1

Overview

INTRODUCTION

The idea of public-private partnerships (PPPs) for some conjures up the spectre of a private invasion of spaces that should appropriately remain the sole jurisdiction of public authorities of one form or another. Within the sphere of healthcare, access to which is universally regarded as a human right, private motivations for coverage or provision are treated with caution – often rightfully so.

For instance, a strong technical consensus exists that unregulated private health markets suffer from various forms of market failure that are ultimately harmful to the general welfare. First, competitive private insurance markets are incentivised to exclude sicker people from coverage, in particular those with pre-existing medical conditions. Second, lower-income groups, unable to afford insurance premiums or healthcare services, are excluded from access. Third, supplier-induced demand and excessive price escalation, accommodated by private insurers, causes costs to increase excessively and access to decline. Industrialised countries consequently regulate their private markets to ensure access and address market failures.

Despite these concerns, there is growing recognition that private markets offer opportunities for public authorities to improve service offerings. Private actors, whether for profit or not-for-profit, are advantaged by an ability to make operational decisions at their discretion, unlike many public-sector organisations. While this discretion may be exercised in favour of pure private goals when operating exclusively in the private sector, public actors are able to leverage off this discretion, and its resulting efficiencies, by contractually capturing the purely private goal and directing it towards broader social protection. At its simplest, therefore, the central objective of any PPP is to achieve public goals using private actors.

While it is possible in theory to replicate the advantages of private actors in public organisations through, inter alia, greater decentralisation and enhanced governance arrangements, this will depend very much on the context. Low-income developing countries may, for instance, experience capacity constraints related to public service remuneration structures that prevent the optimal deployment of suitably qualified staff.

Contractual agreements between public and private actors, therefore, offer opportunities for discrete interventions that do not depend for their success on generalised reforms of the health system. Where these are targeted at systemic weaknesses in the health system, they can achieve medium-term improvements in health systems performance long before generalised reforms become possible – or materialise.

It would therefore be a mischaracterisation of PPPs in healthcare, or any sector for that matter, to assume that they are an ideological intervention based on the belief that private actors always outperform public actors. They are instead now more widely understood as one approach amongst many to accelerate improved performance in an

affordable and sustainable manner.

The incorporation of private actors into the achievement of public goals cannot however ensure a successful intervention. Good outcomes depend on the accountability framework designed to support the partnership, the strength of which depends broadly on two features. First, the public authority must have a governance framework that ensures effective incentives exist to efficiently manage contracts; and second, the contract must be designed to achieve the desired public goals. To institutionalise good governance many countries have therefore implemented regulatory frameworks that not only support the development of PPPs, but also their implementation, monitoring and evaluation.

WHAT LIES BEHIND THIS BOOK?

As a research effort, this book is the outcome of a partnership, the India- Africa Partnership (Partnership), between the African Development Bank (ADB), the Health Systems Research India Initiative (HSRII) and the University of the Witwatersrand (Wits) based in Johannesburg, South Africa.

While the overall idea was always to explore the potential for health-related PPPs in Africa, the central question faced by the partners was how to achieve this. For instance, how would a project such as this succeed best in getting countries in Africa to consider and implement health-related PPPs where no prior experience existed and where private sector penetration may be low and, importantly, where financial capital and fiscal space may be constrained.

Table 1.1: Overview of the major activities of the Partnership



ACTIVITY	DATE
Inception conference held in Lilongwe, Malawi, which evaluated the sub-Saharan African context and reviewed case studies from India and South Africa. Case study inputs were provided by ministry of finance officials from India and South Africa.	26 to 28 March 2014
Conference in Thiruvananthapuram, Kerala, India. This conference offered detailed inputs and reviews of a wide range of PPPs implemented throughout India.	30 November to 4 December 2015
Annual meeting of the African Development Bank board of governors in Lusaka, Zambia. Here an overview of the work to date was provided together with an outline of the proposed book to ADB officials. This session allowed for technical feedback to the project partners in support of the way forward.	23 to 27 May 2016
Conference in Bengaluru, India. A selection of the case studies presented in the first India conference were visited by the African delegates responsible for developing PPP pilot proposals for their countries.	23 to 29 October 2016
Knowledge-exchange visit involving the project partners and the governments of Burkina Faso, Malawi and Zimbabwe in Johannesburg, South Africa. The purpose was to develop final pilot proposals for each country with technical support provided by Health Systems Research India Initiative (HSRII) and Wits.	24 to 28 January 2017



CHAPTER 2

Context for health public-private partnerships in Africa



The approach adopted by the Partnership was therefore divided into four activities. The first involved running international workshops where officials from interested African countries were presented with case studies on PPP approaches from India and South Africa. The second involved site visits for the participating African countries to Indian health PPPs in and around Bengaluru. The third involved the provision of direct support to interested African countries, in this case Burkina Faso, Malawi and Zimbabwe, to develop pilot project proposals. This took the form of technical advice offered by the research partners - Health Systems Research India Initiative (HSRII) and Wits. The final phase of this latter support included a week-long workshop in Johannesburg during January 2017 where all the project partners and participating countries collaborated to finalise pilot proposals. The fourth involved drafting specific studies, or economic and sectoral works (ESWs), for incorporation into the book. A process which ran parallel to the various conferences and workshops.

This book represents the culmination of the complete process carried out by the research partners and supported by the Indian Trust Fund and the ADB. The contents are derived from extensive international engagements, direct contact with health PPP implementers from both India and South Africa, and technical support for project development. The pilot project proposals contained in this book were, consequently, developed during the course of this project and are entirely the inspiration and work of the officials from those countries.

THE PLAN OF THIS BOOK

The content parts of this book are organised into four parts. The first deals with a conceptual and contextual overview of PPPs and their application within health systems and their role in achieving universal health coverage (UHC). It begins with a discussion of the concept of the PPPs, within the context of UHC, and why this can sometimes be viewed as problematic. In particular, the distinction between narrow and wider PPP definitions are discussed.

The second provides health PPP case studies from India and South Africa outlined in the various conferences and workshops carried out as activities of the Partnership. The case studies chapters provide comparative information on regulatory approaches, specific PPPs and health financing options using the private sector.

Part three focuses on specific health PPP pilot project proposals for three countries: Burkina Faso, Malawi and Zimbabwe. Each pilot was developed in accordance with a common guiding framework, which required presentation of: the context, the central problem to be solved, the rationale of why a PPP is best placed to solve the problem, the proposed approach, the distribution of risk between the public and private parties, the financial proposal, and the requirements for technical support.

Part four draws together insights emerging from the project as a whole and provides a generalised guideline for the successful implementation of health PPPs. This, together with an overview of the way forward for the development of health PPPs in Africa, concludes the book.

INTRODUCTION

Progress toward universal health coverage (UHC), a policy goal with near universal international acceptance, requires continuous improvement of two inter-related functions inherent to health systems – service delivery platforms and financial risk protection. While service-delivery platforms affect how services are supplied and managed, financial risk protection addresses how services are financed to achieve access for all. This chapter covers a part of this discussion, addressing, at a fairly high level, the sub-Saharan African health context together with the emergence of opportunities for health PPPs. Both issues are located within an understanding of UHC imperatives outlined in the first part of the chapter.

UNIVERSAL HEALTH COVERAGE

The idea of UHC has become well-established over the past few decades, largely through the work of the World Health Organization (WHO). To define more precisely what is understood by UHC, particularly with the purpose of moving beyond utopian aspirations of no immediate policy value, the WHO identifies two key elements of a health system that must be progressively satisfied to enhance coverage: first, access to good-quality services must be ensured; and second, access must be achieved by avoiding excessive financial hardship in paying for them [1]. The achievement of UHC is therefore plainly a goal which, for many (for now) low-income countries, will need to be realised over time through the careful design of health systems and the associated prioritisation of services to deliver.

The realisation of UHC typically involves combinations of different types of health systems (public delivery, social insurance and private schemes) and financing mechanisms (general taxes, payroll taxes and insurance contributions) that differ according to local social, economic and political contexts. Existing investments in service platforms and governance models also influence, and in some cases limit, the next steps that can be taken by a country. It is, furthermore, simplistic to assume that there are standard models that can be transferred from one country to another. Health systems are very complex and differ considerably between countries even where they are very similar in their levels of development. While certain technical solutions are potentially reproducible from one successful implementation into other country contexts, considerable local adaptation is necessary for success.

Health systems also evolve over time, with the simultaneous expansion of tax-funded public arrangements together with voluntary private health insurance and associated private healthcare providers. Where governments fail to adopt a UHC strategy, health systems are likely to become fragmented and unable to provide effective *pooling* for either *income* or *risk*, together with atomised and disorganised healthcare service arrangements.

Where governments fail to exercise appropriate stewardship, coverage gaps are inevitable regardless of a country's level of economic development. Assuming that UHC can only be achieved using one form of intervention, for instance, the expansion of the tax-funded segment of a health system, it is likely to prove counterproductive. Unregulated private systems can expand quite rapidly to cover certain classes of income earners, but ignore complete lifetime coverage (i.e. the old and chronically ill are shifted to the public system). They can also drive-up costs through problematic forms of reimbursement, such as fee-for-service (ffs), with probable implications for the public health system. Holistic strategies therefore encompass *both* the emergent public *and* private systems, rather than place excessive significance on one or the other.



A fairly standard nomenclature, usefully popularised via the WHO, has evolved around the concept of UHC, with the various elements of a strategy broken down into three components [2]:

1 Ultimate goals: which drive the policy objectives and regulation of a health system. There are three broad identifiable goals: first, health gain and equity in accessing healthcare services; second, financial protection and equity in finance; and third, ensuring that the service is responsive to users and the general public.

2 Intermediate objectives: which are essential to the achievement of the ultimate goals, require that policy address four broad areas: first, the continuous prioritisation of services in relation to social needs; second, ensuring that access is achieved efficiently; third, the implementation of mechanisms to ensure that service quality is optimised and maintained at all times; and fourth, that performance is subject to a governance framework that maximises the accountability of the health system to the country as a whole as well as to specific communities, users and patients.

3 Functions: which reflect the three main conceptual components of the health system that need to be subject to the intermediate objectives and ultimate goals. These involve: first, addressing how resources are generated for the fair funding of health needs; second, there is the financing system which includes revenue collection, pooling for income and risk, and the purchasing of health services in relation to a set of benefit entitlements; and third, there is the provision of health services.

Maintaining the integrity of the UHC strategy places an obligation on governments to apply effective stewardship to the design, maintenance and continuous improvement of health policies. The intensity with which any government complies with their stewardship requirements depends largely on politics or the wider governance systems that define the organisation and conduct of government. Where governments have no incentive to work in the public interest, due to the absence of effective democratic institutions, technical advice will often be of limited value to policy-making.

Stewardship failures also exist where policy-makers have insufficient technical understanding of the needed institutional frameworks that encompass the relevant health systems functions of all parts of a health system, public and private. Where, for instance, resource constraints substantially limit the reach of tax-funded components of the health system, universal coverage goals will require the implementation of mechanisms to ensure the efficient

pooling and purchasing of health services for income-earning families. Mechanisms include social insurance, income-based cross-subsidies, risk equalisation, mandatory membership, open enrolment and prohibitions against any discrimination on the basis of health status. Where private insurance remains voluntary and unregulated, the vulnerable will be structurally excluded and coverage gaps will arise or existing coverage will be undermined (e.g. tax-funded public systems, which are required to cope with income-earners, forced out of contributory coverage).

While high-income countries typically demonstrate a high degree of homogeneity in systems design, irrespective of whether they adopt a tax-funded or regulated private-market approach, developing countries ranging from low- to upper-middle-income are heterogeneous, with universal coverage dependent upon how well they manage a mix of systems within one country. Those countries that place considerable reliance for their coverage objectives on a single public scheme, or the private market, typically demonstrate very high levels of catastrophic out-of-pocket (OOP) expenditure. These OOP payments are in many instances the very coverage failures that health systems should be designed to eliminate.

Countries that embrace the heterogeneity of the health systems and adopt holistic strategies that combine public and private schemes should be able to provide seamless coverage across all social groups. However, achieving UHC goals across multiple schemes requires appropriate investments in health systems platforms with the capacity to work across both the public and private health sectors. Also, approaches to guarantee protection and benefits in a contributory system differ materially from those for tax-funded public schemes. These differences would need to be understood to achieve the intermediate objectives and ultimate goals of the system as a whole.

The achievement of UHC is therefore not confined to raising revenue from direct taxation alone, although this is a vital pillar in all health systems. Tax revenue is essential for structuring the vertical cross-subsidies (from high- to low-income earners), but is not necessarily central to the protection of income-earners. These mainly require access to efficient risk-pooling mechanisms. Risk pools, or insurance, transfer funds from those who don't need healthcare services today to those who do. Revenue-raising strategies that achieve universal coverage therefore combine conventional tax revenue with other forms of health-specific contribution - from payroll taxes, which are mandatory in nature, to private contributions, which can be mandatory, voluntary or both.

Robust revenue-raising strategies invariably rely on spreading the burdens of payment across multiple sources to ensure that the weaknesses of each are cancelled out by the strengths of each. For instance, tax revenue, which is generally progressive (i.e. taxes the rich more than the poor) discourages compliance when implemented at high rates, reducing how much can be raised in this way. General taxes are also not earmarked for health and any increases in tax rates or revenue will not necessarily find its way to the health function. Payroll taxes, which are often *proportional* (every contributor pays the same proportion of their income) and even regressive in nature (higher income groups pay a lower portion of their income), are however earmarked and generate an entitlement to benefits. Contributors are therefore more willing to pay as they see value in the contribution. Private contributions, which are often more regressive than payroll contributions, also promote a willingness-to-contribute based on the strong link to a benefit entitlement. There is therefore a willingness-to-contribute trade-off as revenue is more closely associated with a benefit (a positive), and an equity trade-off as contributions become less progressive (a negative). A holistic strategy therefore prioritises income cross-subsidies on that part of the system that serves families without adequate incomes and prioritises risk cross-subsidies on that part of the system subject to pooling failures, which principally affects families with adequate incomes.

Successful UHC strategies also depend on the prioritisation processes that determine which benefits are to be guaranteed in each setting and that ensure needed services are purchased efficiently. Neither of these activities is however straightforward. While the former is dependent on efficient policy processes that are able to address the minimum benefit requirements of heterogeneous health systems, the latter depends on the accountability mechanisms driving efficient and fair (to users) health service procurement, as well as the efficiency of health markets. In many developing countries, effective platforms or processes to determine benefits in any meaningful way do not exist and *purchasing* functions are vulnerable to corruption or, stated differently, to capture by private interests.

Health systems are also vulnerable to systemic cost increases, both in relation to health professionals and to the incorporation and proper use of new technology. Whereas the management of costs loosely falls within the functional concept of *purchasing*, a wide range of policy interventions are directly and indirectly relevant. These include, *inter alia*, well-designed regulation (which also depends on the implementation of properly capacitated and independent regulatory authorities), centralised negotiations, administered prices, technology review, transparency of performance and conventional procurement approaches. In the absence of structural interventions aimed at stabilising cost distortions, available revenues will buy less each year. Inefficiently purchased health services and/or products will also crowd out needed purchases.

The achievement of UHC in developing country contexts consequently requires implementation of institutional capabilities to efficiently manage the functions of revenue raising, pooling, benefit design, purchasing and provision across heterogeneous health systems. Internationally, no consistency of approach exists, however, despite many successes associated with particular health system components and discrete interventions (particularly in relation to highly vulnerable groups). Nevertheless, developing countries do offer a wide variety of experiments in health systems reform that can inform countries that are heavily committed to UHC as a goal.

HEALTH CONTEXT FOR SUB-SAHARAN AFRICA

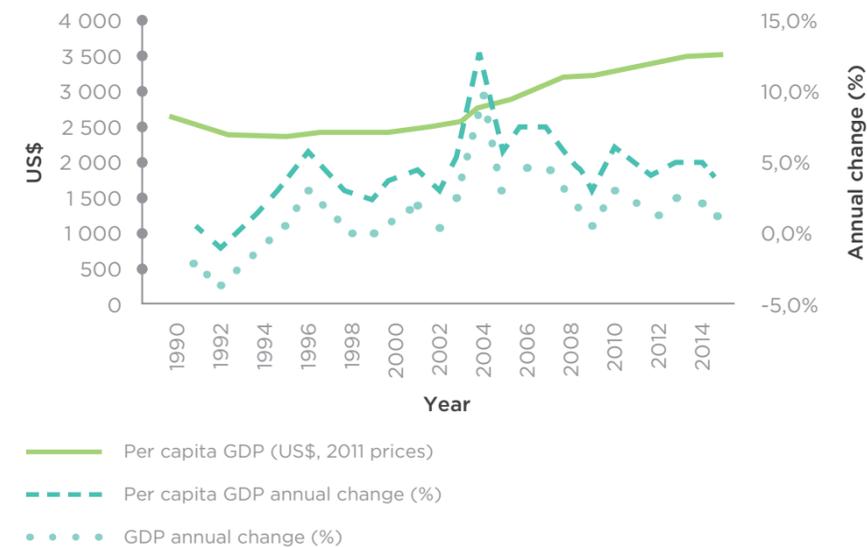
Economic overview

Sub-Saharan Africa has experienced long periods of sustained economic growth from the mid-1990s. Some African countries also experienced some of the fastest growth rates in the world over the past one-and-a-half decades. At a regional level this can be attributed to a number of positive developments which include improved governance, reduced levels of conflict and a boom in commodity exports and associated prices [3, 4]. While overall growth has been relatively high, when adjusted for population change the region has however only seen meaningful improvements from around 2002 (Figure 2.1). While growth slowed in 2016, due mainly to a bottoming out in the commodity cycle and a slow world recovery from the 2008 economic recession, the future growth outlook remains very positive.

Questions however remain about the extent to which the region's economic growth is sufficiently inclusive, with implications both for development and social stability. Inclusive growth depends for its success on government interventions in the form of social services and protection. Their expansion is in part made possible by the fiscal space resulting from economic growth, and the improved growth potential arising from inclusive growth strategies [5]. Improvements in health systems and services are therefore expected to be an ongoing challenge for the decades to come, with the potential for significant annual improvements. Health departments in sub-Saharan Africa are therefore faced with the need to anticipate dynamic changes in both social and economic conditions together with significant improvement opportunities.



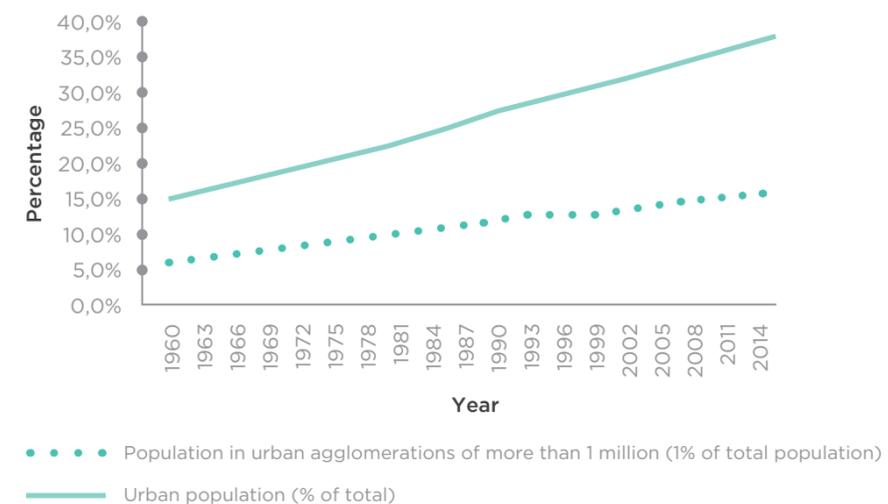
Figure 2.1: Sub-Saharan Africa, economic growth [6]



Social conditions

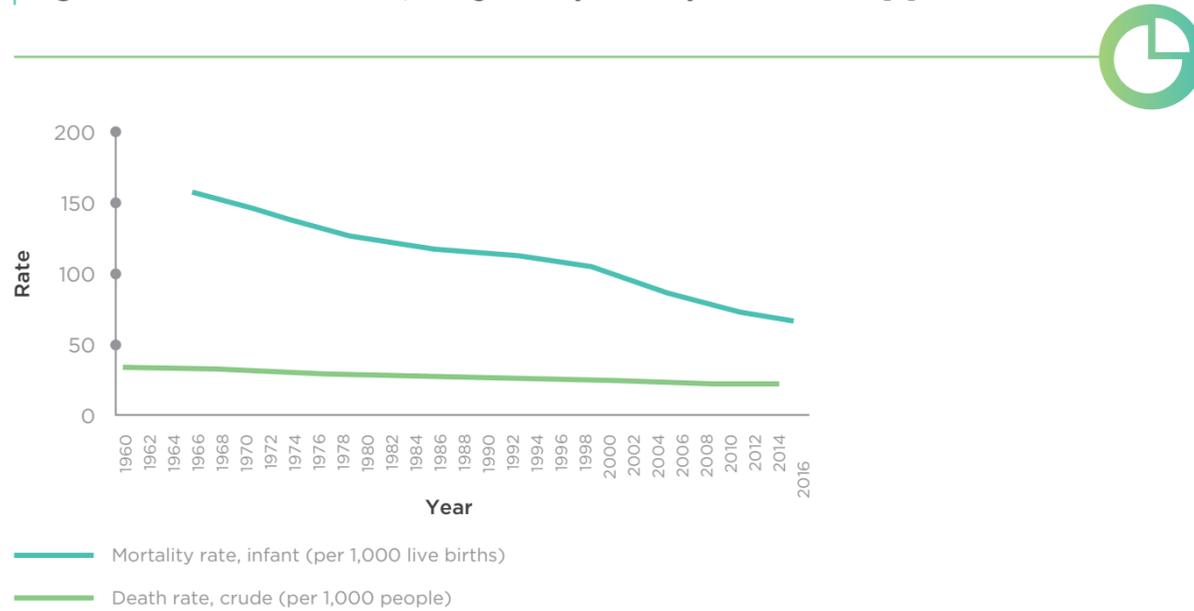
One substantial change in social conditions directly arising from economic change is the migration of populations from rural economies into the rapidly advancing urban economic centres. Over the period 1990 to 2014, the population in urban areas within the region increased from 15% of the total to nearly 40%. Around 15% of the region's population now resides in urban agglomerations of more than one million people. These trends are systemic and will continue at the same levels for the next 20 to 30 years. (Figure 2.2)

Figure 2.2: Sub-Saharan Africa, population in urban agglomerations of more than 1 million (% of total population) [6]



The region is therefore characterised by continuous and rapid cultural, economic and social change which will persist over the long term. Governments are therefore planning for change rather than stability. Urban environments consequently require constant adjustment and improvement to cater for the impending mass urbanisation. In the absence of effective stewardship, long-term weaknesses in social cohesion and economic infrastructure are likely to emerge with inevitable implications for poverty, inequality and sustainable development. While improved socioeconomic conditions and access to health services, as indicated by infant and crude mortality rates, are positive developments over the period 1960 to present (Figure 2.3), these may however not embody equivalent improvements in well-being, which may in reality be negative in some countries due to the unequal nature of growth and the extensive social disruption inherent in the urbanisation process.

Figure 2.3: Sub-Saharan Africa, changes in key mortality rate indicators [6]



Health systems

Most countries in sub-Saharan Africa fall significantly short of UHC goals. For the region as a whole, public health expenditure levels are low, at around 2.3% of GDP, with most expenditure either out-of-pocket (OOP), about 1.3% of GDP, or in some form of unregulated voluntary insurance (1.9% of GDP). There are also substantial variations in these parameters within countries. The relatively high levels of private expenditure, although consistent with the growth of income earners, does not reflect improvements in the goal of UHC. While private unregulated voluntary health insurance excludes people of poor health status and low-income groups, OOP expenditure involves catastrophic expenses for poor and middle-income families [7, 8]. Access is generally fragmented and weak, with only high-income formally employed employees and public servants afforded adequate coverage. Even those who have access to insurance cover will face coverage concerns at crucial stages of their life path - with retirees often excluded from coverage.

Figure 2.4: Sub-Saharan Africa, health expenditure as a percentage of Gross Domestic Product [6]



The challenge facing policymakers in the region, therefore, is to harness the emerging systems to make them offer fair and affordable access. In some instances, as has been experienced in South Africa, private sector costs have become a problem for access, even in the face of regulatory measures to remove discrimination on the basis of health status [9]. This is discussed further in chapter 6.

THE EMERGENCE OF PUBLIC-PRIVATE PARTNERSHIPS IN HEALTH

The achievement of UHC can involve PPPs when seeking to achieve improved health service performance and related access (see case studies in chapters 5 and 6), as well as improved financing both through regulatory interventions of various forms (see the South African case study 4 in chapter 6) and the establishment of specific financing vehicles (see the Indian case study 1 in chapter 5). The contribution made by PPPs to UHC could therefore either take the form of discrete service improvements or apply to broad strategic interventions. The feature common to all, though, is that the goals are always public in nature, but involve the private sector in their achievement.

Much of Africa is however experiencing rapid economic growth while health systems remain poorly developed. This in many instances is due to: the absence of well-structured and coherent policies and strategies, weak regulatory systems, sluggish public and private investments that also don't fully align with national plans, insufficient investments on high-impact interventions and institutions, poor infrastructure, an inadequate focus on results, inappropriate procurement and management practices, insufficient workforce planning and development and unbalanced relationships between public and private systems [3].

Rapid economic growth however gives rise to the natural expansion of private health systems, usually unplanned and uncoordinated, where public systems and interventions are unable to cope with the rising demand for healthcare. Many countries in sub-Saharan Africa are required to confront the need to shape their health systems to include private systems in the achievement of public goals. In the absence of coordination with public systems, private health arrangements have little option but to serve a paying public, often on an OOP basis, limiting their potential for delivering social value. There is also some risk that sub-Saharan African countries may lose out on some important opportunities to efficiently expand health coverage where private health insurance and services are restricted to high-income groups, large corporates, and (in the case of voluntary insurance) to the young and healthy.

The idea of integrated public and private health systems can be captured within the notion of *public-private partnerships* (PPPs) in the following two instances: first, through the architecture of a national or regional health system where private systems are supported and regulated to achieve public outcomes; or second, at facility level (hospital or clinic) to achieve operational efficiencies or to raise investment capital. To date, however, there has been little in the way of systematic reviews of PPPs in the health sector in sub-Saharan Africa, nor any comprehensive studies on how they could enhance the performance of government health strategies.

Public-private partnership strategies and projects can broadly fall into addressing the following thematic areas [3]:

- 1 The PPP institutional framework, which deals with the specific institutional requirements for operationalising PPPs;
- 2 The financing of infrastructure (such as hospitals and information and communication technology [ICT] platforms);
- 3 The financing of health inputs (medicines and human resources including medical education); and
- 4 The strategic use and regulation of health insurance arrangements to achieve public purposes.

The success of a PPP is not measured by the number of transactions, or even the amount of private investment generated (though that is often the proxy used for development impact). Rather, the objective that makes most rational sense is to expand and improve the quality of services for defined populations at an affordable and economically efficient cost.



CHAPTER 3

Concept of and rationale for public-private partnerships

INTRODUCTION

As noted in chapter 2, PPPs involve a wide spectrum of potential interventions – from strategic financing through to one-off projects. The achievement of public goals through the use of private markets and actors requires that government platforms completely understand how contractual and regulatory frameworks are developed and managed. Once internalised, state actors will be in a strong position to expand the range of health policy instruments at their disposal.

There are many ways to systematically improve the performance of health systems in all countries. These include *inter alia*: re-shaping a systems architecture¹, improving governance through properly designed laws, transparency requirements, independent oversight and compliance regimes², and improved financing and resource allocation. Public-private partnerships do not replace any of these strategies and are most effectively used to deepen such responses or to accelerate performance improvement in specific areas.

Given the wide application of PPPs, there is value in the development of a working definition that has practical policy applications. This chapter has three objectives: first, a working definition of PPPs is discussed and proposed; second, a case is made for health-specific PPPs; and third, strategic opportunities for health PPPs in sub-Saharan Africa are proposed.

PUBLIC-PRIVATE PARTNERSHIPS – A DEFINITION?

Given the wide spectrum of arrangements that governments can enter into with private sector entities, a distinction can at the very least be made between the class of contract that embodies the idea of a partnership as opposed to arrangements that involve mere outsourcing or contracting-out. While it can be argued that it is difficult, and potentially counterproductive, to offer a forensic distinction between the two, the risks and complexity of the resulting contract will be quite different. Two approaches toward a definition are presented below.

The first sets store on the intimacy of the private party's involvement in the achievement of a specified public policy objective.

¹ Many systems are inefficiently structured, with certain functions over-centralised. Correcting the mix of centralised and decentralised functions is therefore an important driver of improved service delivery.

² Accountability failures are one of the most important areas driving inefficiencies and corruption in health systems. Improved performance is therefore predicated on governance reform.

“Public-private partnerships are ongoing agreements between government and private sector organizations in which the private organization participates in the decision-making and production of a public good or service that has traditionally been provided by the public sector and in which the private sector shares the risk of that production.” [10]

The second perspective however stresses three different conditions for an arrangement to be regarded as a PPP [11]:

- First, the private partners are responsible for financing;
- Second, multiple tasks (financing, construction, operations) are assigned to the private party or consortium; and
- Third, the private party operates the facility.

While the first approach stresses partnership-type features such as “ongoing agreements,” “participates in decision-making,” and “shares the risk”, the second focuses on functional aspects of the contract, such as the bundling of financing, construction and operations. The second definition arguably implies an increased sense of partnership arising indirectly from the scale of the contract, while the first explicitly lists those aspects that enhance the idea of a partnership.

In both these views the central idea of a *partnership* serves to narrow the spectrum of public-private contracts that could fall within the definition of a PPP. Procurement arrangements involving payments for specific goods and/or services (such as the provision of a laboratory test result, cleaning of laundry items or the construction of a facility) therefore do not convey a sense of partnership and are logically excludable from the concept. Partnership-type contracts are therefore argued to involve a contractually-embedded shared responsibility for the achievement of a defined public purpose rather than the simple delivery of a product. The idea of shared responsibility is often achieved through an explicit (i.e. contractual) and significant level of shared risk.

The South African PPP manual [12] offers an example of this approach through the incorporation of definitions that explain both what a PPP *is* and *is not*.

“... ‘public private partnership’ or ‘PPP’ means a commercial transaction between an institution and a private party in terms of which the private party –

- (a) performs an institutional function on behalf of the institution; and/or*
- (b) acquires the use of state property for its own commercial purposes; and*
- (c) assumes substantial financial, technical and operational risks in connection with the performance of the institutional function and/or use of state property; and*
- (d) receives a benefit for performing the institutional function or from utilising the state property, either by way of:*
 - (i) consideration to be paid by the institution which derives from a revenue fund or, where the institution is a national government business enterprise or a provincial government business enterprise, from the revenues of such institution; or*
 - (ii) charges or fees to be collected by the private party from users or customers of a service provided to them; or*
 - (iii) a combination of such consideration and such charges or fees ...”*

“What a PPP is not?”

“The way that a PPP is defined in the regulations makes it clear that:

- a PPP is not a simple outsourcing of functions where substantial financial, technical and operational risk is retained by the institution*
- a PPP is not a donation by a private party for a public good*
- a PPP is not the privatization or divestiture of state assets and/or liabilities*
- a PPP is not the commercialization of a public function by the creation of a state owned enterprise*
- a PPP does not constitute borrowing by the state.”*

The South African definition is driven by a regulatory imperative, which is to specify in law which arrangements should follow the procurement processes attached to PPP projects. It therefore clarifies which public-private partnerships are to be caught in the PPP-net.

By way of contrast, the Indian government combines certain functional aspects together with the idea of risk sharing.

“Public Private Partnership means an arrangement between a government / statutory entity / government-owned entity on one side and a private-sector entity on the other, for the provision of public assets and/or public services, through investments being made and/or management being undertaken by the private-sector entity, for a specified period of time, where there is well-defined allocation of risk between the private-sector and the public entity and the private entity receives performance-linked payments that conform (or are benchmarked) to specified and pre-determined performance standards, measurable by the public entity or its representative.” [13]

All the definitions discussed thus far have in common a transactional approach to the idea of partnership. The various parties are expected to deliver in accordance with explicit obligations listed in a contract.

The transactional approach to PPPs can however be criticised on the basis that partnerships imply commitments that go beyond any contract [14]. In this thinking, partnerships stress collaboration, where the achievement of the selected public objectives or goals are *joint* rather than limited to a list of stipulated contractual outputs.

“A further corollary of the public governance perspective is that performance should be judged at the level of the partnership, rather than simply at the level of the agency. Asking each individual partner to account for its contribution to the partnership, and whether it is getting ‘value for money’ from these contributions, is highly dangerous – it is like separating out the roots of a plant to see which is contributing most to the health of the plant, with the consequence that the plant is significantly weakened. Once each agency has to account in public for whether it is getting more out of a partnership than it is putting in, the relationships in the partnership are endangered. It is more appropriate that agencies should be held to account for whether the partnership is itself working successfully and whether the agency might do more to contribute to its success.” [14]

A deeper sense of partnership is therefore achieved where partnerships are regarded as collaborative rather than transactional (limited to the contract), and accountability for the achievement of wider public objectives are joint in relation to external stakeholders.

Aside from partnership features of a PPP, they are also characterised by the allocation of significant autonomy to the private party as to how they go about achieving their contractual obligations [15].

Broadly speaking, therefore, the various PPP definitions seek to clarify an emerging class of public-sector contracts that involve private parties more intimately in the achievement of specified public goals. While no watertight definitions exist, two features appear relevant to a pragmatic approach: first, the arrangements need to be significant in scale and involve multiple (bundled) tasks; and second, there should be a well-designed sharing of risk between the relevant public and private parties in the achievement of specified public goals. It is the latter feature that conveys the idea of partnership, at least in a transactional sense, while the former assists in excluding minor contracting-out agreements. While it is accepted that collaborative partnerships represent a valid alternative to purely transactional approaches, it is not precluded from the above definition which allows for both.

THE CASE FOR PUBLIC-PRIVATE PARTNERSHIPS IN HEALTH

At its simplest, the argument for PPPs can be stated as an attempt to improve the performance of public institutions where conventionally organised public-sector institutions face structural impediments to maximising efficiencies. A fault with this approach, however, is that the idea of partnerships in a public-sector context imply they are necessary to resolve fundamental and unresolvable deficiencies with public-sector delivery. In reality, equivalent *private-private partnerships* (not counting anti-competitive arrangements designed to capture and exploit market power) are also implemented where the collaboration is mutually advantageous. Such partnerships are largely driven by questions of efficiency [15]. The choices for a private-private approach are, typically; full in-sourcing, a merger or a partnership. While an efficiency objective dominates in a private-sector context, public entities face certain challenges unique to their role in resolving complex social problems.

Unlike private for-profit companies, public organisations are typically faced with the need to achieve complex and sometimes conflicting social outcomes, some of which change relative to each other over time due to the movement of social and economic factors outside of their control. The implicit contract between public actors and society at large is therefore constantly in motion.

For instance, a public hospital has an obligation to respond to all the medical demands and needs of a community (and often beyond any specified community). People must be treated regardless of their ability to pay and (in many instances) citizenship. Consideration must therefore be given to medical conditions that pose a risk to the presenting patient (e.g. a heart attack) and those that pose a wider threat to the community (e.g. infectious diseases). The strategic service mix must therefore be constantly re-evaluated to decide between preventive rather than purely curative approaches.

A private for-profit hospital, by way of contrast, focuses principally on profit maximisation and may be happy to prioritise responses for acute patients where this optimises revenues relative to fixed costs. The health of a community is not their responsibility. A private for-profit facility would not need to internalise complex social concerns unless compelled to do so by government legislation. A profit-oriented hospital can therefore be regarded as efficient in the pursuit of a narrow range of fixed goals, but inefficient in addressing the wider social concerns that typically fall into the remit of a public hospital.

A partnership would therefore make sense when the efficiencies of a private actor's narrow goals could be incorporated into the complex goals of a public organisation.

The general case for partnerships could therefore arise for the following reasons.

- First, certain **narrow specialised tasks** could usefully be contractually allocated to a private party, the performance of which is normally disrupted in the public organisation due to their complex and changing priorities. The contractual nature of the relationship therefore serves to insulate the activity from the kind of unavoidable disruption faced by public organisations.
- Second, **scale advantages** could be achieved where, for instance, a large high-technology business, with a large platform supporting multiple private companies, is able to offer better value at lower cost than would be possible for a public (or private) organisation attempting to insource the function [14, 15].
- Third, **economies of scope** are possible where the different capabilities in partner organisations can be accessed and used across the partnership. For instance, specialised accounting, legal, marketing and clinical skills may be present in the one partner but not the other [14, 15].
- Fourth, **mutual learning opportunities** can be accessed where more advanced partners can accelerate a catch-up in business practices and the use of technology [14].
- Fifth, efficiency gains through time can be captured from the **competitive bidding process** used to allocate and re-allocate a contract [15].

Aside from the first rationale, all the rest would also apply to the decisions private organisations ordinarily make to engage in partnerships and are therefore not especially tied to the *publicness* of an enterprise. In some senses, therefore, PPPs could be regarded as a normal opportunity for any organisation, public or private, to improve performance. The only special consideration for public organisations is the complexity of their goals and the fact that they cannot typically access some of the advantages of a partnership by way of acquisition. They are therefore limited to insourcing, contracting-out and PPPs, with the appropriate option based on a case-by-case assessment.

STRATEGIC ROLE FOR HEALTH PUBLIC-PRIVATE PARTNERSHIPS IN AFRICA

Areas of concern for sub-Saharan African health systems

Building on the regional context outlined in **chapter 2**, there is a need to identify specific areas where PPPs could play a useful role in the ongoing improvement of rapidly-evolving health systems. It is important not to see health systems in sub-Saharan Africa (or anywhere else) as static reflections of disorder or failure. In almost all instances, health systems are on a developmental pathway that could be achieving objectives slower or more rapidly than permitted by the relevant context. Regardless of any current state, the ground is always shifting and both opportunities and dangers need to be confronted at all points in time.

Within this context, Maxwell Mkwezalamba, the Minister of Finance for Malawi, outlines the following areas that currently hinder the development of health systems in sub-Saharan Africa [3]:

- Insufficient investments in high-impact institutions;
- Inadequate regulatory regimes;
- Poor infrastructure;
- Inappropriate management practises;
- An inefficient balance of workforce between public and private sectors;
- A rising demand for healthcare beyond the capacity of public systems;
- Limited studies performed to improve healthcare;
- Constrained budgets; and
- An expansion of unplanned and uncoordinated health systems.

He argues further that states have an obligation to provide adequate, quality healthcare to the population, but in the absence of coordination between public and private partners, private institutions can only serve the paying public and therefore African countries are losing out on available and efficient services which could be extended to the general public. Governments alone therefore cannot achieve efficient healthcare delivery. However, of concern is the fact that, presently, institutional frameworks often do not exist that allow the private sector to work with the public sector and there is, consequently, a need for structures, regulatory frameworks and policies for the two parties to work together.

The central challenge posed, however, is the need to confront impending change within the context of severe medium-term fiscal and capability constraints. While these could be argued to be perennial concerns on all continents, the consequences for sub-Saharan Africa may be greater given the confluence of factors impacting at this point in time.

Thematic areas for public-private partnerships

In the opening conference forming part of the process resulting in this book, participants identified six thematic areas where PPPs could prove valuable in sub-Saharan Africa [3]. These were adopted after consideration of the regional context, engagement on the nature and purposes of PPPs and a review of case studies from India and South Africa.

- **Governance:** Health systems depend on the quality of governance arrangements for the achievement of enhanced performance. Health-related PPPs can both target supporting general governance improvements and themselves offer strong governance regimes via contractual frameworks.
- **Infrastructure:** Such interventions seek to integrate the capitalisation of infrastructure with its maintenance through a degree of risk-sharing between the public and private-sector partners. The bundling of inter-related infrastructural requirements offers the opportunity for the long-term efficient management of major public-sector assets through an internalisation of the appropriate distribution of spending (between the recurrent and capital budgets) and contractually transferring the management risk to a contractor/partner. More generally, if properly managed, private-sector inclusion in infrastructural projects may result in the provision of additional capital for the construction of health facilities, important efficiency gains and better outcomes – all in a shorter timeframe than would otherwise be possible. They can also stimulate the development of financial markets and improve the business environment.



● **Technology:** Health systems are dependent for good performance both on the efficient use of health technology and the accountability and management of benefits arising from the appropriate development and use of information technology and communication (ITC) frameworks. Exploiting potential in this area however needs to be carefully managed. The focus should be on maintenance contracts and maintenance strategies.

● **Inclusive financing:** This can involve health-system-wide PPPs, typically incorporating the alignment and strategic use of public and private systems of financing, including both health insurance and service provision, to achieve the most efficient use of health resources. Interventions include mechanisms to deliver strategic subsidies and cross-subsidies.

● **Health inputs:** This includes approaches required to achieve the reliable and sustainable management of essential inputs needed for the ongoing operations of health services. This includes: workforce (education, training, retention and access), including those working in the private sector; and medicines, which includes joint manufacturing, logistics (ordering and distribution), and dispensing, which can include contracting options (for hospital dispensary management), the incorporation of retail pharmacies (by permitting the dispensing of publicly-procured medicines through private retail pharmacies), and direct distribution (via postal arrangements) to households of prescribed medicines.

● **Service management:** This includes the contracted use of private-sector management teams to operate major public-sector facilities – such as hospitals or other discrete operations. Here, a third-party contract can internalise the achievement of a minimum standard of management where difficulties are generally experienced maintaining such teams by way of standard employment contracts.

ENABLING ENVIRONMENT FOR SUCCESSFUL PUBLIC-PRIVATE PARTNERSHIPS

To ensure that PPPs are properly prioritised (subject to budgetary constraints) and replicable where useful, appropriate institutional investments are required. Where the expertise to create and evaluate project proposals is absent, viable projects cannot make headway. Frameworks which are able to regulate the preparation and implementation of PPPs should therefore be considered.

Institutional mechanisms are for instance in place within India and South Africa to analyse potential PPP projects and to standardise documentation and processes. This accelerates the appraisal process, which would otherwise obstruct worthy projects. Capacity-building exercises are also important to enable the efficient design, implementation and managing of the projects and government support mechanisms. Where community participation is central to the success of a project, means must be created for communities to participate in the process of project development and implementation.

Enabling environment

Both India and South Africa have implemented enabling environments to support the accountable development and implementation of PPPs. In both instances these have catalysed the implementation of a wide range of major projects, a significant portion of which fall into the health sector. In both countries, interventions include the implementation of national PPP units located in the ministries of finance. These units then support the implementation of projects within client departments and states/provinces [3].

Taking these practices into account, an important intervention for sub-Saharan Africa to consider is the establishment of PPP Cells, or units, which would be responsible for policy, schemes, programmes, capacity-building and matters relating to mainstreaming PPPs. Within India, PPP Cells operate at both the national and state levels. State-level cells are the most active in developing health-related PPPs. Based on both the Indian and South African experience, appropriate enabling interventions can include [3]:

- **Policy and regulation:** PPPs are a marriage of two functionalities and thus a regulatory actor has to exist to govern the PPP project;
- **Financing:** leveraging of private funding to a certain level to ensure that it is sustainable;
- **Capacity building:** setting up of PPP Cells in governments which have regular workshops on related issues;
- **Shelf of bankable projects:** it is important to store and evaluate a range of projects that could benefit from a PPP approach; and
- **Advocacy:** have a website with all information and processes on projects.

Enabling interventions

In addition to the enabling environment, further interventions can be considered which can be used to lower the barrier some projects may face in moving from conception to implementation. India provides a useful checklist [3].

- **Standardised documents:** which ensure a proper and ongoing understanding of contractual obligations and project requirements.
- **Training tool-kits and handbooks:** which help in the design and development of a project (it is for instance useful to have a checklist against tool-kits and handbooks to determine if the project can actually be done).
- **Appraisal committee:** in India an appraisal committee has been set up to fast-track the appraisal and approval of PPP projects for all sectors.
- **Project development fund:** can be used to finance the project development of potential PPP projects. This would include the cost of engaging consultants and transactions advisors. Government is then able to make informed decisions based on the feasibility reports the fund provides.
- **Viability gap funding scheme:** financial support could be made available for certain projects which have significant social implications but require a partial subsidy to be viable. This takes the form of grants up to 20% of the total cost of a project.
- **Development bank:** can play a catalytic role in the infrastructure sector by financing bankable infrastructure projects.
- **PPP capacity building:** can occur through multipronged interventions and support mechanisms which include technical assistance programmes from bilateral and multilateral agencies.

Public-private partnerships involve a great deal of expertise in the form of consultants and experts, the private sector and lawyers. Project success is therefore also often dependent on the champion who owns the project and can actually see it through [3].



INTRODUCTION

The frameworks required for the implementation of health PPPs should not differ substantially from those for PPPs in general. Many countries have developed institutional frameworks that generally support the implementation of PPPs to ensure that good projects are selected and properly implemented. This chapter provides a generic guide on institutional approaches useful for the support of PPP projects. Some guidance is also provided where health-sector approaches may require special consideration.

INSTITUTIONAL ARCHITECTURE

While it is not strictly necessary to have a legal framework to drive PPPs, the emergent best practice is to do so. The scale and complexity of many PPP projects places onerous requirements on public-sector actors to manage the associated risks effectively.

For countries with PPP laws, the institutional framework typically involves the establishment of a central PPP unit with responsibilities for: programme oversight and development, the identification and screening of projects, making recommendations to government for project approval, tracking and reporting on contingent liabilities and securing technical assistance funding for programme implementation.

Most countries that have PPP laws do not have a minister of PPPs. Rather, central PPP units tend to be housed in the ministry of finance (MOF), ministry of planning or the ministry of infrastructure (where most PPP projects will emanate from). Experience tends to show that the MOF location strengthens their authority, as the MOF will ultimately decide on the level of public funding to be allocated to specific projects (if necessary) and the overall level of contingent liabilities which may be incurred by the PPP project. Moreover, a MOF will tend not to have less of a sectoral bias and is most likely to be concerned about fiscal affordability and value for money.

Most countries that have broad PPP programmes also have sectoral PPP units in key infrastructure ministries (transport, energy, water, telecommunications), health and, less frequently, education and housing. An important design issue is the role of the sectoral ministry units versus the central PPP unit. The typical split in responsibilities is summarised in **table 4.1**. For smaller countries with a limited PPP programme of only a few transactions, it may be unrealistic to have sectoral PPP units, but rather locate the programme under one central PPP unit.

Table 4.1: Types of PPP unit



CENTRAL PPP UNIT	SECTORAL PPP UNIT
<ul style="list-style-type: none"> Establishing overall policy/procedures for PPP programme 	<ul style="list-style-type: none"> Developing project pipeline
<ul style="list-style-type: none"> Reviewing sectoral proposals for government approval and implementation 	<ul style="list-style-type: none"> Identifying projects
<ul style="list-style-type: none"> Periodic review of individual transactions during transaction implementation for key decisions 	<ul style="list-style-type: none"> Undertaking the necessary pre-feasibility studies and other documents required for internal government approvals
<ul style="list-style-type: none"> Review/approval of final tender package overall policy and procedures 	<ul style="list-style-type: none"> Managing transaction advisors
<ul style="list-style-type: none"> Tracking fiscal costs and contingent liabilities 	<ul style="list-style-type: none"> Preparing all the necessary transaction documents (e.g. PPP contract), and investor communications

Public-private partnership institutional frameworks typically include an inter-ministerial committee with the following functions:

- **Review/approve project proposals** submitted by the sectoral PPP units, after review by the central PPP unit;
- **Make key transaction decisions** during the course of project preparation, particularly involving such issues as: level/type of government funding/support, impact on consumer charges, bidder qualification criteria, bid criteria (e.g. lowest PPP payment), bid timetable and impact on existing employees (if relevant);
- **Approve the final bid package** before issuance; and
- **Approve the selected winning bidder.**

Some countries also require that every proposed PPP project receive legislative approval (federal or state level) before officially launching the tender. However, this tends to be time consuming. It is preferable for the PPP law to delegate this responsibility to the executive branch of government rather than the legislature.

Many PPP legal frameworks also have independent audit agencies. In addition to standard audits of the financial statements of PPP companies, these agencies may also provide an independent assessment of the value-for-money and performance of PPP projects during implementation.

REGULATORY FRAMEWORK

Most countries that have introduced private-sector participation in infrastructure – whether through concessions, build operate transfers (BOTs), or PPPs – have also established independent regulatory agencies to supervise the regulations applicable to those sectors. A regulatory agency in an infrastructure sector (transport, energy, telecommunications) will usually have the following responsibilities:

- **Tariff regulation:** which involves the approval of periodic tariff adjustments in charges to residential and industrial users. Often, the tariff adjustment methodology is embedded either in individual operator contracts or more generally in sector regulations. Tariff regulation is, from an economic perspective, the most important responsibility of a regulatory authority in an infrastructure sector.

- **Performance monitoring:** regulators often also monitor the performance of operators vis-à-vis the contracts or sector regulations, and impose penalties for non-compliance.

- **Dispute resolution:** between the government and the private operators. In some countries, this role belongs to the regulatory authority. In other cases, it is delegated to expert panels which are set up specifically to resolve disputes between the parties.

Experience of infrastructure concessions in emerging markets in the 1990s (particularly Latin America) demonstrates that the establishment of professional, independent regulatory agencies and adequate dispute resolution procedures have been the most challenging aspects required to ensure the sustainability of infrastructure PPPs. A review of more than 1,000 infrastructure concessions awarded in Latin America demonstrated a high rate of renegotiation, ranging from a low of 10% in electricity sector, to 55% of transport concessions and 75% of water concessions [16]. The review attributes this to weak regulation, poor tendering procedures and opportunism on the part of private operators.

The health sector in most countries, unlike infrastructure, does not have comparable economic/technical regulatory authorities. This is one of the crucial differences between infrastructure and health PPPs.

HEALTH SECTOR PUBLIC-PRIVATE PARTNERSHIPS

Differences between infrastructure and health PPPs

There are four major differences between infrastructure and health, which must be taken into consideration in developing and implementing a health PPP programme.

- **First,** infrastructure services tend to be largely public services and delivered through a coordinated, if not, integrated, system. Hence, private participation in infrastructure tends to be for public, not private, services. As a result, sponsor proposals for infrastructure, and sponsor interest in infrastructure projects, tend to converge with government objectives for expanding public service. The health sector, however, typically has parallel private and public systems with little integration (with some country exceptions). So, sponsors tend to be most interested in *private-for-private* projects, i.e. privately-provided services for private-paying patients, rather than PPPs, which involve *private-for-public* projects, i.e. privately-provided service for publicly-funded patients.

There are two consequences to this difference. First, sponsor proposals do not converge with the government's objective of maximising access, especially for the poor. Second, sponsors tend to have far less interest (than infrastructure operators) in participating in PPPs.

- **Second,** infrastructure PPPs are generally financed through user charges – electricity, water/sanitation, transport and telecommunications. While infrastructure PPPs may involve some targeted subsidies for financing service expansion to the poor and to rural areas, the principal funding is from user charges.

Health PPPs, by way of contrast, tend to be funded directly from the government or from the national health insurer. While there may be patient co-payments, these tend to be minimal relative to government funding.

- This distinction is important because it means health PPPs tend to have a much larger budgetary impact on the government and create much larger contingent liabilities over time. Consequently, it will be more difficult to secure government (and MOF) approval for health PPPs. Also, if there are stated limits on contracting future liabilities, this will also limit the ministry of health (MOH) in the number and type of PPPs it can implement.

Third, in infrastructure, there are typically professional independent regulatory agencies (transport, energy, telecommunications, etc.) which are, *inter alia*, responsible for monitoring infrastructure PPPs, tariff regulation and (in some jurisdictions) providing a professional forum for resolving disputes between parties. In health, there are no similar institutional equivalents in most countries. This makes contract management and sustainability more difficult.

Fourth, in infrastructure, there are large global and regional operators in all sub-sectors, and this makes it easier to attract bidders and competition for PPPs. In health, while there are some global operators for some services (e.g. Fresenius for dialysis), there are none for hospitals. And where there are large regional hospital operators, they are more interested in private-for-private projects than PPPs.

Options/examples for health public-private partnerships

To illustrate the potential for health PPPs, options and examples are suggested here for health infrastructure/services, pharmaceuticals, medical education, ICT/ehealth, and health financing. While the focus is primarily on examples of PPPs (consistent with the discussion in **chapter 2**), other forms of public-private collaboration are also highlighted which can promote expanded public and private financing and closer integration of public and private health delivery, financing and insurance systems.

Health infrastructure/services

There are a wide range of health PPP options which have been implemented to date and summarised in **Table 4.2**.

Table 4.2: Range of health-related PPPs



Design and construction	Non-clinical services	Primary care	Clinical support services	Specialised clinical services	Hospital and network management
<ul style="list-style-type: none"> Detailed designs Building construction Medical equipment Capital financing 	<ul style="list-style-type: none"> IT equipment and equipment maintenance Food Laundry Cleaning Billing Medical waste 	<ul style="list-style-type: none"> Primary care Public health Vaccines Maternal and child health 	<ul style="list-style-type: none"> Laboratory analysis Radiology Medical equipment maintenance Ambulance services 	<ul style="list-style-type: none"> Dialysis Radio-therapy Day surgery Other 	<ul style="list-style-type: none"> Man. of hospitals or networks of health centres

The health-related PPP options selected by a government will depend on three factors:

- 1 Its own needs assessment;
- 2 Its fiscal space, which may limit the options available; and
- 3 Internal political factors, such as the strength of labour unions and public-sector medical professionals, which may also limit the options considered.

For hospital PPPs the main options are:

- 1 The Public Financing Initiative (PFI) model, where the PPP provider is responsible for construction, equipment and all non-clinical services (maintenance, cleaning, etc.), and the public sector remains responsible for all (or most) clinical services and for overall hospital management³; and
- 2 A full PPP model, where the private operator is responsible for all aspects (including clinical and non-clinical services).

The difference in risk-allocation between the two approaches is in **Table 4.3**:

Table 4.3: Distribution of risk between hospital PPP options



FUNCTION	PFI	FULL PPP
Design/construction	PPP operator	PPP operator
Equipment	PPP operator	PPP operator
Capital financing	PPP operator	PPP operator
Facility maintenance	PPP operator	PPP operator
Non-clinical services	PPP operator	PPP operator
Clinical services	Public sector	PPP operator
Hospital management	Public sector	PPP operator

³For instance, see the Inkosi Albert Luthuli Hospital (case study 2) in **chapter 5**.

Table 4.4: Examples of health-related public-private partnerships



Type of service	Project description	Private-sector responsibility
Non-clinical services	Medical waste PPP (Lesotho)	<ul style="list-style-type: none"> PPP operator responsible for all capital expenditure (capex) and operating expenditure (opex) related to medical waste collection, treatment and incineration, as well as maintaining and operating the incinerators. Operator responsible for standard PFI (construction, equipment, maintenance, non-clinical services), but also three specialised services (radiology, laboratory, dialysis) for two 120-bed new hospitals (awarded to separate operators through a tender). Also assumed responsibility for all medical supplies. Government responsible for hospital management and most clinical services.
Design/construction & non-clinical services (PFI)	Hospitals PPP (Mexico)	<ul style="list-style-type: none"> Private laboratory operator to take over hospital laboratory services in a major public hospital in Bucharest. Operator required to replace all equipment, procure all inputs, recruit/manage employees, and provide all laboratory tests based on specified performance standards.
Clinical support services	Laboratory services PPP (Romania)	<ul style="list-style-type: none"> Operator responsible for upgrading and operating all diagnostic/radiology equipment in 12 state hospitals. Also responsible for constructing/operating a centre to receive all results remotely from the hospitals and issue medical diagnoses back to hospitals (ehealth).
Clinical support services (incl. ehealth application)	Diagnostic imaging PPP (Brazil)	<ul style="list-style-type: none"> Operators selected via tender to upgrade and operate dialysis centres in eight public hospitals.
Specialised clinical services	Dialysis PPP (Romania)	<ul style="list-style-type: none"> Responsible for all clinical services, staffing, equipment and supplies. Option to extend contract term if operator constructs new facility within three years.

For any health service/facility, the greater the transfer of risk and responsibility to the private sector using a PPP, the greater the potential gains in efficiency and quality of care (i.e. a full PPP, if properly structured, should result in far greater efficiency and quality-of-care than a PFI model that involves less transfer of risk).

Outlined in **Table 4.4** are a number of examples of different PPP types that have been used for healthcare services/infrastructure, with a summary of the key parameters of each transaction.

Type of service	Project description	Private-sector responsibility
Hospital Management	Cross-River State PPP	<ul style="list-style-type: none"> Operator responsible for construction, equipping and operation (all clinical and non-clinical services) and management of new 105-bed referral hospital. Hospital to treat private and public patients.
Hospital Management	Suburbio Hospital PPP (Brazil)	<ul style="list-style-type: none"> State government funded construction cost and will fund partial cost for treatment of public patients. State government funded and managed construction of new 300-bed hospital serving a poor region of one million in Salvador, Bahia. PPP operator responsible for financing/installing equipment, and providing all clinical and non-clinical services, including hospital management.
Hospital & Clinics	Lesotho Hospital PPP	<ul style="list-style-type: none"> Government funded a third of the capital cost of a new national referral hospital (425 beds, including 390 for public patients). PPP operator responsible for two-thirds of the capital costs, construction, equipping and operational costs of the hospital (including all clinical and non-clinical services and hospital management). Government makes periodic PPP payment to operator.

Pharmaceuticals

There are many successful collaborations between the private sector and governments in essential medicines. For example, public-private collaboration has been crucial in the fight against HIV and AIDs, malaria and tuberculosis through the Global Fund.⁴ There are four ways the private sector can partner with the Global Fund:

- 1 Making monetary or in-kind contributions;
- 2 Supporting implementation of treatment programmes;
- 3 Providing commercial goods and services on a socially responsible basis; and
- 4 Serving as a public advocate and contributor to good governance.

Apart from this form of collaboration, PPPs involving formal government contracting with the private sector can be used to support any part of the pharmaceutical value chain (research and development, production, procurement, import/export, storage and distribution). In several countries, for-profit and not-for-profit entities have been contracted to help distribute essential medicines. In South Sudan, the government conducted a detailed feasibility study to tender for an operator to import, store and distribute essential pharmaceutical products (to replace donor arrangements after donors depart).

In much of the value chain, it would be optimal to promote the growth of larger regional companies which could capture the economies of scale inherent in much of the value chain and provide consumers with higher-quality, lower-cost medicines. This could be achieved through:

- **Private financing** of pharmaceutical companies through private equity (PE) funds and lines of credit. The selective use of direct non-sovereign loans and equity investments in larger companies (which are expanding across the region) could be considered.
- The **joint implementation** of a PPP by a group of countries for any part of the value chain (e.g. pharmaceutical production or research and development).
- **Loan assistance** by a development bank to eliminate the legal/policy/regulatory barriers in many countries, which hamper the establishment and operation of cross-border pharmaceutical plants.

There is considerable interest within the region for the establishment of regionally-based pharmaceutical or vaccine-manufacturing plants. This would provide the region with greater certainty and security of supply, especially in times of global epidemics or other crises, which could disrupt foreign supplies. This will likely require active regional collaboration among several countries, in the form of harmonising legal/regulatory frameworks and possible financial support.

Medical education

Public-private partnerships can also be used beneficially for medical education and involve:

- Construction and facility management (non-clinical services) of a new medical college;
- A full PPP involving the above, plus all teaching services; and
- An associated medical teaching hospital.

An example of a successful PPP for medical education is the Shillong Medical College PPP in Meghalaya state in India. The state is poor and suffers from a major shortage of doctors and medical training facilities. Under the PPP structure:

- The state government grants the land, contributes 40% to the capital cost and provides an operating subsidy for the first 12 years (of the 99-year concession period).
- The PPP operator must construct, equip and operate a new 100-seat medical college and associated 500-bed teaching hospital (providing all services and management).
- The college will train 100 medical students annually and is expected to treat 240,000 patients annually in the associated hospital.
- The bid was based on the annual subsidy to the operator to operate the hospital, with the winner offering the lowest bid.
- The state also committed to the introduction of universal health insurance and lists the hospital as a state-referral hospital - thereby effectively guaranteeing sufficient patients and reimbursement for patient treatment.

Apart from PPPs, governments can use other policy instruments to spur medical education, such as vouchers, whereby students receive a subsidy to attend medical schools in the country, or student loans. These measures might also help incentivise private companies to set up and run medical schools.

Other forms of regional collaboration, such as harmonising curricula and professional certification and licensing, will also promote student and medical human resource mobility across borders. This helps to expand medical educational opportunities and address shortages.

⁴ Founded in 2002, the Global Fund, based in Geneva, Switzerland, is a partnership between governments, civil society, the private sector and people affected by various diseases. The Global Fund raises and invests nearly US\$4 billion a year to support programmes run by local experts in countries and communities most in need. More information can be found at <http://www.theglobalfund.org/en/overview/>.

Information communication and technology and ehealth

Africa is the fastest-growing mobile market globally. With more than 50% of the population with mobile devices, there is tremendous potential for ehealth applications to deliver more services for available funds, and to deliver them to populations that previously had little or no access.

There are many successful examples of ehealth applications now in place in Africa to support public health goals including *inter alia*:

- **Rwanda:** TRACnet, a web-based application accessible both on mobile phones and computers, shows data and government HIV indicators from the field. It allows the viewer a comprehensive view of the status, patient load and drug supply levels of all of the HIV and AIDS programmes.
- **Kenya:** has a system which enables residents with a mobile phone to upload a locally-developed application that allows them to determine if a doctor or clinic is genuine. By sending an SMS, the user is shown updated lists of licensed medical professionals and approved hospitals, starting with those nearest to him or her.
- **Uganda:** has an eHealth solution, mTrack, which allows for the tracking of medical supplies to clinics in the country where 131 hospitals serve nearly 36 million people. Information gathered through mTrack is amassed and coded and shows health officials what is going on in real time. Previously, this information was available only on paper.
- **Zambia:** recently deployed SmartCare, an electronic health record system that stores a person's data on a pocket-sized plastic card.
- **South Africa:** HealthID, an electronic health record application, enables the storage, in one location, of clinical information including patients' data, details of their previous doctor and hospital visits, previously prescribed medicines and blood test results and patients' health measures (such as blood pressure).
- **Mali:** the eHealth IKON project enables rural clinics in the country to forward scans and x-rays to specialists for review through ICT connections. These specialists are then able to advise doctors in remote clinics on what treatments should be dispensed.
- **Mozambique:** SMS reminders and educational messages are sent to HIV positive persons, including HIV positive pregnant women, to help improve HIV treatment adherence and prevention of mother-to-child transmission of HIV.

One possible ehealth PPP project could involve a government contracting with an e-service provider to:

- Establish a system of patient smartcards, which would enable providers to immediately access patient history and treatments.
- Establish a web-based information system at the provider level, which would not only facilitate improved provider performance and patient treatment, but *inter alia* also provide real-time information to ministries of health and public health insurance authorities on provider performance, costs and resource requirements.
- Use of mobile technologies for real-time patient-provider communication, which would allow, *inter alia*, providers to follow up with patients on their treatment, as well as providing reminders on things like medication.

It would likely be easiest to implement this in a country that already has some form of public health insurance in place. Also, it may be preferable to pilot this initiative in a district or province to test and improve its functioning before rolling out on a national basis.

An example of an ehealth PPP project outside of Africa is in Bahia state, Brazil for a PPP operator to upgrade/operate diagnostic imaging services in 12 state hospitals, with results to be sent/interpreted using ICT at a central unit to be constructed and operated by the private operator. This PPP seeks to address the difficulty in attracting/hiring scarce specialists by using ehealth applications.

Health financing/insurance

While PPPs at the provider level can result in significant improvements in local access and quality of care, the impact is still limited to individual facilities. Governments could achieve a much broader development impact by enhancing, aligning and streamlining the public and private financing of healthcare with the goal of maximising access (universal coverage) at an affordable cost. This can be achieved through public and private insurance (and other financing mechanisms).

Decisions that governments take on the health financing and insurance systems can have far-reaching consequences on whether they achieve universal coverage and the overall cost of healthcare. In a resource-constrained region, it is crucial that governments choose reforms which achieve universal coverage (or near-universal coverage) at an affordable and efficient overall cost to the economy.

In structuring the overall financing system for health, governments must make key decisions on, *inter alia*:

- The extent of public funding to be allocated to healthcare;
- Whether the source of funding is tax based and/or employer based;
- If employer based, the proportions that should be paid by the employer and employee;
- Whether funds should be pooled under a public health insurer;
- The scope of public insurance coverage (primary care and/or catastrophic benefits);
- The level of patient co-payments (at the premium level);
- The manner in which healthcare for the poor is to be funded;
- Any restrictions that will be placed on private insurance; and
- The extent to which private insurance complements or supplements public insurance.

There are many options and different country models for health financing, with differing roles and responsibilities for public and private financing. It is recommended that governments, in designing health financing reforms and public insurance, carefully review the different options and the detailed design issues (such as those listed above), before finalising the structure, given that decisions on health financing and insurance can have a profound impact on the overall cost of healthcare and efficiency of delivery.

It is possible to introduce formal PPP contracts for administering public health insurance. Public-private partnerships could be structured for private companies to do some, or all, of the following public health insurance activities:

- Enrolling new insured persons and managing the resulting registries;
- Contracting with private and public providers;
- Claims-adjustment (i.e. reviewing claims submitted by providers for reimbursement); and
- Reimbursing providers.

An example of a successful PPP is the Meghalaya State Health Insurance PPP in India. The state had in place partial health insurance for those below the poverty line (15% of the population), funded by the Federal RSBY (Rashtriya Swasthya Bima Yojana) programme (discussed as *case study 2* in **chapter 5**). The goal of the state was to expand its public health insurance to cover the entire state population and to use a PPP to expand and administer this programme.

Under the PPP structure:

- The state government defines the benefits package to be covered for insured patients;
- Private insurers administer the public insurance scheme;
- Private insurers are responsible for enrolling eligible applicants, contracting with and reimbursing providers;
- The newly-created state agency responsible for overseeing the public health insurance scheme would pay the premium to the private insurer for the more than 500,000 eligible households (including the subsidy received from the federal government);
- The premium amount is determined by tender, with the winning bidder based on the lowest premium offered;
- The winning bidder bears the costs incurred for the medical treatment of enrolled families within the pre-defined parameters of the contract as well as the enrolment of beneficiaries;
- The agreement also provides incentives to maximise the number of families enrolled; and
- The insurer is also required to empanel the requisite number and type of hospitals and providers within the scheme, and assume responsibility for negotiating rates and ensuring quality.

This is a powerful model which, with proper preparation and structuring, could very likely be replicated in some African countries. It should be emphasised that all policy decisions on important aspects, such as the scope of the benefits package and population coverage, would remain with the government. Only the administration of the government-determined programme would be managed by the private insurer under a PPP.

Contracting

Another powerful instrument governments have for expanding access and promoting better integration of public and private health systems is contracting. The public health insurer enters into standardised contracts with providers (public and private) for the treatment of public patients. Contracting with private providers significantly expands service options for patients and resources available for the treatment of public patients, and can be a faster and more efficient mechanism for achieving universal coverage than trying to reform and improve public hospitals and

health centres. Key features of an effective contracting system include:

- An accreditation procedure for empanelling different types/levels of healthcare facilities;
- Standard framework contracts, which would apply to public and private providers;
- A reimbursement schedule for reimbursing providers for the treatment of public patients; and
- Ideally, sufficient funding to cover efficient provider costs.⁵

Governance and institutional framework

As noted above, sector ministries (in this case, the MOH) will typically have a PPP unit, with the following responsibilities:

- Developing the PPP strategy and project pipeline;
- The identification of projects;
- Undertaking the necessary pre-feasibility studies and other documents required for internal government approvals;
- Managing transaction advisors;
- Preparing all the necessary transaction documents (e.g. PPP contract) and investor communications; and
- Contract monitoring and management.

For PPPs involving the administration of public health insurance, additional institutional arrangements are required regarding the establishment and supervision of public health insurance and regulated health insurance markets.

Pre-conditions for successful public-private partnerships

To implement successful and sustainable PPPs in health requires that a number of macroeconomic, legal, institutional, regulatory and political conditions are met, such as:

- A relatively stable political environment (more important for foreign than local investors);
- A relatively stable macroeconomic framework, without major shocks (which would likely result in investor reluctance and also early termination of PPP contracts);
- A legal/regulatory framework that is predictable, fair, transparent and conducive to business operations; Institutional capability to prepare projects, conduct transparent tenders and monitor PPP contracts (as noted above); and

⁵ This may take time to achieve and many governments still effectively contract with large numbers of private providers while unable to cope with demand changes. It still may be worthwhile for private providers to treat public patients at variable-cost rates, provided they can make their profits on treating private patients.



The fiscal capacity and creditworthiness to make continued PPP payments throughout the duration of a project.

Public-private partnerships for administering health insurance have additional pre-conditions for success, including:

- Defining the population to be covered and estimating the number of households;
- Defining and costing a benefits package for the insured;
- Actuarial estimates of the expected long-term costs due to demographic changes; and
- Determining how insurance will be funded and taking steps to implement (e.g. tax based and/or employer based).

Other measures, such as enrolling households and empanelling/contracting with providers, are also essential, but these activities can be delegated to the PPP administrator as part of the PPP project.

Preparing providers for public-private partnerships

Governments can promote PPP projects broadly to local and international investors. But, they can also take other steps to help develop local providers and their capacity to take on PPP projects more generally. These measures include, *inter alia*:

- Ensuring that the legal/regulatory framework is conducive to the establishment and operation of private health providers (or insurers in the case of health insurance PPPs);
- Establishing an accreditation system that enables accredited providers to obtain contracts with the MOH or the public health insurer for treatment of public patients; and
- Establishing framework contracts (and an institutional framework for contracting) for governments and public health insurers to use when contracting with private providers for the treatment of public patients.

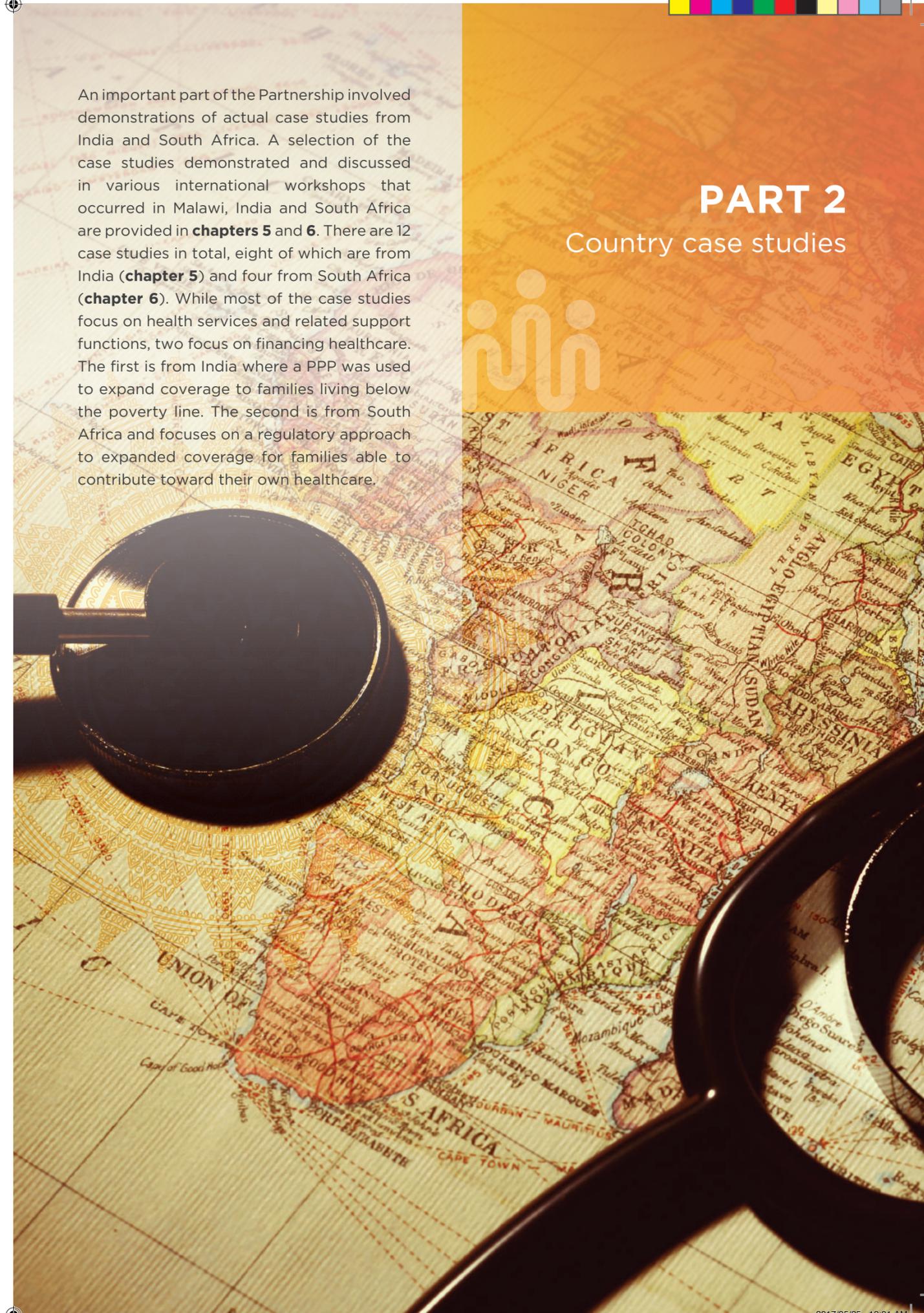
Development-financing institutions could also play an important role in strengthening the capacity of private providers to enter into PPP contracts, as well as contracts with public insurers for the treatment of public patients. These measures could include:

- Loans to private providers, either direct loans or through lines-of-credit with commercial banks or regional development financing institutions (DFIs);
- Equity investments in private providers, either direct or via private equity funds; and
- Technical assistance to private providers to supplement lending/equity.

An important part of the Partnership involved demonstrations of actual case studies from India and South Africa. A selection of the case studies demonstrated and discussed in various international workshops that occurred in Malawi, India and South Africa are provided in **chapters 5** and **6**. There are 12 case studies in total, eight of which are from India (**chapter 5**) and four from South Africa (**chapter 6**). While most of the case studies focus on health services and related support functions, two focus on financing healthcare. The first is from India where a PPP was used to expand coverage to families living below the poverty line. The second is from South Africa and focuses on a regulatory approach to expanded coverage for families able to contribute toward their own healthcare.

PART 2

Country case studies





CHAPTER 5

Public-private partnerships in India

BACKGROUND AND CONTEXT

Health expenditure in India, despite recent improvements, is still low at 4.2% of GDP, with the government share also low at a mere 1.3% of GDP (Figure 3). India's health spending is lower than comparable middle-income countries such as China, and far below upper-middle-income countries such as Brazil and South Africa.

Figure 5.1: Location of India

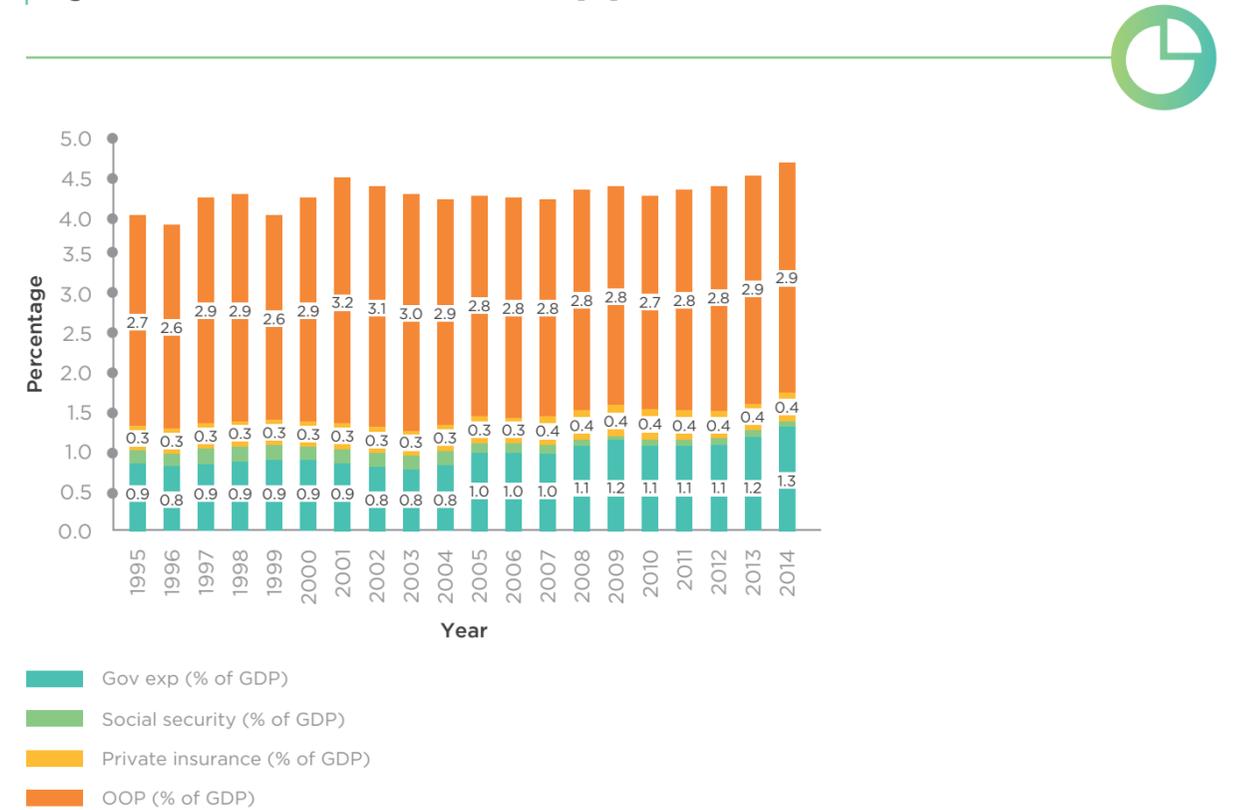


Public spending on health accounts for 28.6% of all health expenditure, with private household outlays at roughly 67.7% as per National Health Accounts Estimate for 2013 [17].

The largest source of health financing is found in the private sector in the form of OOP expenditure by households. This accounts for nearly 64% of total health spending (2.9% of GDP in 2014) and mostly involves fee-for-service payments for private healthcare services or user fees at public facilities. The second largest source of funding derives from central and state governments, which collectively represent around 20% (or 1.3% of GDP in 2013) of total health spending (state funds account for the larger share of 13%). The high OOP spending, which particularly affects poor households, forced 28% of rural Indians, particularly high among the poorest 20%, to forgo medical treatment when ill [17]. (Figure 5.2)

From the healthcare access point of view, public health services infrastructure is well-developed in India, starting from primary care facilities (such as the sub-centres, primary health centres [PHCs] and community health centres [CHCs]), and secondary care facilities (such as the sub-district and district hospitals), and tertiary care facilities (such as medical colleges and specialty hospitals).

Figure 5.2: India - National Health Accounts [18]



Private healthcare infrastructure is also well-developed and expanding and serves about 78% of the rural and 81% of the urban population. Private-sector health service provision comprises 58% of all hospitals, 29% of all hospital beds and 81% of all doctors. About 77% of the ambulatory care is serviced by the private sector in rural areas and 80% in urban areas. However, the quality of healthcare offered by both the private and public sectors is uneven and subject to huge regional variations. Overall, there is a significant gap in healthcare financing, provision and access in India [17].

Since the financing, provision and access gaps are great, governments at all levels try to bridge these, at least for the poor, through the promotion of PPPs and subsidies of various forms. Public-private partnerships are therefore used as a mechanism to leverage the potential of the private sector to achieve systemic results. Public-private

partnerships are presently viewed as social experiments that offer a mechanism to supplement public health services by engaging and leveraging private actors. It is also believed that certain structural drawbacks of private healthcare delivery can be mitigated to an extent by PPPs. Importantly, private actors are directed through the partnerships toward public objectives – an important objective of PPPs as discussed in **chapter 2**.

In India, approximately 1,300 projects have been implemented across various sectors, with most occurring in the roads and ports sectors. There are some states that have more PPP projects due largely to political priorities and the existence of project champions [3].

METHODOLOGY

This chapter reviews the health PPP experiences in India with a view to understanding the issues and implementation challenges. The main emphasis is to document the role and impact of PPPs in expanding effective service coverage for the poor and ensuring financial protection. Three domains are addressed:

- Generating and pooling more finances for health through health insurance;
- Augmenting healthcare infrastructure; and
- Augmenting health service delivery.

The approach involves secondary research on PPP policies, implementation experiences and the evaluation of PPP programmes in India. A case-study approach of the main experiences of key PPP programmes in the three domains is adopted. The review involves a literature review of the various PPP programmes, policies of central and state governments, research reports and journal articles.

PRIVATE HEALTH SECTOR IN INDIA

The health care system in India consists of a public sector and a private sector, which includes informal networks of healthcare providers. The private health sector is large and heterogeneous, and includes for-profit providers of varying capacities, informal providers and NGO providers. India has the largest private health sector in the world in terms of human resources, with over one million qualified doctors of various systems of medicine and approximately 1.25 million unqualified rural medical practitioners.

Even though the public health system is responsible for delivering healthcare and preventive services, they bear less than 30% of the burden of providing healthcare. More than 70% of the burden is on the private healthcare system. It is estimated that 93% of all hospitals, 64% of beds, 80 to 85% of doctors, 80% of outpatients and 60% of inpatients are in the private sector. Though the not-for-profit healthcare sector operates in an apparently efficient and self-regulated manner, it comprises a tiny fraction of healthcare services in India – less than 1% in most states. Further, in both rural and urban areas, a large number of unqualified practitioners also form part of the private sector. The health sector operates in a largely unregulated environment, with minimal supervision over what services can be provided, by whom, in what manner and at what cost. Hence, there are many discrepancies and disparities that occur across the cost, access and quality aspects of Indian health services.

A significant proportion of household expenditure ends up in the unorganised private sector. The formal for-profit sector covers a broad range of facilities from small clinics and nursing homes to large corporate chains of tertiary facilities. Although inequitable, expensive, over-indulgent in clinical procedures and without quality standards or public disclosure of practices, the private sector is perceived to be easily accessible, better managed and more efficient than its public counterpart.

Surveys of health-seeking behaviour in India indicate that the poor increasingly prefer, and use, private providers of healthcare rather than public providers. Private providers are also a major source of care in rural areas with strong networks of private medical practitioners present. Private practitioners are typically the first point of contact that

the rural poor have with the health system, largely due to their extensive reach and coverage of the population. In the poorest states, such as Bihar and Uttar Pradesh, the public sector is very weak and no effective alternatives to the private sector exist.

One way of classifying the private players within the health sector is to look at their organisational complexity vis-à-vis their profit motive (or lack thereof). In this regard, it may be noted that *non-profit* organisations are differentiated into those with a formal corporate hierarchy and those structured informally around a few individuals and working with the community at the grassroots level. Even where voluntary organisations resemble a formal and professional management structure and hierarchy, the essence of the internal governance and policy is more informal than formal. **Table 5.1** summarises the various forms of private sector participation.

Table 5.1: Private players in health sector, by type of organisation and management

Degree of complexity	For-profit healthcare providers	Non-profit healthcare providers	Voluntary healthcare providers
Highly complex organisation	<ul style="list-style-type: none"> • Corporate hospital chains • Private medical colleges and hospitals 	<ul style="list-style-type: none"> • Mission hospitals, church hospitals operating nationally/ globally • Philanthropic institutions • Corporate social responsibility (e.g. Tata Cancer Hospital) 	<ul style="list-style-type: none"> • Health services provided by big/ international NGOs (Aga Khan Foundation, CARE) • Health services run by workers and motivated health rights groups who identify with the poor
Moderately complex organisation	<ul style="list-style-type: none"> • Private hospitals, nursing homes, diagnostic centres 	<ul style="list-style-type: none"> • Missionary/trust hospitals 	<ul style="list-style-type: none"> • Outreach/mobile clinic services provided by reputed NGOs
Simple organisation	<ul style="list-style-type: none"> • Private doctors, clinics • RMPs • Fake doctors 	<ul style="list-style-type: none"> • Private doctors providing services in outreach camps organised by missionary/trust hospitals/professional bodies • Traditional healers whose main livelihood is different 	<ul style="list-style-type: none"> • Local NGO providing symptomatic screening and referral services usually by health camps



PUBLIC-PRIVATE PARTNERSHIPS IN THE INDIAN HEALTH SECTOR

The private sector plays an important role in providing various forms of health services in India, although mostly by default. Collaborating with the private sector and fostering partnerships for providing health services to the under-served sections of the population has therefore increased as a policy priority. As noted above, due to the deficiencies in the public-sector health systems, the poor in India are forced to seek services from the private sector, often borrowing to pay for them OOP.

Given the significant presence of the private health sector in the country, especially in secondary, tertiary and support services such as pharmacies and diagnostics, public health systems have little option but to improve access in cooperation with the private sector. Engaging with the private sector therefore offers the opportunity to *inter alia* strengthen public healthcare delivery systems.

Engaging with private sector to improve health services has already been advocated in various policy documents of central and state governments in India. Under the 10th five-year plan [19], initiatives were taken to define the role of government, private and voluntary organisations in meeting the growing needs for healthcare services, including Reproductive and Child Health (RCH) and other national health programmes. National health policy objectives from 2002 [20] also envisaged the participation of the private sector in primary, secondary and tertiary care. The policy also wanted the participation of the non-governmental sector in the national disease control programmes to ensure that standard treatment protocols are followed.

Partnerships between the government and a private sector, and/or the non-profit sector, and/or a private service provider, and/or multilateral agencies is an important strategy for the various national diseases control programmes such as the National Malaria Control Programme (NMCP), National Blindness Control Programme (NBCP), and the Revised National Tuberculosis Control Programme (RNTBCP). The National AIDS Control Programme (NACP) has also involved both the voluntary and private sectors to carry out various HIV- and AIDS-related services.

The ministry of health and family welfare (MOHFW), government of India, has also evolved guidelines for PPPs in different national health programmes such as, *inter alia*, RNTBCP, NBCP, National Leprosy Eradication Programme and RCH. The National Rural Health Mission⁶ also proposed to support the development and effective implementation of regulatory mechanisms for the private health sector to ensure equity, transparency and accountability in achieving the public health goals.

⁶ National Rural Health Mission is the name of a flagship programme launched by MOHFW in 2005 to provide universal healthcare through a well-functioning health system throughout the country with special focus on 18 states which have unsatisfactory health indicators and/or weak public health infrastructure.

FORMS OF PUBLIC-PRIVATE PARTNERSHIPS IN HEALTH IN INDIA

Up to eight types of health PPP have been implemented to date in India. These are listed here, with more detail provided for some in the case studies.

1 Partnerships in health financing through health insurance: The government covers, wholly or partially, the health insurance premium for families below the poverty line (BPL). These families in turn are insured against expenses related to health events and hospitalisation, up to a certain amount. The private sector provides the insurance for a range of health services pre-determined by the government while services are delivered at public or private health facilities.

2 Contracting-in and contracting-out of service delivery: The second major form of partnership in health sector involves contracting for defined services from private providers. In this model the public sector provides the funds but allows the private partner operational control with monitoring performed by the public sector. The most popular model of contracting is the Chiranjeevi Yojana PPP where the public-sector hospital invites private doctors to undertake normal and caesarean deliveries to increase patient volumes at an institution. The contracting model found in almost all parts of India involves the management of primary care by NGOs. Government provides most of the funds to the NGO and they run primary care services for a stipulated period under contract.

3 Outsourcing of operations and management of public health facilities: This involves the management of a part or all of a public facility by the private sector. The private player is paid a fixed fee by the awarding authority for performing specific tasks, the value of which is dependent on the costs and/or risks involved. Such contracts allow the entry of private-sector skills into operations, design, delivery, labour and equipment procurement.

Examples include non-clinical hospital services such as laundry, catering, security (in, for instance, Bhagajatin hospital); the contracting-out of kitchen, cleaning and laundry services (in, for instance, Kolkata hospital); clinical services such as radiology and laboratory services, the directly-observed therapy programme for anti-tubercular therapy; and the private management of primary healthcare centres in Tamil Nadu and the Rajiv Gandhi Gramin Mobile Medical Centre in Rajasthan.

4 Build-operate-transfer model: Here the private sector is assigned the task of building, operating and eventually transferring the project to the public sector. The model involves outsourcing the early stages of a hospital project's execution. Once the project starts running smoothly, it is taken over and run by the government or a corporate entity. The hospital group will invest in the hospital and operate it for a number of years (usually less than 15 years) before handing it back to the public sector. The hospital group generates financial returns during the years it operates the hospital. Further, the public sector retains the asset and gets a fully-functional hospital at the end of the PPP term.

5 Concession model: This works more like a long-term lease where a private player takes over the management of a state-owned enterprise including significant investment risks. The ownership and investment decisions during the lease period therefore no longer remain with the state government.

6 Joint venture model: The project is jointly owned and operated by the public and private sector entities that share costs, risks and revenues. Most of the time, a joint venture is undertaken when the public sector seeks technical skills from a private entity. An example is the land subsidy provided to private healthcare providers by the Delhi government in return for 25% free inpatient and outpatient treatment.

7 Social franchisee model: Here one agency – non-government or quasi-government – decides to start a chain of providers. This can be done by converting an existing healthcare facility into a franchisee or by encouraging a new individual/group to set up a healthcare facility. The franchisee has the right to use a brand name and has to pay a fee for its use. In return, the franchisee gets a higher number of clients due to the brand name being popularised and benefits from technical support to ensure that his or her unit is viable. In a social franchisee arrangement, the objective is to offer a set of socially important services in the form of a franchisee operation. The private partner takes complete responsibility for marketing and distribution of low-cost health products (contraceptives, insecticidal bed nets, etc.).

The leading and perhaps most successful example of this is the Janani programme which is operational in Bihar and Jharkhand. The products of the franchisees are the entire range of RCH services – but especially institutional delivery, emergency obstetric care, safe abortion services and family planning services. The programme uses the network of rural medical providers in the villages to provide first-contact care services of a very uncertain quality and to drive-in referrals for the secondary care services to the Janani chain of hospitals. The services are reasonably priced. However, commercial considerations predominate and are therefore out of reach for the poor unless they are combined with some demand-side financing or insurance option. Janani's chain is a mix of existing providers that are recruited into the chain and a number of hospitals owned by it which they have started.

Voucher schemes: A voucher is a token or document which would ensure a specified range of services or goods for the user in place of cash. In this system the government defines the range of services (family planning services, delivery, transportation, caesarean delivery, ante-natal care, free medicines, etc.) which would be provided to the beneficiaries at fixed intervals based on criteria already defined by the government. It is a cashless transaction whereby the beneficiary gets the service without paying any money, while the government can target the subsidy to be provided and the private provider is reimbursed the cost based on actual outputs or performance.

These schemes cover the cost of deliveries of women with BPL cards in designated private hospitals. According to the scheme, the government pays the designated hospitals for each delivery and, in return, expects the hospital to provide vaginal or caesarean deliveries to the women with BPL cards free of cost and also cover a portion of travel costs.

Corporate social responsibility (CSR): The corporate sector partner or corporate associations, like the Confederation of Indian Industries (CII) and the Federation of Indian Chamber of Commerce and Industries (FICCI), provide support by way of funds and expertise in partnership with government. The CSR activities usually support development and health activities targeted at people living in areas near to their sites of operation.

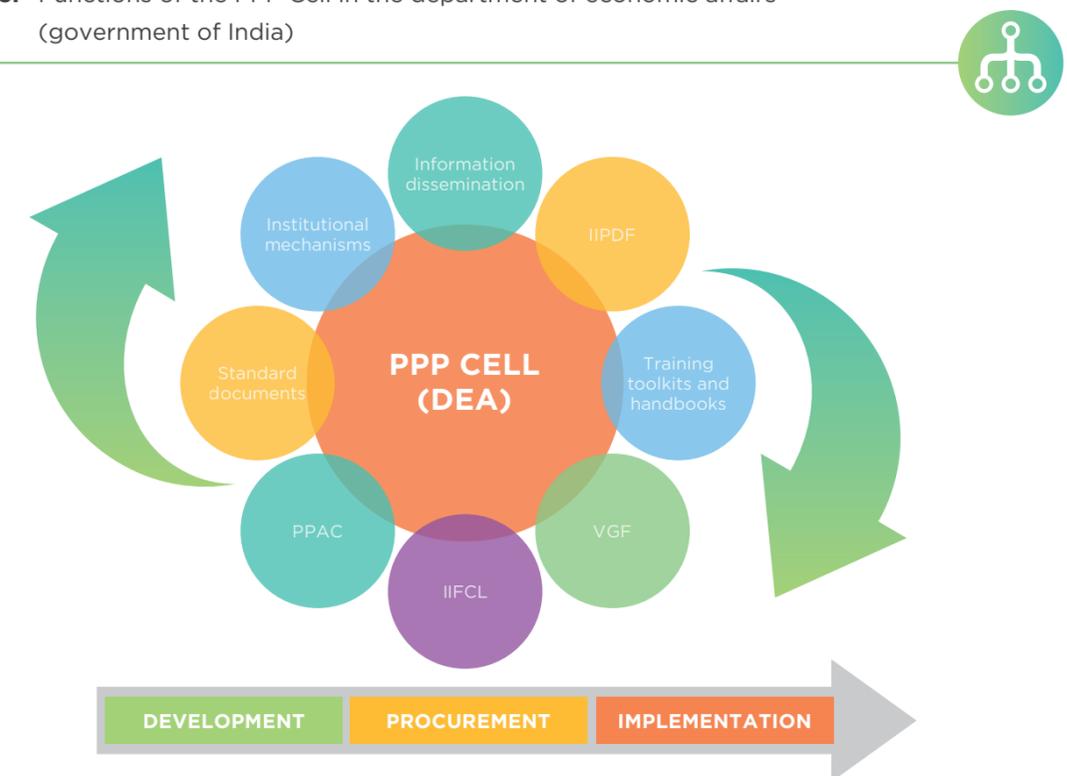
INSTITUTIONAL MECHANISMS FOR STRENGTHENING PPP INITIATIVES IN INDIA

Public-private partnership in India is defined as a commercial legal partnership between government and private organisation. Further, the government of India defines the relationship as “an arrangement between a government / statutory entity / government-owned entity on one side and a private-sector entity on the other, for the provision of public assets and/or public services, through investments being made and/or management being undertaken by the private-sector entity, for a specified period of time, where there is well-defined allocation of risk between the private-sector and the public entity and the private entity receives performance-linked payments that conform (or are benchmarked) to specified and pre-determined performance standards, measurable by the public entity or its representative”.

The government of India recognises several types of PPP, including: user-fee based BOT models; performance-based management/maintenance contracts, and modified design-build (turnkey) contracts.⁷

The PPP Cell in India was set up in 2006 in the department of economic affairs (DEA). The PPP Cell was set up for facilitating the implementation and capacity building of PPP projects in the country. The cell acts as the secretariat for the PPP appraisal committee (PPPAC), empowered committee (EC), and empowered institution (EI) for the projects proposed for financial support through viability gap fund (VGF). The cell is responsible for policy-level matters concerning PPPs, including policies, schemes, programmes, model concession agreements and capacity building. The PPP Cell is also responsible for proposals relating to clearance by PPPAC, schemes for financial support to PPPs in infrastructure (VGF schemes) and the India Infrastructure Project Development Fund (IIPDF). The PPP framework assists in providing systematic and speedy appraisals and approvals of projects. The cell has over time progressively opened more and more sectors for private involvement. It has also promoted levies for user charges and also standardised bidding documents such as the model request for qualifications and the model request for proposals.

Figure 5.3: Functions of the PPP Cell in the department of economic affairs (government of India)



⁷ <https://www.pppinindia.gov.in/overview>.

The institutional framework for PPPs in India has resulted in a robust pipeline of projects at different stages of implementation (i.e. bidding, construction and operational). According to the DEA there are around 1,300 PPP projects in various stages of implementation for the delivery of high-priority public utilities and infrastructure and, over the last decade or so, developed what is perhaps one of the largest PPP programmes in the world. The PPP model is being adapted to various sectors like roads, airports, ports, etc. and this sectoral diversity has proved to be successful.

According to the World Bank, India is one of the leading countries in terms of readiness for PPPs. As per the 2015 Infrascope Report of the Economist Intelligence Unit, *Evaluating the environment for PPPs in Asia-Pacific 2014*, India ranks first in the world in *operational maturity* for PPP projects, third for sub-national PPP activity and fifth overall in terms of having an ideal environment for PPP projects.

In 2006, the government of India introduced the appraisal mechanism by setting up the public-private partnership appraisal committee (PPPAC) responsible for the appraisal of PPP projects in the central sector. The appraisal mechanism for the PPP projects was initiated to “ensure speedy appraisal of projects, eliminate delays, adopt international best practices and have uniformity in appraisal mechanisms and guidelines”. The PPPAC comprises the following:

- Secretary, Department of Economic Affairs (in the Chair);
- Secretary, Planning Commission (now CEO Niti Aayog);
- Secretary, Department of Expenditure;
- Secretary, Department of Legal Affairs; and
- Secretary of the Department sponsoring a project.

The cell has developed a website (located at www.pppinindia.gov.in) to provide key information related to PPP initiatives in India and to share best practices for PPP practitioners whether in government or the private sector. The website is a storehouse of policy documents, government guidelines, model documents, project information, information on the institutional mechanisms for appraisal of PPP infrastructure projects, schemes developed for financial support to PPP projects and guidance material and reference documents developed by the PPP Cell.

There is another website - www.infrastructureindia.gov.in - which is developed by the PPP Cell to provide information on infrastructure projects implemented in India. The website provides detailed guidelines for appraisal/approval procedures to be followed for central (national) sector PPP projects.

Capacity-building initiatives

The following measures are taken by the PPP Cell for capacity building and to promote knowledge transfer to improve the PPP initiatives in India.

- The national PPP capacity-building programme aims to train government officials in various central and state government departments, parastatal agencies and urban bodies.
- Information dissemination through the website www.pppindia.com, through which the cell aims to provide comprehensive information on the status and extent of PPP initiatives in India. This contains:
- Government guidelines and knowledge products for use by PPP practitioners in various sectors.
 - Online PPP toolkits to help with improving decision-making for infrastructure and to structure better PPP projects.



- Mainstreaming PPPs - where support to state and central PPP Cells is provided through programmes using technical assistants and experts.
- Knowledge-exchange practices through exposure visits and knowledge-exchange programmes with other countries.
- Pilots - aim to ensure that PPP projects are well-structured, particularly challenging sectors, to develop demonstrable PPP projects, ensure successful bid processes and establish their replication potential.
- Knowledge products are developed to ensure a high standard of PPP implementation, such as: post-award management guidelines and manuals, reports frameworks for PPP contract renegotiation and a *green book* for the health sector.



CASE STUDIES

from India

Case study 1: PPPs in health financing: the National Health Insurance programme



India ranks very low in terms of health financial risk protection and most financing occurs through OOP payments by individual households at the point of service. The high OOP expenditure on healthcare represents a barrier to accessing care and can cause households to incur catastrophic expenditures, which, in turn, can push them into indebtedness and poverty. In order to reduce the burden of high OOP expenditures on poor households, the government of India has launched a national health insurance programme designed to improve access to quality medical care for informal workers living *below the poverty line* in India. It was launched in April of 2008 and is now active across all major Indian states.

The National Health Insurance Programme known as RSBY was launched by the government of India in October 2007 to provide BPL families with access, choice and financial-risk protection for inpatient healthcare, presently covering 200 million beneficiaries. The scheme provides annual cashless coverage up to INR30,000 (approximately US\$450) per family for inpatient treatment in more than 10,000 empanelled hospitals. In addition to the BPL, specific vulnerable groups are also designated for coverage: building and other construction workers registered with the welfare boards, licensed railway porters, street vendors, Mahatma Gandhi National Rural Employment Guarantee Act workers who have worked for more than 15 days during the preceding financial year, Beedi workers⁸ domestic workers, sanitation workers, mine workers, rickshaw pullers, rag pickers, auto and taxi drivers, and handloom weavers and artisans.

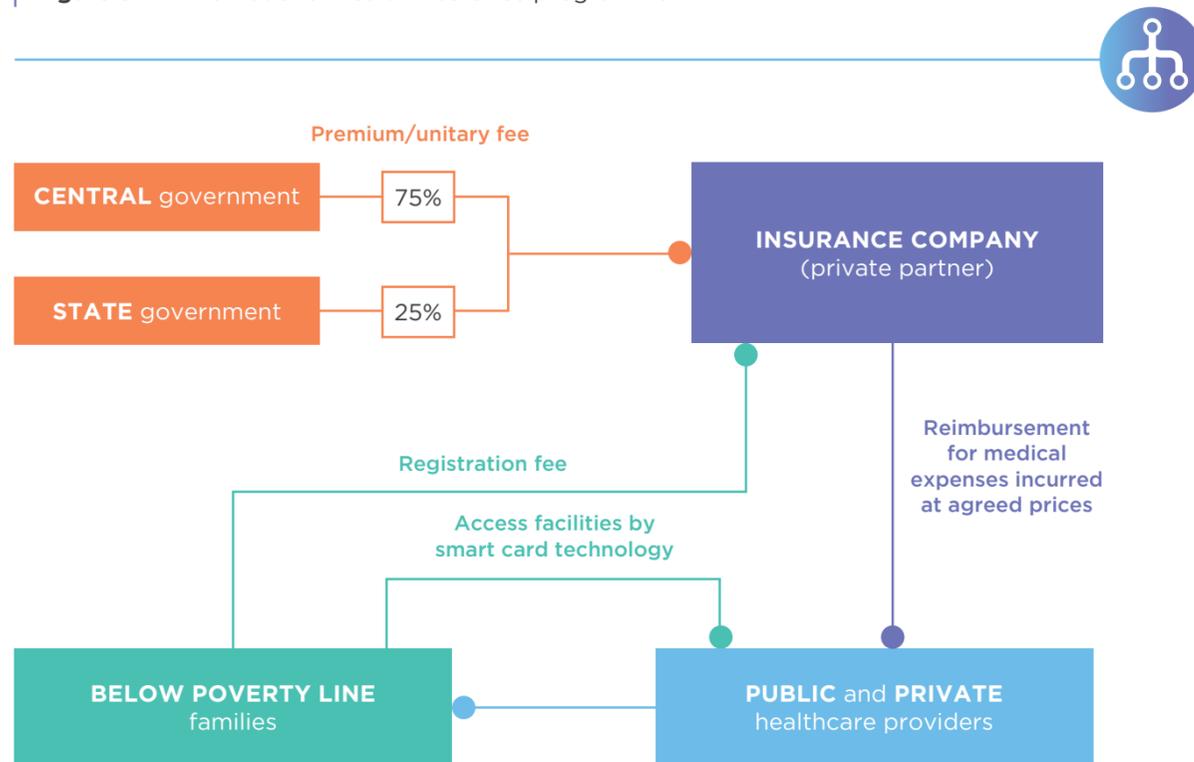
This programme is based on a PPP model and the financing is done by central and state governments. Health service delivery is provided by private and public service providers. Central government funds 75% of the premium and the remaining 25% by the state government. A nominal yearly adherence fee of Rs30 (roughly US\$0.5) per family of five is paid by the BPL household itself.

The programme has a strong emphasis on secondary care. The annual ceiling for a five-member household is Rs30,000 (US\$450). Benefits specified as a list of more than 1,150 treatment packages. There are fixed rates for each package, which are used for the reimbursement of providers empanelled under the programme. The treatment packages cover 17 different disease categories including all major hospitalisation episodes. The RSBY programme recently expanded to cover 11 more categories of people working in the unorganised sector (mentioned above).

⁸ Mostly female workers who produce a form of cigarette for sale.

Outpatient care is offered on a pilot basis under the scheme for a few special categories of people, such as weavers, where the providers get reimbursement in accordance with an outpatient benefit list. The schematic design of the programme is illustrated in **Figure 5.4**.

Figure 5.4: The National Health Insurance programme



The roles of various stakeholders:

- **Beneficiaries:** Initially the scheme targeted the BPL population alone. Now it has started expanding its coverage to include other occupational groups. Beneficiaries are expected to enrol in the scheme by paying Rs30 (US\$0.5) per family (for five members) for a year, receive a smart card, and then use the benefits when hospitalised in empanelled hospitals.
- **Non-governmental organisations:** NGOs are expected to create awareness among the community about RSBY and mobilise them for enrolment.
- **Insurance companies (both private and public sector):** Companies compete with each other for covering the eligible families in each state. The company with the lowest bid gets the contract for implementing the scheme in that specific state. Once selected, the company has to appoint smart-card agencies, work closely with the state government's nodal agency to identify the eligible households, empanel hospitals and contract NGOs to create awareness in the community.
- **Third-party administrators:** These are private agencies that help the insurance company to implement the scheme in the field.
- **Smart-card providers:** Provide the payment interface for the RSBY.

- **Empanelled hospitals (both public and private):** Once empanelled by the insurance company, they provide the necessary services to the RSBY beneficiaries. Their services are reimbursed by the insurance company via third-party administrators or directly.

- **State government nodal agency:** It is an independent body formed by the government which acts as the focal point for governing the programme. In most states it is led by the department of labour while in some it is the MOHFW. It initiates the process of introducing the scheme in the state, negotiates with the insurance company and monitors the enrolment and the utilisation. The state contributes 25% of the premium through this agency.

- **Central government:** The ministry of labour and employment launched the scheme and its main responsibility is to develop technical and administrative guidelines and market the scheme to the state governments. The central government contributes 75% of the premium to the insurance company through the ministry.

The MOHFW is the apex body of the scheme responsible for making the regulatory decisions of the scheme. While at the state level the state nodal agency implements the scheme. Insurance companies are chosen by the nodal agency through a competitive bidding process. The insurance companies are in turn responsible for empanelling and purchasing services from providers, pre-enrolment of beneficiaries and maintenance of the helpline number.

A monitoring committee within MOHFW reviews the progress and approves the proposals of the state for financing, empanelment and selection of insurance companies. The state government guides the state level of implementation through a public trust or society called the state nodal agency, which facilitates, monitors and evaluates the implementation of the scheme as per the national guidelines.

The insurance company ensures the quality of the network hospitals by following stringent empanelment criteria. The data of the scheme is available for all aspects of the hospital. The use of biometric smart cards for beneficiary documentation at the hospital, real-time data collection and subsequent analysis and monitoring is done by the insurance company, state nodal agency and the central government.

Case study 2: State health insurance programme for tertiary health care - the Rajiv Aarogyasri programme



The Rajiv Aarogyasri Health Insurance programme (Aarogyasri), initiated in April 2007, in the Andhra Pradesh and Telangana states of India is a popular form of social insurance implemented by way of the PPP model. It focuses on the coverage of catastrophic medical expenditures at tertiary-level care for the poor households below the poverty line. It is estimated that about 81% of the population in these states has BPL ration cards and therefore considered eligible to utilise the benefits. This scheme currently covers nearly 80 million people who live below the poverty line in 23 districts of Andhra Pradesh and Telangana.

Within Andhra Pradesh, catastrophic (inpatient) care through the Aarogyasri programme is provided primarily by private providers⁹, and administrative services are provided by a state nodal agency, the Aarogyasri Trust. Aarogyasri beneficiaries have access to facilities they would not otherwise be able to utilise due to the financial barriers to access. Aarogyasri is funded entirely from general tax revenue generated by the state of Andhra Pradesh. The government therefore takes care of the entire premium on behalf of the beneficiary.

The programme's focus on around 900 high-cost procedures (such as coronary bypass surgery, renal transplantation surgery and surgery for spinal cord tumours) reflects its aim of covering catastrophic illnesses that could potentially wipe out a poor family's savings. This sets Aarogyasri apart from many publicly-financed health insurance schemes around the world where benefit packages usually focus on cost-effective (and often low-cost) interventions.

⁹ The network does include some public facilities, but the majority of the network providers remain private facilities.

Aarogyasri levies no co-payments at the point-of-service for covered services. Enrolment is automatic for those with the BPL card. The programme has a sophisticated set of arrangements under which hospitals, both public and private, can apply to become empanelled, but not all those that apply are ultimately empanelled. Hospitals below a certain size threshold, for example, will not be accepted. Once empanelled, a hospital can be removed from the panel if its performance falls short of the standards set out in its contract.

In order to ensure the utilisation of the scheme by those below the poverty line, health camps are conducted by the empanelled hospitals to mobilise beneficiaries. At each camp patients are screened, tested and referred to a hospital when required. In addition, an Aarogyasri help desk is in place at primary health centres and government hospitals in every district. Operated by the insurance company, the desk also refers patients to hospitals in the network. In each instance, the hospital is selected by the patient or his/her family and hence there is an element of choice.

The management and oversight of the programme is performed by the Aarogyasri Trust, private and public sector hospitals and the insurance company. The trust acts primarily as an independent regulator and seeks to ensure that patient care is properly prioritised, while the network hospitals and the other private sector partners make a reasonable profit. The monitoring framework is supported by an information technology platform which enables the transfer of data in real time for pre-authorisation and monitoring. This has not only enabled an efficient operating system, but also provides a check against any unnecessary surgery or over-servicing.

Case study 3: Contracting-out of primary health centres



The contracting-out of primary health care centres (PHCs) is becoming a well-established form of PPP that many state governments are trying out with varying degrees of success, especially under NRHM.

In one of the good-performing models in the state of Odisha, an NGO contracted out some PHCs along with the sub-centres reporting to them. The PHCs selected were performing poorly, according to basic health and performance indicators. After consultation with the local community and local self-governments, the PHCs were handed over to the NGO, along with the land, building, equipment and furniture in their current state. The contract period was initially set for a period of two years (which was later renewed to three more years). The government staff were given the option to either join the NGO or remain posted at their present locations or continue with the government and get transferred to another location. Most of the staff were ultimately hired by the NGO.

In accordance with the agreement, the state covered 75% of the salary bill. The rest was borne by the NGO from its own resources. In addition to the salary, the government paid the NGO a fixed amount per month for administration and drugs. The state government later moved to paying the full cost for running the services based on the satisfactory achievement of the performance indicators. Apart from routine reporting by the PHC, as per the government reporting formats, the NGO also undertakes community monitoring, thereby building in community involvement in the management of the PHC and the sub-centres. This initiative provided an opportunity to leverage the ideas, resources and expertise of different partners in strengthening healthcare services for the people of Odisha. The government also ensures that there is monitoring and regular evaluation of the programme by a third party.

Case study 4: Merrygold Health Network and Life Springs Hospitals Network



The Merrygold Health Network (MGHN), launched in August 2007, is an innovative PPP implemented by the Hindustan Latex Family Planning Promotion Trust (HLFPPT) and supported by State Innovations in Family Planning Projects Services Agency (SIFPSA) and USAID. The HLFPPT is an Indian not-for-profit organisation. The MGHN project was implemented in 35 districts of Uttar Pradesh, based on the social franchisee model, to establish a sustainable PPP model in healthcare for the poor and marginalised population using a network of franchised hospitals offering quality reproductive and child health services at pre-fixed prices. The network is comprised of a hub-and-spoke referral system that runs bottom-up from the village to the district level. The key objectives are to:

- Leverage existing private healthcare infrastructure to complement the public health system;
- Increase system efficiency by combining the three domains of: service demand, service delivery (by leveraging existing private-sector infrastructure) and use of information and communication technology;
- Standardise services by ensuring uniform clinical and operational protocols;
- Implement quality assurance through a combination of regular capacity building of the clinical teams and regular medical audits;
- Improve the affordability of maternal health services obtained from private maternal health centres;
- Improve family planning through the implementation of a toll-free helpline for educating beneficiaries on family planning needs and choices;
- Reach out to the target population through marketing and promotion; and
- Access the wider benefits for franchisee and beneficiaries by back-end linkages and partnerships with government schemes like RSBY.

The hub-and-spoke model is made up of three tiers of referral - hospitals, clinics and community-based workers - for access to reproductive healthcare services:

- 1 Merrygold Hospital (level 1): based at district headquarters with a trained gynaecologist providing a full range of maternal healthcare services including caesarean sections and family planning services.
- 2 Merrysilver clinics (level 2): have appropriately trained healthcare service providers providing maternal healthcare services including normal deliveries, ante-natal check-ups and post-natal check-ups.
- 3 Merrytarang members (level 3): involves community-based workers responsible for spreading awareness about the need for quality maternal healthcare services and family planning.

LifeSpring was formed as a private limited company in 2008. It is a 50/50 joint venture between HLL Lifecare and the Acumen Fund. HLL Lifecare is a government of India enterprise (Mini Ratna Company under the MOHFW) providing contraceptives and other healthcare products and services. The Acumen Fund is a social venture capital firm based in the United States. The two partners jointly invested about US\$4million in the venture. LifeSpring offers pre-natal, delivery and post-natal services for outpatients and inpatients. It also offers laboratory, pharmacy and family-planning services. In addition, it has a community outreach programme to educate the surrounding communities on maternity and related health issues. Each hospital is typically a 20-bed facility with one general ward and two to three deluxe rooms. The mission of LifeSpring is to be the leading healthcare provider delivering high-quality, affordable core maternal healthcare to low-income mothers across India.

The goals are to:

- Operate small-sized maternity hospitals in the proximity of urban slums, catering to pregnant women whose husbands work in the informal sector and who have no health coverage;
- Provide core maternal healthcare at an affordable price;
- Maintain a very high level of quality control, continuously benchmarked with the best health systems in the world; and
- Serve patients as customers, and treat them with respect and dignity.

LifeSpring's twin focus on reducing costs and improving volumes ensured that its hospitals became profitable in two years. Mr Kumar, who is the driving force behind the organisation, opened the first 20-bed low-cost LifeSpring hospital in 2005. This was the pilot phase at Moula Ali, a low-income suburb of Hyderabad. The hospital broke-even in just 18 months. This was achieved with the support of the management at HLL Lifecare. The model was designed with the core customer base in mind, which is the bottom 60% of the Indian population. Most of LifeSpring's customers are employed in the informal sector.

Each consultation with a LifeSpring doctor is priced at Rs80 and paediatricians cost Rs100. A normal delivery costs Rs4,000 and a caesarean delivery costs Rs9,000 in the general ward. LifeSpring's prices are 30% to 50% lower than market rates. A tiered pricing model helps its commercial viability. Women, for instance, can choose to give birth in a general ward, semi-private room or private room. Rates will rise accordingly. LifeSpring's general ward, which makes up 70% of each hospital, is 30% to 50% cheaper than comparable market rates. Its private room is at par with the rest of the market. Normal deliveries, which cost Rs4,000, include the cost of a two-day stay in the hospital and includes medicines. The cost of the caesarean operation is a fifth of what is charged by private hospitals.

LifeSpring also provides paediatric care (including immunisations), diagnostic services, pharmacy services and health-care education to the communities in which its hospitals are located. Specialising in inpatient gynaecology and obstetrics leads to easy standardisation. It has over 90 standard procedures, including standardised surgery kits and clinical protocols. LifeSpring uses a narrow range of drugs and equipment for large numbers of repeat procedures and thus purchases standard equipment and generic medicines in bulk. LifeSpring's highly standardised processes allow for quality control and easy routines and replication by lesser-skilled hospital employees.

Case study 5: Contracting of dialysis centres in Andhra Pradesh



B. Braun is one of the leading companies in the field of healthcare in India, catering to therapeutic segments such as anaesthesia, surgery, interventional cardiology, orthopaedics, dialysis treatment and home care. They have entered into a PPP with state governments to provide dialysis through their centres in public hospitals.

This PPP approach began in the state of Andhra Pradesh and B. Braun is running and managing 11 haemodialysis centres within their medical colleges and hospitals with 111 haemodialysis machines. The PPP approach involves a seven-year build-own transfer model, based on which B. Braun brought in foreign direct investment.

Figure 5.5: Site visit by the Partnership to a dialysis PPP



The government of Andhra Pradesh has been providing basic medical treatment at no cost to patients living below the poverty line through the Aarogyasri health insurance scheme. The scheme indicated that a significant number of BPL patients needed dialysis services and that many state-run hospitals had little or no capacity to perform dialysis. Eleven dialysis centres have consequently been established in teaching hospitals and tertiary care centres in Hyderabad, Tirupati, Kurnool, Kakinada, Visakhapatnam, Guntur, Srikakulam, Anantapur and Vijayawada. Most of the patients who use these facilities are Aarogyasri beneficiaries. Services are free to patients and the cost of treatment per patient (Rs1,080 or US\$23) is paid by government to B. Braun (a portion also goes to the relevant medical college). The programme presently serves around 1,000 people per month.

Case study 6: Ambulance model of emergency response systems



The EMRI 108 is a contracted-out model and one of the most successful PPP models in India. The objective of the PPP is to provide access to emergency services through emergency/referral transport. The 108 Ambulance Service is a PPP between state governments and the Emergency Management and Research Institute (EMRI). The service provides complete pre-hospital emergency care from event occurrence to evacuation to an appropriate hospital.

The 108 Ambulance Service aims to reach patients/scenes within 20 minutes in urban areas and 40 minutes in rural areas. It also seeks to move the patient to the nearest hospital within 20 minutes after arrival at the scene. Emergency transportation is provided by state-of-the-art ambulances as a free service. The transportation is also coordinated by state-of-the-art emergency call response centres, which are operational 24-hours a day, seven days a week. The call to the number 108 is a toll-free service accessible from a landline and/or a cellphone.

Ambulances accommodate Indian cultural traditions through the inclusion of space in the back for both the paramedics and a bench for family members. The EMRI ambulance fleet includes basic life support ambulances (BLS) and advanced life support ambulances (ALS).

The private partner is responsible for the identification of the nearest patient pick-up points. It also assists the state government with the accreditation of hospitals that are able to provide various levels of emergency care. Both public and private hospitals that meet the minimum criterion for emergency care can be empanelled under the scheme.

To strengthen the hospital-level emergency care, the private party arranges for the training of government and paramedic staff. The state government is responsible for promotion of the scheme. The private party is directly responsible for patient transport and in-transit stabilisation. Empanelled hospitals are contracted to the private party and are responsible for the stabilisation of the patient free of cost. After stabilisation, it is the patient's/attendant's choice whether to stay in the same hospital for further care or to shift to another hospital. Transportation for shifting is however not provided by the private partner.

Figure 5.6: Site visit by the Partnership to EMRI 108 control centre in Bengaluru



Under the scheme, the private partner is contracted for a period of five years. The ambulances are purchased by the state government and handed over to the party to operate. The specifications for the ambulances are provided by the private party. The government also makes available the land and infrastructure to set up the state-specific call centre to service the emergency calls and direct the nearest ambulance to pick up and take the patient to the nearest empanelled hospital. The software is provided free of cost by the private party. The government also provides a toll-free telephone number for the emergency calls applicable throughout the state. Ambulances are inducted into the scheme in a phased manner.

To finance the PPP, the government fronts all the funding for the procurement of ambulances and infrastructure and 95% of operating expenses. The remaining 5% comes from the private partner EMRI as their share in the PPP initiative.

The scheme has a separate state committee to supervise operations. They have full access to the books of accounts and other operational records. The scheme is designed to run on a no-profit-no-loss basis. The private party has to report to the state government in the form of daily (operational), monthly (administrative and financial) reports and quarterly (fund utilisation) statements. The state government is also contractually bound to provide legal protection to staff engaged by the private party for the purpose of emergency transportation and care under the scheme.

The scheme has however been criticised for poor transparency and the absence of an independent monitoring system to validate data provided to the government by the private party. Nevertheless, the PPP has been very successful and has consequently implemented in multiple states.

Case study 7: Fixed day health services through mobile medical units



One of the strategies adopted by the NRHM, falling within the 104 Services programme, was to improve service provision in difficult and inaccessible areas through the implementation of mobile medical units (MMUs). In most states, MMUs were implemented in partnership with private providers and fixed day health services (FDHS).

The 104 Services were initiated in Andhra Pradesh in 2007 as a PPP initiative with the Satyam Foundation. These initially focused on the provision of health information helpline services through NRHM, Pradesh state and the Health Management Research Institute (HMRI), and a private partner.

Figure 5.7: Mobile medical unit in rural India



The main purpose of the health information helpline was to assist people in the rural and interior areas facing difficulties getting access to qualified doctors and in need of health-related information. The health information helpline therefore provides health advice to callers to bridge information gaps and provide information on referral services. The *104 Advice Health Information Help Line* (HIHL), as it is commonly known, is drawn from the United Kingdom-based approach to the provision of healthcare advice through telephonic consultation.

In 2008, the FDHS was introduced as the second component of the 104 Services. This was designed as a once-a-month fixed day health service delivered through a MMU that provides people in rural areas with a package of services for the identification, diagnosis, monitoring and treatment, record keeping and referral of high-risk cases to higher-level healthcare facilities. There are around 475 MMU vans distributed across 22 districts and 22,501 service points. The FDHS service was initiated as a pilot project in four districts of Andhra Pradesh with 100 vans (and later expanded).

The FDHS was launched on the premise that PHCs are only providing services to the village in which they are physically located. All villages which are beyond 3 km to 5 km of a PHC do not get adequate cover for most clinical services.

The FDHS MMUs are equipped with an ultrasound machine, an extended roof canopy, basic laboratory equipment to perform basic laboratory tests, a cold chain unit to store vaccines and blood samples, and a laptop computer to enable store-and-forward technologies for improved beneficiary profile tracking. The vehicles also have a video projection system for public health education. The MMUs visit a service point monthly and deliver the pre-determined package of services to care-seekers of an approximate population of 1,500 over a period of four hours. The FDHS MMUs provide three core services: pregnancy monitoring, child growth monitoring and the monitoring of chronic diseases.

The PPP model envisages that the private party procures and equips the vehicles in accordance with the prescribed design and links the van with the HIHL. Along with this, the relevant state nodal agency monitors the scheme through a daily online reporting system with respect to drug consumption, accounts and funds received from the government, quarterly utilisation certificates and expenditure statements.

The capital expenditure for the 104 technology platform and 104 MMUs is provided by government. The state government provides 95% of the operational funding and HMRI 5%. The capital expenditure borne by the government of Andhra Pradesh includes the expenditure on the procurement of 475 vehicles and buildings for the support of operations.

Case study 8: Public-private partnership in the National AIDS Control Programme



Although the Indian government has initiated several HIV- and AIDS-related interventions, related service delivery has increased rapidly since 1995. This is mainly due to international funding becoming available through *inter alia* the World Bank. In the third phase of the NCAP, 80% of the funds have come from outside India - from the World Bank and other international organisations, governments and philanthropies.

The National AIDS Control Organisation (NACO) provides 80% of its funds to NGOs and 20% to private and academic sectors. Government's partners in the NACO include:

- The multilateral and bilateral development agencies in implementing a comprehensive national AIDS control programme;
- The United Nations Programme on HIV and AIDS and its nine United Nations co-sponsors;

- The International AIDS Vaccine Initiative and the Indian Council for Medical Research to develop a vaccine for the HIV sub-type most prevalent in India and with the Centre for Disease Control, Atlanta;
- Industry coalitions and the private sector;
- Paramedical fraternities such as the Indian Red Cross;
- The Global Fund on AIDS, TB and Malaria; and
- The Bill and Melinda Gates Foundation.

To strengthen the response to HIV and AIDS at the workplace, NACO also collaborates with the International Labour Organization, the ministry of labour and employer and worker organisations.

At the micro level, the state AIDS Control societies and the various other development agencies working in the respective states are partnering with networks of HIV positive people, NGOs, community-based organisations (CBOs), women's groups, self-help groups and faith-based organisations. In 2006, CBOs/NGOs were involved in 1,080 projects. Over 3,400 NGOs are currently involved in HIV programmes for prevention, care and support, while positive people networks have been established and/or strengthened in 22 states and 221 districts. In addition, there are plenty of NGOs/CBOs involved in HIV and AIDS with the financial assistance from various funding agencies. The private for-profit business organisation's involvement in HIV and AIDS interventions treatment, *integrated counselling and testing centre* services and other preventive interventions are also increasing.



OVERVIEW

Public-private partnerships in South Africa can be viewed through two broad lenses consistent with the conceptual framework discussed in **chapter 3**. First, there are partnerships focused on specific project-type interventions, such as the building of a facility and managing the assets; and second, there is the regulatory framework to enable fair and affordable access to private health services through the use of private health insurance (as a substitute for public-sector coverage). Both forms of PPP are discussed as case studies in this chapter.

METHODOLOGY

This chapter is broadly divided into three sections. The first deals with the over-riding context for PPPs, including relevant socioeconomic features and the main elements of the health system. The second focuses on formal PPPs (i.e. those implemented as projects), with a particular focus on the health PPP projects implemented. Three health projects are presented in more detail as specific case studies. Third, the regulatory framework for private health financing is discussed as a fourth case study.

The case studies are presented principally as illustrative examples that add to the variety of possible projects that can be considered within an innovative policy framework. The source material for the case studies includes published literature and available official reports. The reviews lead to a number of findings that can serve as advice to other developing countries, especially in sub-Saharan Africa on approaches to PPPs.

CONTEXT

General features

According to standard economic criteria, South Africa is a high-income country with a well-developed infrastructure, with nearly 70% of the population urbanised and deep and liquid capital markets. However, it is also one of the most unequal economies in the world with a post-tax Gini coefficient of 0.7, with unusually high levels of structural unemployment (around 36%) and poverty (around 50%).

The country is a constitutional democracy following the removal of Apartheid in 1994. Arising from the new constitutional dispensation implemented in 1996, it has three tiers of government – national, provincial and local/municipal. There are nine provinces and 52 municipal governments. There are also three branches of government that make up the state, the judiciary, the legislature and the executive.

Figure 6.1: Location of South Africa



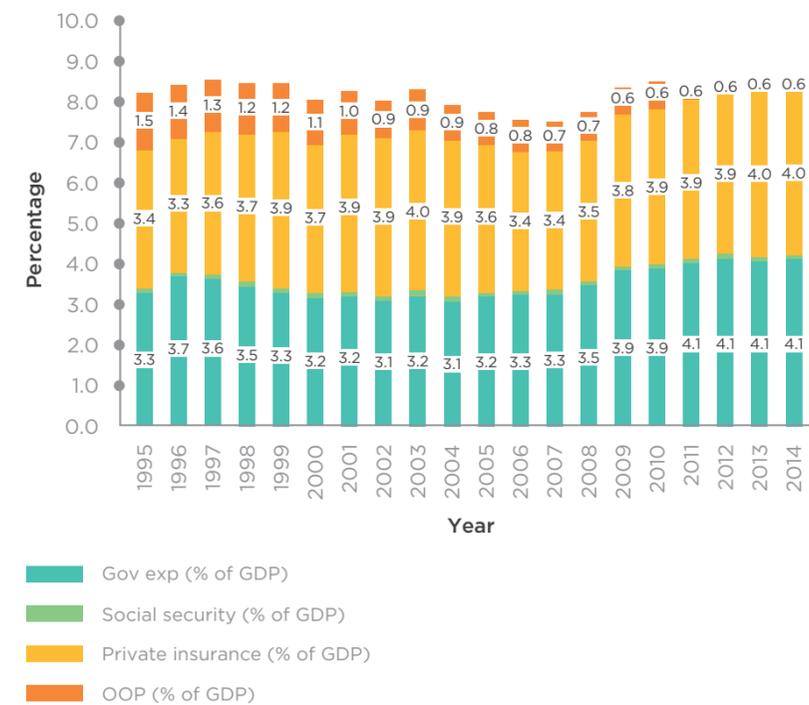
Health system

The constitutional dispensation implemented in 1996 adopted healthcare as a right, specified in section 27 of South Africa's Bill of Rights [21].

"Everyone has the right to have access to ... health care services, including reproductive health care ... The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights ... No one may be refused emergency medical treatment."

The health system is comparatively well developed with the combined coverage of the tax-funded public system, social insurance arrangements and regulated contributory private health insurance offering near universal coverage. South Africa spends around 8.8% of GDP on healthcare, which is high for a country of its level of development, with 4.1% in the public sector and 4.0% through private insurance (the main vehicle referred to as medical schemes). Out-of-pocket expenditure is relatively low and estimated to be in the region of 0.6% of GDP (Figure 6.2).

Figure 6.2: South Africa - National Health Accounts [18]



While the public health system applies a means test for access to free hospital care, primary care is universally free [22]. Nevertheless, approximately nine million out of a total population of 56 million choose to get all their coverage and services in the private sector - most of it through some form of pre-payment via medical schemes. Medical schemes are required by law to be not-for-profit, but are administered by third-party administrators that are for-profit.

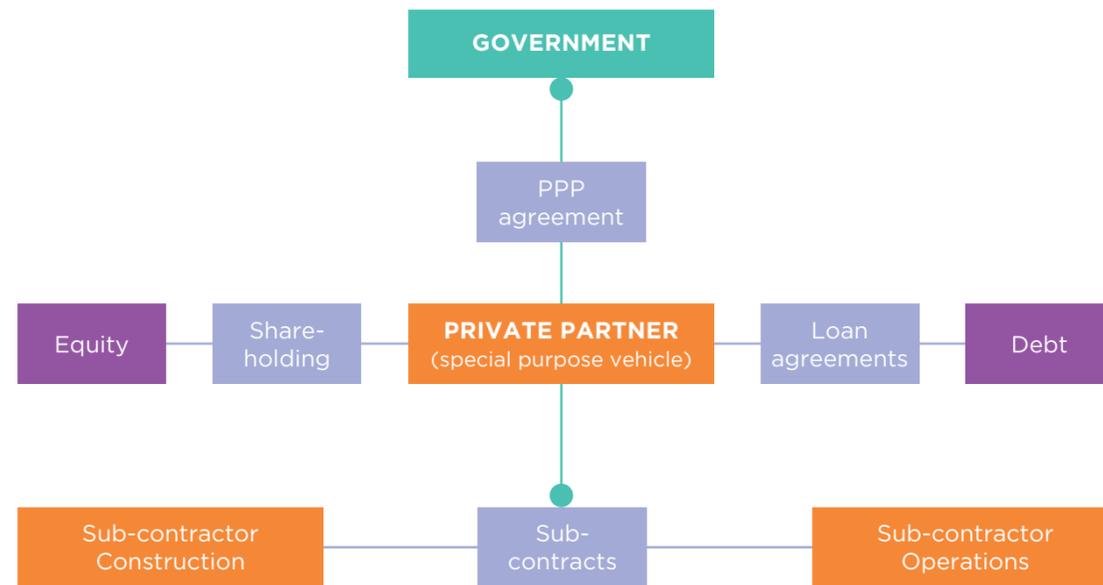
The system of medical schemes forms part of a regulated health insurance market which predominantly offers coverage to families of formal sector income-earners. Medical schemes are either employer-based, industry-based or open to all applicants. The former two types are referred to as restricted schemes as they only accept membership applications from people in a designated employer or industry. Open schemes must however accept applications from any person wishing to join. A regulatory framework is in place which mandates minimum benefit requirements and prohibits any explicit discrimination against any person on the basis of their health status.

FORMAL PUBLIC-PRIVATE PARTNERSHIPS - CASE STUDIES 1 TO 3

Institutional framework for public-private partnerships

South Africa has implemented a regulatory framework for PPPs which came into effect in the early 2000s, enabled through the *Public Finance Management Act of 1999* (PFMA) [23]. To support the implementation of PPPs, a PPP unit was established within the National Treasury which supports all projects from inception to closure. In addition to the technical expertise available at the national level of government, materials in the form of guidelines and practice notes are developed and made available.

Figure 6.3: Generic PPP agreement framework

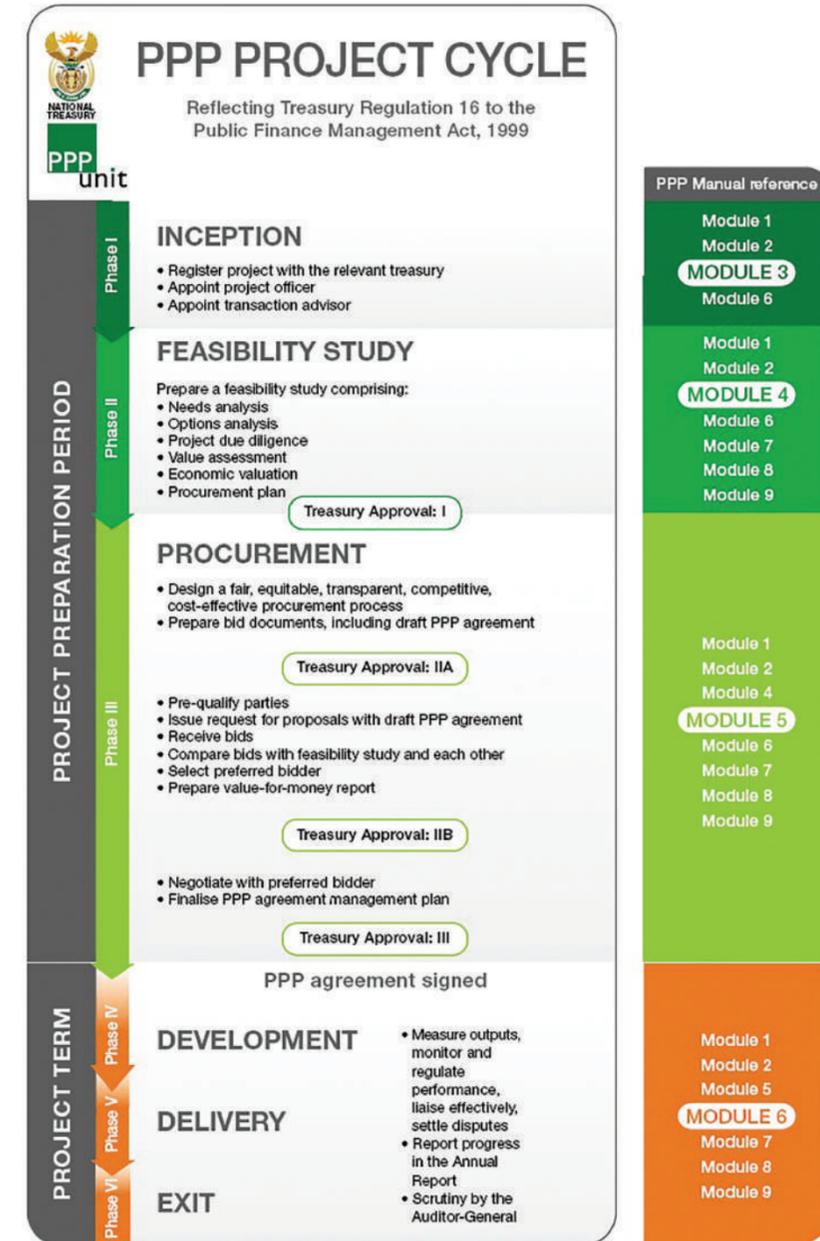


Source: [24]

The development of the policy framework began in April 1997 when the South African Cabinet appointed an inter-departmental task team to develop policy, legislative and institutional measures to establish an enabling environment for PPPs.

Initial PPP projects were undertaken between 1997 to 2000 by the South African National Roads Agency for the N3 and N4 toll roads (national roads), the departments of Public Works and Correctional Services for two maximum security prisons, two municipalities for water services, and by South African National Parks for tourism concessions. Using lessons from these projects, together with international experience, a strategic framework was adopted by government in December 1999 and in April 2000 in accordance with Treasury Regulations for PPPs issued in terms of the PFMA.

Figure 6.4: The PPP project cycle as required by National Treasury



Source: [24]

By mid-2000, together with technical assistance funding from international development agencies, the PPP Unit was established in the South African National Treasury with five professional staff drawn from both the public and private sectors.¹⁰ From March 2003, regulations were promulgated for PPPs initiated by municipalities.

¹⁰ Information provided by National Treasury: <http://www.ppp.gov.za/Pages/About.aspx>

In total there are 71 projects active or closed to date¹¹. The range of project areas include: transport, accommodation, education, energy, fleet management, health, housing, independent power production (renewable energy) and information technology. The generic contract agreement framework is illustrated in **figure 6.3**.

Health public-private partnerships

Given the size and well-developed features of the private health sector, the South African government initiated a number of health-related PPPs from early 2000 using the PPP regulatory framework. To date, eight major projects have been initiated, seven of them within five provinces and one at the national level. Projects fall roughly into five categories: facilities management, asset financing and maintenance, co-location¹², specialised renal care and concessions.

- **Western Cape:** Rehabilitation and Lentegeur Hospital – covers hospital facilities management. Project period: 2006–2018.

- **Kwazulu-Natal:** The Inkosi Albert Luthuli Central Hospital – asset financing and maintenance and management functions. Project period: 2001–2017.

- **Free State:** Universitas and Pelanomi Hospital – co-location and clinical care management. Project period: 2002–2017.

- **Eastern Cape:** Humansdorp District Hospitals – provision of clinical and facilities management services. Project period: 2003–2024.

- **Eastern Cape:** Port Alfred and Settlers – co-location. Project period: 2006–2034.

- **Limpopo:** Limpopo Polokwane Hospital Dialysis – provision of specialised clinical care renal and peritoneal dialysis. Project period: 2006–2016.

- **Limpopo:** Phalaborwa Private Hospital – concession. Project period: 2011– 2026.

- **National:** National State Vaccine initiative. Project period: 2003–2010.

Case study 1: Rehabilitation and Lentegeur Psychiatric Hospital



The Lentegeur project involves a single PPP for two service areas – rehabilitation and psychiatric care – available on the Lentegeur hospital complex. The hospital complex is laid out on a site that is 104 hectares, located in the area called Lentegeur within the Western Cape province, with 34 clinical units (wards) and 20 non-clinical units (buildings) [25].

Rehabilitation services are provided by the *Western Cape Rehabilitation Centre* (WCRC) with 208 beds, which offers a comprehensive, interdisciplinary approach to rehabilitation services for physically disabled patients on an in- and out-patient basis. The main focus of the WCRC is to reintegrate patients back into the community and enable patients to be independent. Services include personal care, work assessment, daily living activities and socialisation. There are three large therapeutic blocks each serving clients from the adjacent two wards. Clients are managed by interdisciplinary teams consisting of *inter alia* medical, nursing and therapeutic staff together with

¹¹ As indicated on the PPP Unit website: <http://www.ppp.gov.za/Lists/PPP%20Project%20List%20Master/Master%20Project%20List.aspx?SortField=Department&SortDir=Asc&View=%7b7D8DB8FE-901F-40D3-A0DC-56A347BD811F%7d>.

¹² Co-location projects involve a private health service provider using public facilities for their private patients. At essence this is a form of lease arrangement.

social workers. Clinical psychology, dietetics and speech therapy services are rendered transversally across the site [25].

Table 6.1: Services provided by the private party to LPH and WCRC



SERVICE	LPH	WCRC
Soft facilities		
Catering	Yes	Yes
Cleaning	Yes	Yes
Grounds and gardens	Yes	Yes
Linen and laundry	No	Yes
Pest control	Yes	Yes
Security	Yes	Yes
Utilities management	No	Yes
Waste management	Yes	Yes
Helpdesk services	Yes	Yes
Hard facilities		
Medical and therapeutic equipment (procurement, maintenance, and replacement)	No	Yes
Estate maintenance and non-medical equipment (procurement, maintenance and replacement)	No	Yes

Source: [25]

Lentegeur Psychiatric hospital (LPH) is the largest psychiatric hospital in the Western Cape province of South Africa with a capacity of 788 usable beds. Of these, 398 are dedicated to intellectual disability services and 390 to psychiatric services. The hospital has 34 clinical units (wards) and 20 non-clinical units (buildings). The latter includes a hostel, crèche, mortuary, laundry, kitchen, stores, pharmacy, transport section and workshops. The main clinical service areas are: general adult psychiatry (males and females), child and adolescent psychiatry, forensic psychiatry and intellectual disability services. Patients are managed by multidisciplinary teams consisting of psychiatrists, registrars, medical officers, psychologists, nurses, social workers, occupational therapists, physiotherapists and a dietician [25].

The PPP involves the contracting out of the hard and soft facilities-management services to a private partner (in

the form of a consortium) for both rehabilitation and psychiatric services located on the same site. The contract period is from 2006 to 2018. Although categorised as a PPP, the agreement could simply be seen as a contract for outsourcing non-core (non-clinical) health services to a private sector consortium. It however differs from standard outsourcing through the extensive bundling of virtually all non-core services into a single contract (consistent with the PPP definition in **chapter 2**). **Table 6.1** indicates the list of non-core services included in the contract.

The contract specifies output parameters, in exchange for a single unitary fee, which must be achieved by the private partner or face the application of financial penalties. A call centre is available where staff members can log a concern related to the specific non-core services. The private partner is contractually obligated to respond to logged calls within specified time periods (response times are automatically calculated from the time a call was logged). In addition to staff, contract managers review the facility at all times and log their own calls. Routine monthly meetings are held to deal with any issues arising from the PPP. Disputes also follow an escalation mechanism. All processes are documented and discussed.¹³

The rationale for the PPP was to keep the focus of hospital management on managing patients rather than non-core services. While the outsourcing was not new, the specific PPP arrangements were. Two advantages have been highlighted. First, the bundling of the contracts simplified contract management – now involving only one party for the public party to deal with. Second, the contract compliance mechanisms were specified across all non-core services using a single tracking and enforcement mechanism – streamlining contract management.¹⁴

Case study 2: The Inkosi Albert Luthuli Central Hospital



The Inkosi Albert Luthuli hospital (ILH) is a substantial undertaking, with a fairly long history behind its establishment. It is a central academic hospital with 839 beds that provides highly specialised services to the entire province of KwaZulu-Natal as well as populations residing outside of the province – in particular, the province of the Eastern Cape.

The partnership has been entered into to deliver non-core clinical services. In terms of the agreement, the private partner is responsible for the following [26]:

- The supply of state-of-the-art equipment and information management and technology systems, and replacing the equipment and systems so as to ensure that they remain state-of-the-art;¹⁵
- The supply and replacement of non-medical equipment;
- The provision of all services needed to manage the hospital's assets in accordance with best industry practice;
- The maintenance and replacement of the departmental assets in the hospital;
- The provision or procurement of utilities and consumables and surgical instruments; and
- The provision of facilities management services.¹⁶

¹³ From discussions with members of the national PPP unit.

¹⁴ From discussions with members of the national PPP unit.

¹⁵ This includes management of all hospital computer servers, desktops, mobile units, printers and the systems, including software and networking. With more than 1,500 personal computers, this is the first paperless hospital in the southern hemisphere. (ILH website: <http://www.ialch.co.za/index.php/about-us/ct-menu-item-7>).

¹⁶ These include: building maintenance, specialist engineering services, procurement, central and satellite stores management, a 24-hour/365 days central helpdesk, all soft facilities management services including security, management of CSSD and TSSU services, catering, cleaning, patient portering, landscaping, parking, waste management, management of crèche, a 465-bed residential village and retail units. (ILH website: <http://www.ialch.co.za/index.php/about-us/ct-menu-item-7>).

Five reasons were provided for the decision to proceed using a PPP [26]:

- The limited available funding¹⁷ within the health department for the replacement of equipment;
- The need to ensure that cutting-edge technology is made available;
- The lack of expertise within the public sector in facilities management;
- The lack of expertise within the public sector, even in the *State Information and Technology Agency*, to sustain ICT systems; and
- A desire to outsource non-core functions so that the department could focus on the core medical functions of the hospital (i.e. a similar rationale to that for the Lentegeur PPP discussed above).

The implemented PPP therefore has three main components:

- Facility management – hard and soft;
- Information communication and technology systems – installation, maintenance, management and refreshment; and
- Medical equipment – installation, maintenance, management and refreshment.

The ICT systems include the implementation of a paperless patient administration and electronic record system.

Figure 6.5: Terminal for electronic patient records at ILH



¹⁷ This rationale relates to the tendency for budgets for facilities maintenance to generally go unprotected. The PPP, through its reciprocal obligations, ensures that maintenance is both funded and carried out.

A key difference between the ILH and the Lentegeur PPPs is that patient administration (electronic records) and financial management systems are included. This increases the ability of the hospital to efficiently manage services not belonging to the PPP. For instance, the information system allows for more effective decentralised management by *domain* within the hospital. The main domains are management, medical, surgical, peri-operative and professions allied to the medical support domain.

To ensure that all staff are able to use the electronic patient administration system, including the electronic records, no nurse or doctor is permitted to begin employment before they've undertaken a two-week training course on the system.¹⁸ Terminals (**Figure 6.5**) into the system are distributed to all sites within the hospital, including boardrooms.

The PPP covers all equipment, including the most advanced radiological items. State-of-the art radiological equipment, including CAT¹⁹ and PET²⁰ scanners are therefore maintained by the private partner. However, the latter are only operational for half the day as they rely on nuclear material supplied by a cyclotron located in the province of Gauteng.

Figure 6.6: PET scanner at ILH - purchased and maintained by the PPP



As a consequence of this, PPP clinical staff at the hospital face virtually no downtime resulting from equipment failures or failures with patient administration. The operational performance of the hospital is superior to other public hospitals in South Africa according to the staff, and potentially better than private sector facilities offering the same care.²¹

¹⁸ From discussions with the national PPP unit.

¹⁹ Computed tomography scanner.

²⁰ Positron emission tomography scanner.

²¹ From discussions with the national PPP unit.

Case study 3: Limpopo Polokwane Hospital dialysis



This project involved the implementation from 2006 of a new 24-hour functional renal dialysis unit at the Polokwane (tertiary) hospital in the province of Limpopo. This unit now serves as the referral point for acute and chronic renal failure from all provincial hospitals in Limpopo. The PPP however only covers *peritoneal dialysis*.

The original idea was for the new renal unit to implement a minimum of 22 renal dialysis machines, up from four available (only able to treat roughly 10 patients a day) in 2005. While this target was achieved in the original PPP, the number of machines has subsequently increased to 25.

Prior to the establishment of the PPP, Limpopo referred the overflow patients (that could not be treated using the available four machines) to the services provided in another province, Gauteng. Patients consequently faced travel constraints and limits on the availability of Gauteng's renal services. The rationale for the PPP was to establish and maintain a service which, if implemented without a PPP, would exceed the capital funds available and the management capabilities of the hospital. Without the PPP, therefore, the province would not have been able to expand its renal services.

The PPP involves both *technical* and *service* components for a project with a 10-year life-span.²²

Technical requirements require the private partner to:

- Upgrade the existing facility;
- Demolish a portion of the existing prefabricated building;
- Construct the extended section (for housing the new services); and
- Supply the necessary services (e.g. water, sewerage, power, access and parking) to the extended section.

Service requirements of the private partner include:

- Design the renal unit according to international standards, but only within the physical area identified by the hospital for the unit;
- Ensure that the renal unit is operational during agreed hours;
- Provide well-qualified staff to operate the unit at all times according to both national and provincial policies;
- Take transfer into the private partner of provincial (government) staff to run the unit and train them to meet basic entry qualifications;
- Ensure that the unit is at all times operational to meet the demands placed on it by the province;
- Ensure that equipment is fully operational and, in the event that machines are out of service, that appropriate measures are taken to ensure that patients receive uninterrupted treatment;
- Take full responsibility for the ongoing maintenance of all equipment used in the unit;

²² This information provided by the national PPP unit.

- In the event that the unit cannot provide treatment, *for any reason*, that the private party shall, at its own expense, make alternative arrangements to ensure compliance with the service specifications;
- Ensure the renal unit operates within the policies of the Limpopo Department of Health (LDOH); and
- Ensure a competent supervisor is available at all times.

The obligations of the public party (the LDOH) are to:

- Make available the designated area within the boundaries of the Polokwane Hospital for the establishment of the unit; and
- Provide metered water and electricity, as well as waste services, porter services, patient registration, patient files and related documentation in line with provincial policies.

In addition to the above, provision of the following are also provincial obligations: laboratory services, medical approval of patients for entry into the dialysis programme and all transport to and from the unit.

The range of services required of the private partner at project inception included:

- 16 machines for chronic patients, two machines for septic patients, four machines for acute dialysis and the provision of all consumables related to haemodialysis, including but not limited to: filters, bloodlines, haemodialysis solutions, intravenous lines and fluids and miscellaneous related consumables;
- the provision of all medicines directly related to the haemodialysis process, but excluding all chronic medication including any TTO²³ medication; and
- the provision of information on each patient (public and private) to the province.

The private partner is also not required to provide services to patients in the hospital's general wards or the outpatient department.

Aside from the successful expansion of services (a clear gain for the Limpopo province), the operational efficiencies of the project distinguished the service from other public services both in the province and the rest of South Africa. In particular:²⁴

- There are no medicine stock-outs;
- Equipment downtime is virtually zero - with replacements or repairs occurring within 24 hours when required;
- Any downtime due to unforeseen factors (e.g. load shedding²⁵) is compensated for by working extra hours;
- Patients are given personal attention and followed up at home if anyone misses an appointment;
- The private party's staff join in with the rest of the hospital's staff on general activities (celebrations, etc.) and have a good relationship with the public party; and
- Any problem of any nature is resolved collectively and immediately.

²³ To-take-home.

²⁴ From discussions with the national PPP unit.

²⁵ These were planned electricity blackouts that occurred over a 12-month period resulting from power station downtime due to maintenance and the slow delivery of new power stations for the electricity grid. These blackouts were therefore not under the control of the private party.

In addition, the hospital (within which the PPP is located) is also proud of the PPP and showcases it regularly to interested visitors. The staff employed by the private partner also all originated from the public partner and were trained and developed by the private partner. The employability of the staff has therefore increased. Staff retention has also been high. It is noted that successful retention has not been exclusively about financial reward, but principally about the positive work environment.²⁶

Case study 4: Private health financing as a form of partnership

BACKGROUND

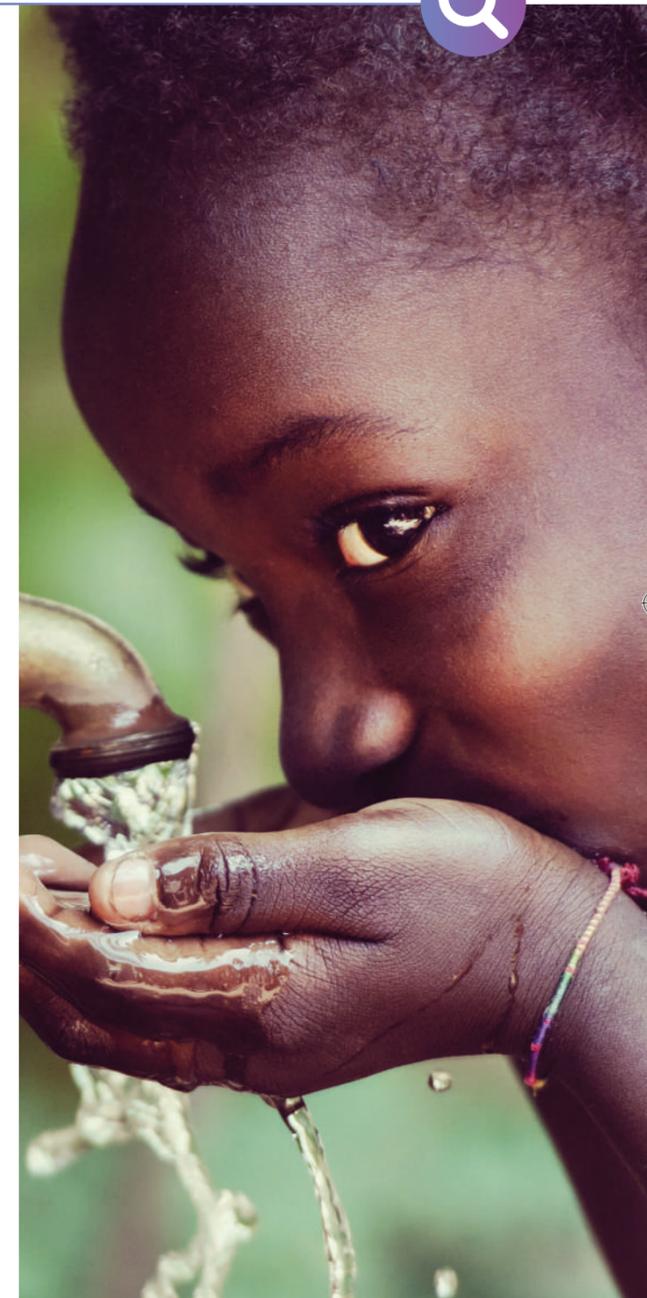
A system of health insurance, or coverage based on the payment of some form of contribution, that supports UHC can take one of two basic forms. Either a public scheme is established where participation is mandated, or a regulated market is established where access to coverage is protected and participation either mandated or quasi-mandated. A quasi-mandate occurs where non-participation is penalised, either through waiting periods or premium loadings²⁷, and participation is actively incentivised through contribution subsidies of one form or another²⁸. In developing countries, it is not possible to create universal coverage for the entire population through a single scheme, either in the form of a tax-funded free public scheme or a national insurance scheme. Universal coverage is therefore often achieved through a combination of schemes in such a way that a fair system of cross-subsidies from high- to low-income groups, and from low- to high-risk groups, is protected at a societal level.

Two major forms of health coverage have evolved over a fairly long history in South Africa. A free publicly-funded health service available to all people earning below a specified income (roughly US\$438 per month) and their families, and a quasi-mandatory private health insurance system made up of medical schemes. The regulation of private health insurance in South Africa has changed considerably over the years and has not always complied with the principles of UHC. Nevertheless, South Africa offers some insights into the role that regulated health markets can play in the expansion of health coverage. In this instance, the notion of partnership is achieved through the use of regulations and associated oversight to get a market to serve a public purpose it would otherwise not be able or even willing to do.

²⁶ From discussions with the national PPP unit.

²⁷ These are required to protect health insurers from anti-selection, where individuals choose insurance coverage only when they need to make a claim. Such anti-selective conduct can be either of a hit-and-run nature, where an acute healthcare need is involved, or long-term, where people wait to take out coverage only when older and generally sicker.

²⁸ These can include tax subsidies, such as tax credits or rebates, or direct or indirect financial transfers to households. These subsidies serve to make the contribution cheaper and can also be used to provide income-based transfers from higher- to lower-earning families.



Historical developments to 1998

What are now referred to as medical schemes have been around a long time in South Africa. The first recorded scheme was established by the De Beers mining corporation in the 1880s. The schemes emerging from that time largely took the form of mutual funds – often established in the absence of any specific legal framework for health insurance. Schemes were often controlled by employers, their members or both. Commercially-driven health insurance only began to emerge in the 1980s and early 1990s [9].

Aside from the mutual funds (referred to here as medical schemes), so-called benefit funds were established by groups of general practitioners who received contributions in exchange for access to their services. These arrangements had however largely disappeared by the late 1980s, overtaken by medical schemes that offered comprehensive coverage from primary to tertiary care [9].

The existence of medical schemes that offered comprehensive coverage to virtually the entire formal income-earning segment (and their families) of the population, led over time to the development of a comprehensive private healthcare provider system. Initially, over the period 1948 to 1985, medical schemes focused principally on reimbursing the professional fees of doctors (both general practitioners and specialists) rather than *private* hospital-based services. Initially the *public* hospital service was used by medical scheme members – who were required to pay for services, mostly financed through their medical scheme. However, from 1985, a private hospital system rapidly began to emerge – established by doctors. So rapid was the shift that by the early 1990s, medical scheme members had virtually ended all use of public hospital services [9].

The emergence of a fully private health system (both insurance and provision) from the mid-1990s resulted in structural changes in the cost of coverage. This trend, together with the emergence of commercial competitive health insurance, in the form of open (to individuals) or multi-employer schemes, generated incentives for the market to shift away from traditional employer-based schemes. While medical schemes remained mutual, or not-for-profit, for-profit third-party administrators emerged with incentives to capture the coverage offered by employer schemes.

This was achieved through persistent lobbies to the government to do away with certain social protections, such as community rating²⁹ and mandatory minimum benefits, embedded in legislation from 1967 to 1989 which favoured employer schemes. *Community rating* regulations in place prohibited the structuring of contributions/premiums on the grounds of health status. The mandatory benefits regime prevents commercial schemes from (price) competing merely through offering reduced coverage. From 1989, the market for medical schemes was however de-regulated to allow contributions/premiums to be structured in a manner that discriminates against beneficiaries on the basis of their health status. Just prior to the first democratic elections in 1994, the market was further deregulated to remove the mandatory requirement for minimum benefits.

Reintroduction of social protections – the period from 1998

The deregulations of 1989 and 1994 had fairly predictable effects – with a rapid closure of closed (employer-based) schemes in favour of open and multi-employer (commercial) schemes. Employer-based schemes went from covering more than 50% of all beneficiaries to under 30% in four years. Employers often took advantage of the shift to open or multi-employer schemes to renege on post-retirement obligations. Open or multi-employer schemes could refuse to cover older or sicker individuals or groups, or at least charge them far more (than they could afford) for coverage. Where a retiree could no longer afford a medical scheme, the employer no longer felt obliged to pay the post-retirement medical scheme contribution subsidy they had promised [9].

²⁹ Community rating refers to the setting of contributions based on the community in the risk pool, i.e. without reference to the health status of the individual.

From 1998, medical schemes were re-regulated to protect the coverage of families compelled to make use of open schemes. This involved five key reforms [9]:

- First, medical schemes were prohibited from determining contributions based on the health status of beneficiaries. Schemes could vary contributions based on income and number of dependents.
- Second, open medical schemes were prohibited from refusing membership based on any person's health status. Schemes could also not terminate the membership of any person on the grounds of their health status.
- Third, all medical schemes had to cover a full set of benefits defined around catastrophic health conditions.
- Fourth, to mitigate against the anti-selection incentives inherent in the voluntary nature of the system, a set of waiting periods³⁰ and late-joiner penalties were introduced.
- Fifth, an independent regulator of medical schemes was established to oversee the industry. This included a complaints regime to permit any person and, in particular, medical scheme members to enforce their rights.

Despite the voluntary (from a membership perspective) nature of this regime, which largely took effect from 2000, the new regulations effectively protect cradle-to-grave coverage through the removal of express discrimination on the basis of health status. Without these reforms, older and sicker people would have been systematically excluded from coverage – leaving all but the wealthiest without access to complete life-cycle coverage. Normally, complete life-cycle coverage would only be achievable through the application of mandatory membership.

Gaps in the regulatory framework

While the five key interventions improve protection, they do not amount to an absolute guarantee *over time* due to the incomplete nature of the regulatory framework. These gaps affect the incentives and market conduct of medical schemes and, in particular, third-party administrators, together with healthcare providers [22].

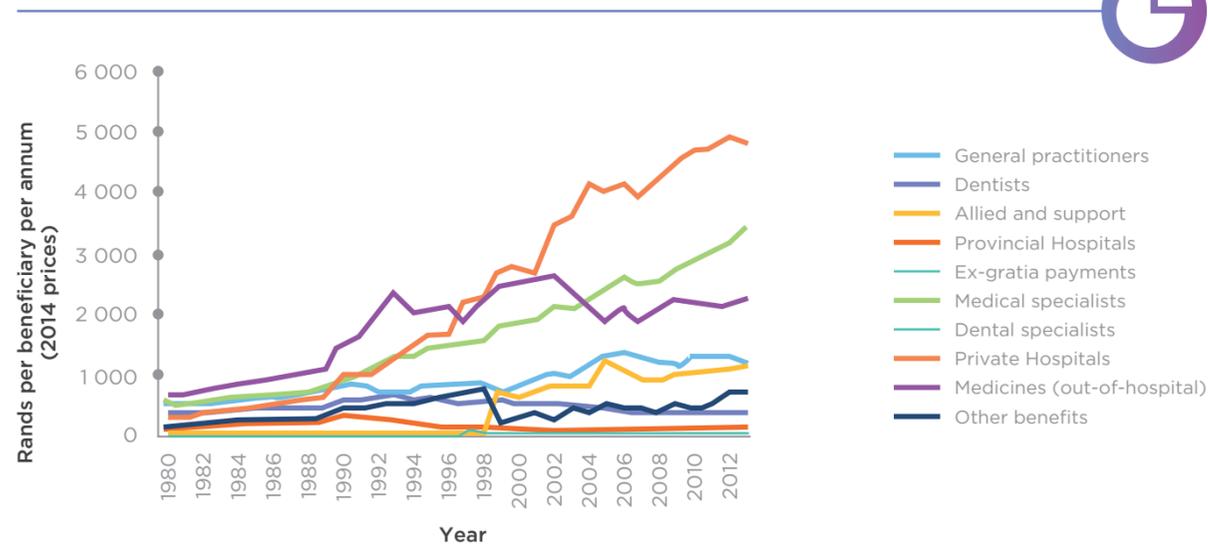
- First, although medical schemes are prohibited from competing on the basis of health status, many opportunities still exist despite the regulatory framework. For instance, outside of the mandatory minimum benefits, medical schemes provide a wide variety of benefit options with considerable variations in the levels of coverage. While prohibited from actively selecting members based on health status, open commercial medical schemes allow members to self-select into different levels of benefits based on their health status. In this way schemes purport to compete on price (i.e. contribution/premium costs) by incentivising the young and healthy members to buy less cover, and the older and sicker to buy more cover. The resulting competition reduces the incentives of commercial medical schemes to compete on lower healthcare provider costs.³¹
- Second, the complexity of the insurance arrangements on offer confuses consumers who have no idea of the value-for-money of the coverage they are purchasing. Consumers consequently rely on brokers to advise them about their coverage options. Given the important gatekeeper role (in directing demand for health insurance) played by brokers, third-party administrators use commission-based payments to incentivise consumers to join the schemes they administer. Product complexity consequently harms the opportunity for consumers to apply market pressure on schemes and administrators offering poor value-for-money.
- Third, healthcare providers, in particular private hospitals and specialists, have been able to increase both the prices and volumes of services due to the weaknesses in the incentives of medical schemes. As a consequence,

³⁰ There are two waiting periods. First, a standard three-month general waiting period applicable to any person joining a scheme after a break of 90 days. Second, a 12-month pre-existing condition waiting period applicable to any applicant joining after a break in coverage of longer than 90 days and in respect of a condition that was diagnosed or treated in the 12-months prior to the application. The waiting periods apply only when joining or re-joining the system (after a break of 90 days. Once exhausted, they do not thereafter apply to any further movements between schemes.

³¹ This is because price competition is on the risk status of the membership rather than the costs of healthcare services. As risk-based price competition is administratively simpler than managing healthcare provider costs, this remains the dominant mode of price competition.

private healthcare costs have increased dramatically since 1980. Based on the data reflected in **Figure 6.7**, per capita costs over the period 2000 to 2013 have increased by 73.4% for hospitals, 84.3% for specialists and only 19.2% for all other expenses. Medical scheme administrators have shown little interest in attacking the hospital and specialist cost increases and find it easier to instead remain competitive by reducing benefits.³²

Figure 6.7: Medical schemes per capita claims cost increases from 1980 to 2013 (Rands) (2014 prices) [27]



Closing the gaps

As private health insurance markets are subject to systemic market failure, to ensure that they can play a role in the achievement of UHC goals, governments have to step in to enhance market transparency and remove certain features from competition to accentuate competition on other features. The following are measures that would close the gaps in the South African regulatory framework for medical schemes. These are provided to illustrate the range of mechanisms required to achieve a stable private health system [22].

Risk-equalisation: a risk-equalisation mechanism should be implemented which redistributes contributions between schemes based on their risk profiles. This serves to ensure that no scheme can profit from the risk profile of their scheme. This also allows for value-for-money comparisons between different schemes by consumers, increasing the pressure on schemes to compete efficiently, in particular on the actual costs of healthcare providers.

Mandatory membership: by compelling all individuals and families to contribute to a medical scheme for those earning above a specified income level removes opportunities for anti-selection by individuals. This diminishes reliance on waiting periods and late-joiner penalties as the principle means to counter anti-selection. The net effect is improved risk-pooling and more predictably-priced coverage.

Contribution subsidies: to ensure that a fair system of societal pooling occurs, income transfers derived from general tax revenue should be implemented. For those individuals not on a medical scheme, their subsidy will be available in-kind through the free service. For those on a medical scheme, a subsidy no greater than the value of the subsidy for public sector users should be available universally. This would protect low-income earners from having to pay the full cost of a medical scheme contribution.

³² Consumers are typically unaware that benefits have been reduced, or unaware of the implications of a benefit reduction on the value-for-money of the insurance provided.

Standardised benefits: the manner in which benefits are reflected to consumers should be standardised to allow them to make value-for-money comparisons. These should be divided into:³³

- **Mandatory minimum benefits:** benefits that must be covered by all medical schemes, and the benefits against which risk-equalisation is applied; and
- **Supplementary benefits:** benefits over-and-above the mandatory minimum benefits and not subject to risk-equalisation.

Fee-based broker payments: all intermediaries providing advice to consumers must have no conflicts of interest with the product suppliers (the medical schemes or third-party administrators). This involves, *inter alia*, requiring that brokers are paid exclusively by consumers and can receive no inducements from product suppliers.

Public competitor and default scheme: to ensure that private medical schemes are fully incentivised to offer value for money to consumers, a publicly-sponsored competitor should be introduced as both a default scheme, where individuals do not choose a scheme, and a market-maker³⁴.

Information regulator: to ensure that healthcare providers compete on both the cost and quality of their services, an information regulator is required to implement data production and information requirements regarding diagnoses, procedures, episodes and outcomes. The regulator would also process the information and make performance indicators public so they can be taken into account by consumers when choosing which provider to use.

Provider regulation: to remove conflicts of interest between clinicians, various intermediaries, and suppliers of related goods and services. This requires that regulators are introduced that are independent of the regulated parties that oversee the structure of provider markets and their conduct.

Price negotiations: to counter collusive price-setting practices, all fee-for-service negotiations should fall within a multi-lateral negotiating forum with mandatory adjudication of any disputes. This should be coupled with the enforcement of compliance with the Competition Act [28] for all contracts determined outside of the multi-lateral negotiations.

Conclusions

This chapter illustrates two strategic forms that partnership could take, the project-oriented conventional PPP and the regulated market. South Africa, while far from offering a benchmark approach for either, does provide a point-of-departure for improved thinking about the options. The three project-oriented case studies, for instance, demonstrate material improvements in the performance of public services. However, after 17 years of implementation, only eight major health PPPs have been implemented despite demonstrated successes. The fourth case study offers an overview of the strategic opportunities that exist to attain UHC through leveraging the private health systems of financing and service provision. However, gaps in the regulatory framework are evident that materially affect the performance of the entire sector. All the case studies indicate strongly that public value can be attained through the creative use of the private sector. However, in all instances, the achievement of value is predicated on the implementation of strong regulatory frameworks based on the principles of good governance.

³³ This framework formed part of legislation set for implementation in 2008, but was not implemented.

³⁴ A market-maker is a competitor designed and implemented by the state to act as a catalyst for competition that may otherwise not occur due to market failures.

An important result of the Partnership was to support the selection and development of potential pilot PPPs for three sub-Saharan African countries – Burkina Faso, Malawi and Zimbabwe. While there are similarities in the socioeconomic and health systems contexts of the three countries, there are also significant differences. For instance, while both Burkina Faso and Malawi face strong and consistent periods of economic growth, Zimbabwe has lost roughly 50% of its economy over the past decade. Nevertheless, all face fiscal and institutional constraints combined with rapid population growth and urbanisation – trends which will continue for the foreseeable future. The pilots are discussed in consecutive chapters with Burkina Faso in **chapter 7**, Malawi in **chapter 8** and Zimbabwe in **chapter 9**.

PART 3

Concept pilot proposals

CHAPTER 7

Burkina Faso³⁵



INTRODUCTION

Over the past decade, Burkina Faso has formalised an enabling framework to facilitate the implementation of PPPs. While to date these have focused largely on infrastructure, Burkina Faso is now actively pursuing health PPPs as a means to support the domestic achievement of UHC. The PPP pilot proposal presented here forms part of this strategy and has been developed as part of the India-Africa Partnership. It involves biomedical waste (BW) management and follows a successful private-private partnership initiative already implemented in Burkina Faso. The pilot is proposed within the context of an emergent health system, which is characterised by a partially developed tax-financed public system together with a largely out-of-pocket (OOP) financed private system.

COUNTRY CONTEXT

Country features

Burkina Faso is located in the centre of West Africa, with an area of 274,000 km². Given its geographical position, it shares borders with six other countries (Benin, Côte d'Ivoire, Ghana, Mali, Niger and Togo) and is consequently an important transit country in the region. Administratively, the country is organised in 13 regions, 45 provinces, and 351 communes comprising departments and villages.

Demographic projections for the period 2007 to 2020 show that the population grows at 3.1% per year with a total fertility rate of 5.6 [29]. The population in 2016 stands at 19 million inhabitants and is expected to reach 22 million by 2020 [30]. It has an average female population of 51.7% with most of the population (77.3%) living in rural areas [30].

The adult mortality rate per 1,000 is 279 for males and 250 for females. The infant mortality rate per 1,000 live births is high at 60.9, as is the under-five mortality rate at 88.6. The percentage of children under the age of five with stunting is also high at 32.9% [31].

The maternal mortality ratio is also high at 400 per 100,000 live births, with overall life expectancy at birth roughly 59 years [29].

Per capita GDP (adjusted for purchasing power parity) was equivalent to US\$1,537 in 2011, placing Burkina Faso among the lower-income developing countries. Overall, the country ranks very low on the United Nations Development Programme's (UNDP) human development index, with a ranking of 185 out of 188 countries [31].

³⁵ The information provided in this chapter, unless otherwise stated, has been provided by officials from the government of Burkina Faso.

Figure 7.1: Location of Burkina Faso



The country has however had an average annual economic growth rate of around 5% for almost a decade – albeit from a very low base. Faster rates of growth also materialised in recent years, reaching 9.8% in 2012 and 6.8% in 2013. While this growth has not been inclusive to date, the growth rates suggest the opportunity for improved fiscal space for future redistributive programmes and projects.

Health system

The right to health is recognised by the Constitution of Burkina Faso of 2 June 1991 [32], which states in article 18 that “Health, maternity and child protection, assistance to the elderly and disabled social rights, constitute social rights recognized by this Constitution which aims to promote them.”

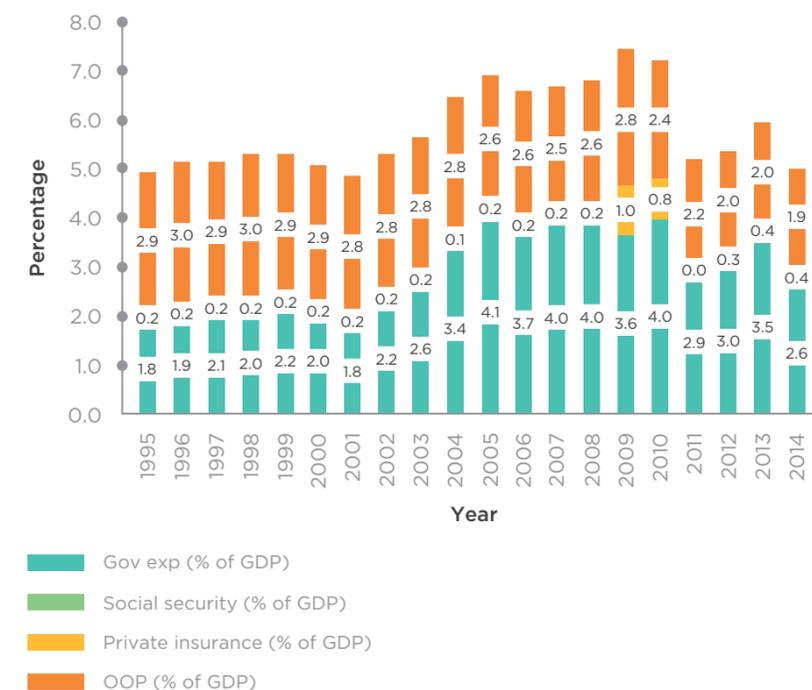
Since health is a prerequisite for the enjoyment of other fundamental rights, it is the responsibility of the state to define a national health policy capable of promoting, protecting and restoring the health of the population and to ensure effective implementation. The supply of healthcare and the budget allocated to healthcare are constantly increasing but not yet sufficient to keep pace with the rate of population growth.

The administrative organisation of the health system is divided into three levels:

- 1 Central level, which is organised around the office of the minister and the general secretariat;
- 2 Intermediate level, which includes the regional directorates of health. Their mission is to implement government policy in the regions; and
- 3 Peripheral level, represented by the health districts, the most decentralised operational entities of the national health system.

While public health expenditure forms the largest component of overall health expenditure, at around 3.6% of GDP, OOP expenditure is the next largest at nearly 2% of GDP. The extent of OOP expenditure reflects weaknesses in the achievement of universal coverage to date. Improved economic performance has however contributed to improved government coverage over time. (Figure 7.2)

Figure 7.2: Burkina Faso - National Health Accounts (% of GDP) [18]



Features relevant to the PPP pilot

Interventions making use of PPPs are identified by the government of Burkina Faso as important for meeting the needs for infrastructure and public services. In this regard, Burkina Faso has developed a PPP strategy based on regional and international best practices as well as successful experiences of PPP projects at the national level. There are five strategic thrusts for the implementation of PPPs:

- 1 Establishment of financial and human resources;
- 2 Legal and institutional framework of the PPP;

3 Development of a PPP project programme;

4 Launching of pilot projects; and

5 Feedback and development of a PPP guide.

The main advantages for using PPPs, identified by the government of Burkina Faso, are to:

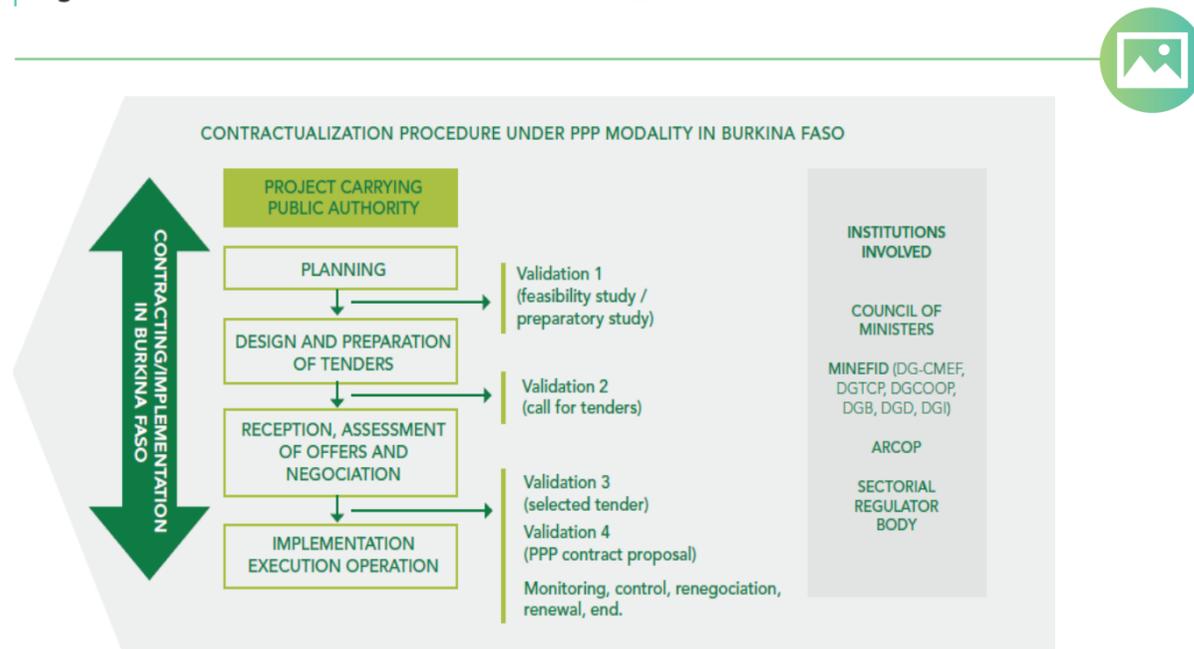
- Accelerate the implementation of strategic projects through enhanced access to capital for investment;
- Enhanced access to the knowledge, skills and creativity of the private sector;
- Achieve guaranteed performance over time and ensure the consistency of budget allocations due to contractual agreements; and
- Achieve an optimised and more rational distribution of risks between the public and private sectors – such that each bears the risk it is best able to manage.

Public-private partnerships are also seen as an important vehicle for attracting foreign direct investment and thereby promoting the creation of new jobs, the reduction of the government indebtedness and the optimal allocation of resources.

Burkina Faso has therefore adopted *Law No. 020-2013/AN of 23 May 2013* and its implementing decree *No. 2014-024/PRES/PM/MEF of 3 February 2014* to set out the legal regime applicable to PPPs in Burkina Faso.

Burkina Faso has also developed experience in making use of PPPs. In 2015, 31 PPP projects of more than US\$5.4 billion were executed. Altogether, 48 projects to be carried out as PPPs at a total value of around US\$6.02 billion were submitted to the Council of Ministers in 2016. By September 2016, a total of 94 projects from 16 ministerial departments had been adopted by the Council of Ministers, equivalent to a total value of US\$6.9 billion.

Figure 7.3: General PPP institutional framework in Burkina Faso



Source: [33]

This use of PPPs is central to the government's economic policy aimed at placing Burkina Faso on a strong, sustainable and inclusive growth trajectory with a view to structurally transform the national economy and eliminate poverty and inequality.

PILOT PROPOSAL - BIOMEDICAL WASTE MANAGEMENT

Background

The management of biomedical waste (BW) is a key support function of health systems. As health systems expand, the proper management of BW represents a risk to developing-country populations. Over time, Burkina Faso has introduced a number of regulatory measures to deal with hygiene requirements within health facilities. These culminated in a 2008 decree [34] regarding the organisation and management of biomedical and similar waste. While the legal framework established the imperative to formalise the management of BW, practical steps were nevertheless required to ensure compliance within both the public and private sectors.

With this in mind, a private-private partnership was initially implemented in two large regions, Ouagadougou and Bobo-Dioulasso, driven by the Federation of Professional Associations of Private Health of Burkina Faso (FASPB). This involved the implementation of six incinerators (for the removal and incineration of BW) and 60 tricycles for the transportation of waste. Following an open competitive tender, Aube Nouvelle Sarl was appointed and currently manages BW in private health facilities that are members of the FASPB in compliance with the relevant hygiene regulations.

It is within this context that the government of Burkina Faso is now considering the use of a PPP to expedite the improved management of BW in both public and private healthcare facilities. The model provided by the FASPB contract, although private-private, represents an approach that can be adapted and generalised more broadly. The government consequently intends expanding the existing private-private pilot to include public facilities in the same two regions, Ouagadougou and Bobo-Dioulasso, prior to a general roll-out throughout the country.

The proposed PPP pilot aims to improve and consolidate the achievements in the present BW management initiative and to correct any shortcomings – especially on the asset side. The strategy is structured around the following objectives:

- Strengthening the regulatory framework for BW management;
- Improving BW management (organisation, personnel, equipment and equipment) in facilities;
- Training health personnel and maintenance workers on the management of BW waste;
- Sensitising populations and users on the risks related to BW;
- Involving private operators in BW management;
- Monitoring the implementation of environmental measures to improve BW management; and
- Participating in the development of a national vision for the management of BW.

What is biomedical waste?

Biomedical waste derived from healthcare-related activities consists of liquid and/or solid waste where there is a risk of infection, and originates from diagnostics, treatment, prevention and healthcare-related research.

Liquid waste

Liquid waste is made up of residues of blood, liquid chemicals, medical fluids such as gastric lavage, pleural and cardiac, as well as postoperative drainage fluids and bronchial and gastric exhalations. Blood is an important liquid effluent because of its high contamination power. Effluents also include flushing water from radiological films such as developer and fixer, laboratory chemicals such as reagents and solvents, as well as domestic wastewater from kitchens, toilets and laundries. Liquid waste also includes toxic waste (chemicals, mercury and mercury compounds, radiographic films, development bath, etc.).

Solid wastes

There are two forms of solid waste: First, there is refuse, equivalent to household waste, produced by health personnel or the treatment of patients. This includes, *inter alia*, leftover meals, unsanitary paper and packaging, unsanitary sanitary napkins and waste from administrative services. Second, there are wastes produced by special services offered by healthcare establishments such as hospitals, health centres, clinics, medical practices, medical laboratories, pharmaceutical manufacturers and veterinary offices. This consists of:

- Sharp or sharp waste (saw blades, needles, syringes, bistouries, probes, tubes, infusion tubes, glasses containing blood, or any other object that may cause a break in the skin);
- Residues of dressings (soiled cottons and compresses, various pockets of blood, etc.) and plasters;
- Anatomical waste (tissues of organs of the human body, fetuses, placentas, biological samples, amputations and other physiological fluids);
- Toxic waste (chemicals and radiographic films); and
- Pharmaceutical waste (pharmaceuticals and expired and/or unused medicines).

Figure 7.4: Unmanaged solid waste in Burkina Faso



Generally, BW production is related to several factors including management practices, types of health facilities, number of beds and occupancy within a facility, number of patients treated on a daily basis, and the degree of specialised care offered.

BIOMEDICAL WASTE PRODUCTION IN BURKINA FASO

The current daily production of BW in Burkina Faso is around 2,667kg or 973,455kg per annum. To this should be added the annual quantity of used syringes generated during the expanded vaccination programmes; this amounts to approximately 153,000 boxes each containing 100 syringes (approximately 45 tons per year). The total annual production in BW is therefore estimated at about 1,022 tons per year.

The public health imperative for effective biomedical waste management

Healthcare waste is a reservoir of potentially harmful microorganisms that can infect health facilities, patients, health workers and the public. Other potential infectious risks include the spread of resistant microorganisms from healthcare facilities to the outside world. The inappropriate handling of BW materials (especially those infected with HIV and AIDS and tuberculosis) poses serious threats to the health of several categories of actors. The handling of this waste therefore constitutes an environmental and health risk that needs to be managed.

The problems posed by poor BW management are significant. The main people exposed in the BW management process are: patients and health professionals (medical and paramedical staff) in healthcare facilities; nursing aides, janitors, incinerators, etc.; those outside the hospital perimeter, including agents of private companies or NGOs responsible for the collection, transport and disposal of household waste mixed with BW; informal collectors who carry out on a permanent or occasional basis the excavation of garbage, especially women and children; and populations using hospital goods recovered for domestic use.

The risks associated with the mismanagement of healthcare waste generally include:

- **Accidental injuries:** risks of accidents for health personnel, children who play on garbage dumps and unwary collectors; and
- **Acute poisoning:** nosocomial infections and nuisances to health and collection personnel (odours, exposure, lack of protective equipment, absence of medical follow-up, etc.).

For infections, the following categories are identified:

- **Viral diseases:** such as HIV and AIDS and viral hepatitis;³⁶
- **Microbial or bacterial diseases:** such as tuberculosis, streptococci, typhoid fever, etc.;
- **Parasitic diseases:** such as dysentery, roundworms, etc. from stools coming from health centres and discharged into public dumps near houses;
- **Nosocomial infections;** and
- **Contamination of the food chain:** domestic and wild animals in search of food at public dumps can ingest these types of wastes, which can lead to the potential spread of diseases and chemical contaminants through the food chain.

³⁶ Primarily exposed to these diseases are health workers, accompanying persons, maintenance staff and people living near landfills (children, informal collectors, etc.).

Within the context of high levels of poverty, informal recovery activities in public or uncontrolled dumps (sometimes referred to as scavenging) are vital sources of income for a large number of people. This activity constitutes a way for many to survive on a daily basis. Any modification, even qualitatively, of the waste management system risks drying up the only income source available to groups engaged in waste recovery and recycling activities.

This situation is likely to occur in Ouagadougou where a modern *landfill technical centre* has been built, which prevents any informal recovery activity. For this reason, the management plan should include accompanying measures such as: authorisation for recovery at source, the prohibition of recovery for collection staff engaged in formal collection activities, and the development of a sorting and recycling zone within the framework for effective collaboration with informal collectors.

Certain populations are however highly sensitive to certain types of BW, including anatomical (amputations, placentas, etc.). They are often very demanding as to the modalities for waste elimination. In their eyes, it is unacceptable to dispose of this form of waste in garbage dumps. Generally, this waste is delivered to patients or family members.

Public-private partnership concept design

The proposed (concept) operational model involves a *common* private partner that will provide the BW waste management to both public and private facilities in Ouagadougou and Bobo Dioulasso. In total, it is envisaged that 997 facilities will be serviced, with 287 in the public and 711 in the private sector.

The objective of the pilot is to expand the present BW assets in existence through additional private investments carried out by FASPB. The private operator will then provide services on a fee basis to all public and private facilities. The FASPB will recover the investment costs of the assets through rental fees charged to the private operator.

The private operator will contract with each facility to provide services as well as with FASPB with respect to oversight of the PPP and for use of the assets. Government will indirectly fund the public sector fees through its budget allocations to public facilities.

General PPP oversight will be provided by a multi-sectoral committee. The FASPB will support aspects of oversight through reporting and the resolution of fee-payment and service-related disputes.

Figure 7.5: Operational model

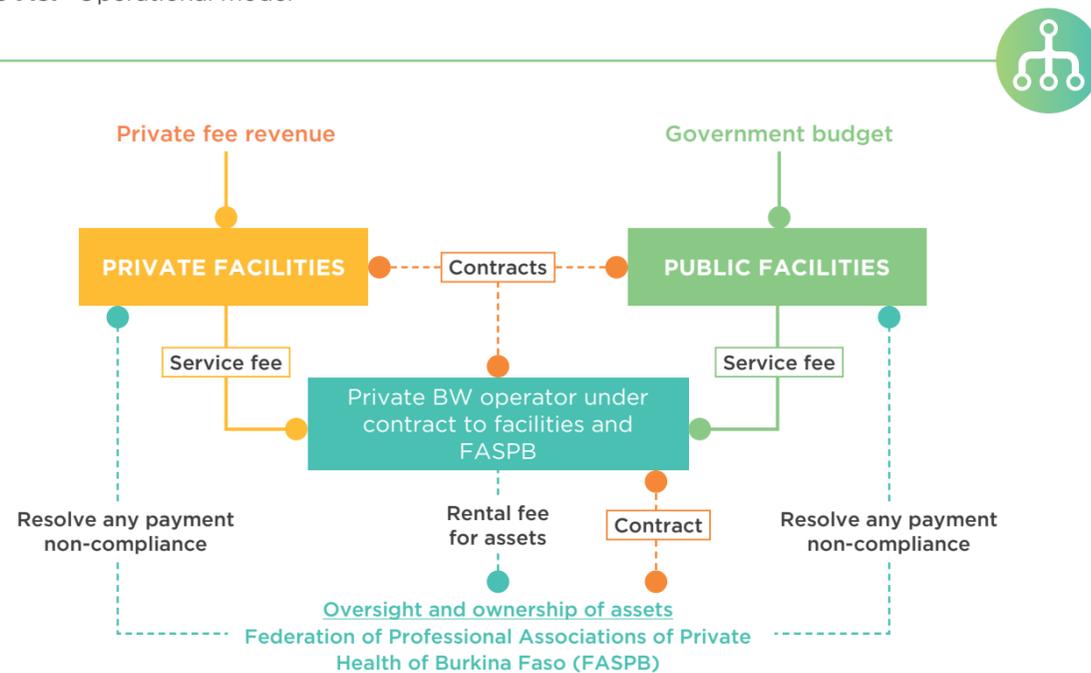


Table 7.1: Facilities forming part of the pilot

TYPE OF FACILITIES	OUAGADOUGOU		BOBO DIOULASSO		TOTAL
	Public	Private	Public	Private	
Academic hospitals	3	0	1	0	4
Private hospitals	0	1	0	0	1
Regional hospitals	0	0	0	0	0
Policlinic	0	7	0	1	8
Medical centres with surgical services	3	5	3	1	12
Clinics	0	36	0	12	48
Medical surgical centre	0	1	0	0	1
Medical centres	13	28	0	10	51
Doctor's offices	0	10	0	1	11
Dentist's offices	0	7	0	1	8
Isolated dispensaries	7	2	3	0	12
Isolated maternity centres	1	0	0	0	1
Centre for Health and Social Promotion	95	22	71	16	204
Birthing clinic	0	12	0	4	16
Integrated health centres	0	107	0	45	152
Radiology centre	0	2	0	1	3
Medical laboratories	0	7	0	3	10
Pharmaceutical manufacturers	0	202	0	35	237
Pharmaceutical depots	0	54	0	67	121
Centre for Recovery and Nutritional Education	9	2	2	2	15
Ophthalmology centre	0	0	0	0	0
Infirmiry	15	4	4	3	26
Travel offices (health)	42	0	14	0	56
Total	188	509	98	202	997

Objectives and activities

The following narrative description of the objectives and activities of the proposed pilot provide more depth to the rationale for the PPP and its design.

Objective 1: Improve the institutional and legislative framework for the management of BW

Step 1: Establish BW Management Committees and appoint management follow-up officers (health region, health facility).

The aim is to regulate the management of BW at the level of health facilities. In particular this will: define the roles and responsibilities of the various public institutions in the management of BW; develop internal management plans (guides or procedures) for waste management for healthcare facilities (including, *inter alia*, the establishment of a waste-sorting system, separate waste disposal where required, the appointment of a person responsible for waste monitoring, the establishment of an operating budget); the design and implementation of appropriate pre-collection facilities for waste management in health centres; the development and adoption of performance-based staff management approaches for BW; and the establishment of control procedures for the management of the BW.

The committees should also promote the use of recyclable materials: the use of recyclable materials (boxes of medicines or other plastic containers, bottles, empty bottles, etc.) is an option in the process of minimising waste volumes as this reduces waste to be incinerated or otherwise treated. Packaging material can be recycled (paper, cardboard, glass, metal cans, plastic packaging, etc.). Given the opportunities for recycling and the importance of the market, cooperation mechanisms could be established between professional salvagers and managers of health facilities.

Objective 2: Train the actors in the management of the BW

Step 2: Develop training programmes and train trainers.

This involves: the identification of training needs at the health facility level, the identification of groups of trainers and training them in the management of BW, and the development of the programmes in a participatory manner.

Step 3: Train all the operators of the BW management chain.

This involves the training of management staff, doctors, nurses, hygiene and sanitation officers, decision-review technical teams, municipal technical services management staff, private companies and collection NGOs, and the training of waste handlers (nursing aides, cleaning agents and other hospital workers and municipal collection agents).

Step 4: Evaluate the implementation of the training plan.

Monitoring and follow-up in health centres should be carried out on a regular basis to supervise the implementation of training programmes, with a view to improving the level of management of BW and above all ensuring that good practices are acquired and effective. Measures should be taken to identify risks and prevent future problems. Supervision should include the selection of BW, their identification, internal storage, transport and processing systems, agent safety measures, landfilling, etc.

Stage 5: Involvement of the private sector in the implementation.

The proposed management plan will consider the development of an approach to professionalise the sector so that it can generate income and profits. This requires that the plan includes support for private initiatives and the development of the public-private-civil society partnership to ensure adequate financing. In this context, it would

be desirable to: identify autonomous financing mechanisms for the management of BW and encourage public and private partners to commit to financing the sector by strengthening their capacities (including their technical and managerial skills to foster the development of expertise and leadership in this field).

In addition, the aim is to strengthen the capacities of private waste collection companies through support for the training of managers in the following areas: choice of appropriate collection equipment, specific handling of BW and the cost-effectiveness selection of technologies.

Objective 3: Raise awareness of the management of risks related to BW

Ministry of Health information and awareness programmes do not explicitly include concerns related to the management of BW. Essentially, they cover areas related to health in general (health care, disease prevention, etc.). It is therefore necessary to carry out awareness-raising programmes targeting populations: providing or receiving health care at home, using recycled objects or living near garbage dumps, and collectors of waste. These programmes should be carried out with the support of NGOs with broad experience in environmental and health matters.

Step 6: Inform people about the dangers of BW.

This involves informing the general public about the dangers of BW and the use of recycled objects through the design and distribution of monthly television messages. These should focus on: the dangers of handling BW, especially needles. Additional information channels can take the form of awareness-raising banners and monthly public information sessions in neighbourhoods run by NGOs.

In addition, it is proposed to make people aware of the measures to be taken in households involved in home care (self-medication) to ensure the sound management of BW that is generally mixed with household waste.

Objective 4: Acquire BW management equipment

The aim will be to equip public health facilities with appropriate pre-collection bins for the storage of BW and to introduce efficient systems for the treatment and disposal of solid and liquid BW.

Step 7: Financing the purchase of BW-specific containers.

Step 8: Financing the purchase of BW collection and transport facilities.

Step 9: Financing the purchase of BW processing facilities.

Objective 5: Monitor and evaluate BW management activities

Ensure monthly, quarterly, semi-annual, annual and final monitoring and follow-up of the BW management project.

Steps 10: Ensure that all actors carry out selective sorting at source.

Step 11: Monitor approved companies responsible for collecting, transporting and disposing of BW.

Step 12: Ongoing performance evaluation of the BW management plan.

Objective 6: Provide technical assistance

The aim is to provide technical assistance in terms of regulation, management, capacity building, monitoring and evaluation, etc.



CHAPTER 8

Malawi³⁷

INTRODUCTION

The ministry of health in Malawi (MOHM) is looking for a private partner to operate a *National Cancer Treatment Centre* (NCTC) at Kamuzu Central hospital (KCH) on a five-year commission (renewable upon satisfactory performance). The Malawian government has the funding to construct and equip the facility. The NCTC will offer both radiotherapy and chemotherapy on a non-paying and paying basis, where paying patients are expected to supplement the revenue required to finance the non-paying patients. The centre will be autonomous from the rest of the KCH. The private partner will be responsible for the recruitment of staff and the day-to-day running of the facility including the procurement.

CONTEXT

Country features

Malawi is a small, narrow and landlocked country with a surface area of 118,484 km. Administratively the country is divided into three regions, namely the northern, central and southern regions. There are 28 districts, which are further divided into traditional authorities overseen by chiefs. Traditional authorities are further sub-divided into villages, which form the smallest administrative units. There is a village development committee, which is responsible for development activities. Politically, each district is divided into constituencies represented by members of parliament in the National Assembly (the national branch of the legislature).

Demographically, the country has an estimated population of 16.8 million people in 2016, with an average annual growth rate of 2.8%.³⁸ The estimated population size by 2022 is therefore 20.4 million. The ratio of males to females is 96:100. An estimated 85% of the population lives in the rural areas as compared to 15% in urban centres [35]. The rate of urbanisation is high, with Malawi likely to experience an annual urban population growth rate of 4.2% for the foreseeable future. Around 45% of Malawi's population is under the age of 15 years with 18% under five years [29]. Those aged 65 years and above represent only 3% of the total population in 2017 and should continue to increase as life expectancy improves. Life expectancy is estimated at 55.7 and 58.8 years in 2013 for males and females respectively [29].

³⁷ The information provided in this chapter, unless otherwise stated, has been provided by officials from the government of Malawi.

³⁸ National Statistical Office in 2016 Population Projections.

Figure 8.1: Location of Malawi



Table 8.1: Demographic features of Malawi – 2017

POPULATION	NUMBER	PERCENTAGE
Children aged 0-59 months (under five years)	3,094,693	18%
Population that is under 15 years of age	7,790,744	45%
Population of adolescents (10-19 years of age)	3,954,332	23%
Women of reproductive age (15-49 years)	3,871,569	23%
Total population	16,832,910	100%

Source: Based on [36]

Economically, the country's per capita GDP in 2015 was estimated at US\$381.40³⁹. The real GDP growth for Malawi was reported as 5% in 2013, higher than the reported rate for sub-Saharan Africa in the same period. Higher growth rates have contributed to a reduction in the proportion of Malawians living below the poverty line, from 52% in 2004 to 50.7% in 2016. Poverty remains deep-rooted in rural areas.

Malawi's economy is predominantly based on agriculture, with production accounting for 35% of GDP and more than 80% of exports (principally from tobacco sales). Agriculture as an industry and activity supports more than 80% of the population. The government however plans to transit from an agricultural-based economy to an industrial- and service-driven economy over time. Development aid has played a key role in stabilising and improving the economy over the past 30 years. In addition, remittances from the diaspora increasingly contributes to the country's economy.

Malawi has made significant improvements in social services, such as health, housing, education, water/sanitation and others in recent years. Most social services, health inclusive, are provided free at point-of-service, to reduce financial barriers to their utilisation. The government introduced free primary education in 1991 and enrolment consequently increased from 1.9 million to about 3 million. Although enrolment increased, government data reveals that only 30% of the children who start in grade 3 actually reach grade 10. The literacy rate is estimated at 62% and it is higher among men (69%) than women (59%).

In spite of reduced gender disparities, the achievement of gender parity faces significant challenges. Up to 90% of all rural women work in agriculture, largely on the production of food for domestic consumption. In addition, women are responsible for caretaking within their families, resulting in longer hours compared to men. Their work also seldom generates a monetary income. Although many small entrepreneurial activities have been initiated to target women and girls, heavy domestic and agricultural workloads keep them from taking advantage of these opportunities.

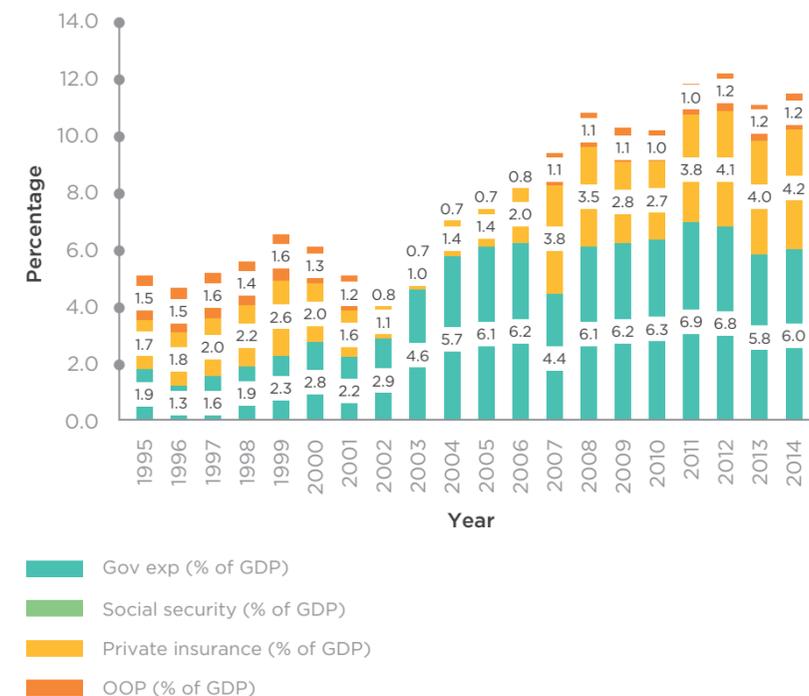
Health system features

Health services in Malawi are delivered through a network of MOHM health centres, dispensaries, urban health centres, rural hospitals, district hospitals, central hospitals, and other facilities. Provision of health services is provided free within all government facilities. Health expenditures have shown dramatic increases over the past 15

³⁹ Audit Report – Global Fund Grants for Malawi – October 2016

years, with public expenditure at around 6% of GDP in 2014. Private expenditure has also increased dramatically, going from 1% of GDP in 2003 to 4.2% of GDP by 2014. (Figure 8.2)

Figure 8.2: Malawi – National Health Accounts [18]



The Christian Health Association of Malawi (CHAM) is the major government partner in health service delivery. CHAM is supported by a government subsidy. There are also other facilities jointly operated by the MOHM and other partners including local government. In addition, private health providers have a significant presence: with over 700 primary care facilities, 50 secondary care facilities and five tertiary care facilities.

Features of relevance to the PPP pilot proposal

Malawi is presently constructing a cancer centre to provide tertiary level oncology healthcare. However, from experience and lessons learned, it will be challenging for the government to operate and manage the facility using the currently available (general tax-based) resources. Therefore, consideration has been given to engage a private partner to ensure sustainability (in terms of both finances and operations) of service at the facility.

PROBLEM STATEMENT

Basic cancer facts for Malawi

Cancer is an increasing public health problem in Malawi. Kaposi sarcoma, cancer of the cervix, non-Hodgkin lymphoma, cancer of the oesophagus and breast cancer are the top five concerns. With only 18% of cases having a laboratory-verified diagnosis, capacity needs to be strengthened for laboratory services (human resources and sites). In the absence of this improvement, under-reporting and misdiagnosis will remain high.

Less than 5% of cancer patients have access to radiotherapy in Malawi, which is far less than the 50% for the rest of Africa. Age-standardised estimates for Malawi indicate a prevalence of 83 male and 105 female cancer cases

per 100,000 [37]. Further studies by the MOHM reveal that from the 28 public hospitals in Malawi there were 300 new cancer cases in 2009. Based on these figures the estimates for new cases in 2016 were about 13,000, which matches other estimates and those seen by other countries within the region.

In Malawi, 11.9% of the reproductive age group is infected with HIV [29]. It is estimated that about 15% of HIV-infected patients will develop Kaposi's sarcoma and 5% will develop lymphoma. The incidence of other forms of cancer (e.g. cancer of the cervix, Non-Hodgkin lymphoma) is also significant. These are also the most commonly reported cancers in the Malawi national cancer registry and by WHO [37]. It is estimated that 28% of HIV-related deaths are due to cancer, which may be higher in the case of Malawi due to lack of comprehensive cancer care.

Cancer management

Malawi does not have an operational national cancer control programme. The provision of different services also remains incoherent (screening, prevention, early diagnosis, treatment and palliative care). The national cancer action plan presently being developed by the MOHM aims to address this and will follow the Integrated System for Comprehensive Cancer Control guidelines as produced by international reference organisations.⁴⁰

Cancer prevention

Prevention programmes are broadly differentiated into three areas:

- **Vaccinations:** Malawi has a comprehensive vaccination programme for Pentavalent in children, which includes Hepatitis B. This prevents Hepatomas which are prevalent in Malawi and the sub-Saharan region. The HPV⁴¹ vaccination is also about to be piloted under the GAVI⁴² initiative. Once this is successful, a full-scale national programme roll-out is planned.
- **Screening:** cervical cancer screening using visual inspection and acetic acid is being implemented at a national scale. However, the uptake remains relatively low (at less than 7%).
- **Early detection:** efforts are being made to sensitise clinicians on the benefits of early detection. The majority of the cancer diagnoses remains clinical and not confirmed by histopathology. Currently, eight pathologists are in training to complete within four years.

Cancer therapy availability

The following are available in Malawi:

- **Primary therapy:** surgery and chemotherapy are presently available in Malawi. Radiotherapy is however not available. Access to surgery and chemotherapy also remains difficult.
- **Adjuvant therapy:** chemotherapy is the only available adjuvant therapy in Malawi and is provided only at the central hospitals, with the bulk of patients treated at the Queen Elizabeth Central Hospital (about 1,000 per year).
- **Palliative therapy:** palliative care is extremely limited and is mostly provided within central hospitals. This is a consequence of limited palliative care facilities.

⁴⁰ Such as the World Health Organization and the International Atomic Energy Agency.

⁴¹ Human papilloma virus.

⁴² Global Alliance for Vaccines and Immunization.

Approach to national cancer therapy management

With the introduction of radiotherapy, Malawian patients will be able to access the full spectrum of primary therapies. This will provide opportunities to expand the therapeutic possibilities to include adjuvant and palliative therapy.

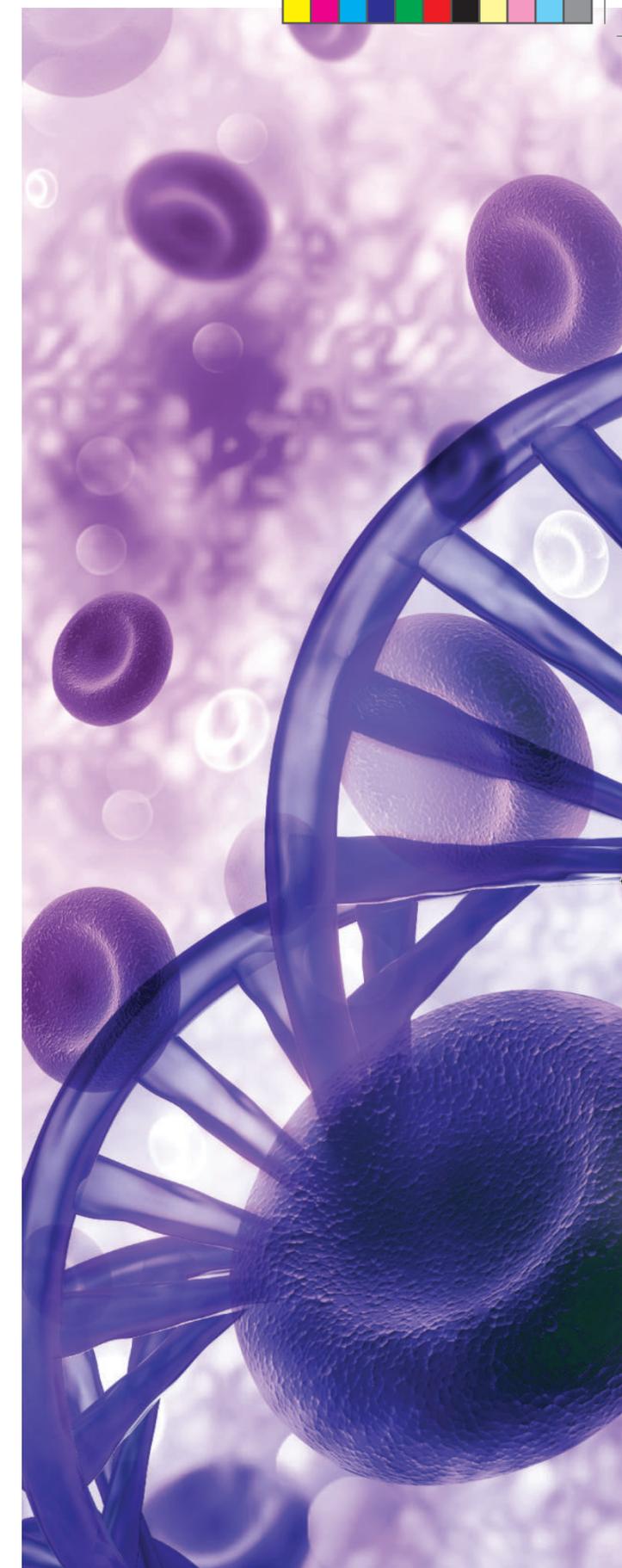
Radiotherapy will, together with chemotherapy, become an add-on therapy to surgery for a significant proportion of cancers and thereby improve quality-of-life and survival. The introduction of radiotherapy provides a useful modality for palliating most of the disease burden arising from all cancers.

The MOHM currently sends cancer patients abroad. The average cost of radiotherapy treatment for a patient treated externally is US\$30,000. On average, Malawi sends around 40 cancer patients abroad each year at a total cost of over US\$1million (excluding transport costs). This is not inclusive of the far greater number of self-referred private patients funded by private insurance companies.

Upon completion, the PPP will significantly reduce the cost of treatment, which is expected to be around US\$3,000 to US\$5,000 per patient. This will considerably improve the affordability and cost-effectiveness of treatment, and allow Malawi to save scarce foreign currency. In the long-run, the centre will allow more patients to access services within the country as compared to the present external referrals. It is also worth noting that the survival rate of cancer patients referred abroad is low due to delays in the referral process. Such delays will also be averted when the cancer centre is operational.

Value for money

The present cost of treating one patient outside the country now will, through the PPP, enable the local treatment of 30 patients. Presently US\$1million is spent abroad to treat roughly 33 patients. Localisation will, for the same cost, enable the proposed cancer centre to treat 340 patients per year. This, together with the money spent privately (either by insurance companies or private individuals), should be sufficient to sustain the operations of the cancer centre.



Malawi has national PPP legislation that provides a legal framework to engage in PPPs. The ministry of finance of Malawi has a PPP Commission that steers and guides all forms of PPP. The ministry of justice also assists the government in drafting contracts and other legal documents. A plan also exists to establish a PPP unit within the MOHM to properly contract and better monitor PPPs. The proposed pilot project will serve to strengthen this unit.

PROPOSED PILOT

Key features of the pilot

The government of Malawi identified resources to construct and partially equip the NCTC at KCH but lacks the internal capacity to successfully run the centre. This is in addition to concerns about health-financing challenges. Therefore, it was proposed that consideration be given to commissioning an experienced private partner who will: recruit, manage and train health personnel; maintain the equipment; ensure the steady supply of drugs; and offer treatment to patients. The private partner will also be required to operate the centre on an autonomous basis to ensure efficiencies.

Operational model

It is envisaged that the private partner will provide services at a reasonable cost for public, private and international patients. The private partner will be responsible for patient care and management, including the development of treatment protocols, accreditation of the facility and the maintenance of the equipment.

Financial model

The government of Malawi has entered into a loan agreement from the Oil Fund for International Development (OFID) for the construction and equipping of the NCTC. The infrastructure and equipment will therefore remain the property of government. This includes the land upon which the facility is to be constructed.

Government has begun to train health personnel using own resources. However, the IAEA has offered to assist in the training component by financing some specialties. When the project becomes operational, some staff will be seconded from the public sector.

INSTITUTIONAL FRAMEWORK FOR PPPS



The private partner is expected to be financially sound to ensure the smooth running of the facility on an autonomous basis. Still to be decided is whether the private partner will provide some of the equipment. If so, they will be responsible for maintenance, including preventative maintenance and the procurement of necessary medical supplies.

The private partner will however be responsible for the maintenance of the infrastructure during the running of the contract.

Risk distribution

On service delivery, the government will regulate services and negotiate prices to ensure that the treatment remains affordable.

The private partner will ensure that quality healthcare is supplied and that the delivery of services is sustainable. The private party will also take responsibility for the procurement of medicines and other supplies.

Potential for expansion beyond a pilot

The government intends to open up diagnostic centres for cancer detection by preparing rooms and procuring equipment for all district hospitals. Such an initiative has started with the opening of mammogram rooms in all central hospitals.

The private partner may also consider being an integral part of the cancer control programme of Malawi, which would include strengthening the prevention of cancer in the form of increased vaccine coverage against cancers and the cancer registry.

The private partner may also take on the establishment of chemotherapy satellites in the other central and district hospitals. The long-term plan is to open cancer centres in all the regions operationalised using a similar model.

CHAPTER 9

Zimbabwe⁴³

INTRODUCTION

The Zimbabwean health system has experienced significant challenges over the past two decades, arising principally from a number of severe economic crises. These have negatively influenced the availability of skilled health professionals in both the public and private health sectors and created shortages in the foreign currency needed for the purchase and maintenance of essential health equipment. To help rehabilitate public health services, Zimbabwe is, *inter alia*, seeking to expand its capacity to provide essential nephrology services.

Figure 9.1: Location of Zimbabwe



However, Zimbabwe is constrained on two fronts. First, public-sector capacity to manage the expansion is presently weak; and second, the fiscal space is severely constrained and likely to remain so over the medium term. The government of Zimbabwe is therefore seeking to expand nephrology services (and related equipment) through a PPP. This chapter provides an overview of the concept case for a PPP pilot developed as part of the Partnership.

COUNTRY CONTEXT

Zimbabwe is landlocked and situated in southern Africa with a total land area of 390,757 square kilometres. It is bordered by Mozambique to the east, South Africa to the south, Botswana to the west, and Zambia to the north and northwest. The country is divided into 10 administrative provinces and 62 districts. The capital city is Harare and other major cities include Bulawayo, Gweru, Kadoma, Kwekwe, Masvingo and Mutare.

According to the 2012 census, the population of Zimbabwe is estimated to be 13.1 million with 52% female. Two thirds of the population are below the age of 25. The major ethnic groups are Shona and Ndebele.

Zimbabwe's economy has experienced severe challenges over the past two decades, reaching crisis levels in 2007 and 2008. The GDP is estimated to have contracted by a cumulative 50.3% over this period while official inflation peaked at 231 million percent in July 2008. Capacity utilisation in industry also fell below 10% by January 2009. As a consequence, poverty remained widespread, infrastructure deteriorated, the economy became more informal and severe food and foreign currency shortages were experienced. The country also faced sanctions from some western countries and the cessation of funding from the World Bank and the International Monetary Fund.

Zimbabwe has however been able to stabilise and, to a degree, turn around following the adoption of a multicurrency payments system in February 2009. Other significant macroeconomic contributors to the stabilisation and resuscitation include price liberalisation, removal of surrender requirements on export proceeds, removal of exchange restrictions, the end of the Grain Marketing Board (GMB) monopoly, the imposition of budget constraints on parastatals, and the reform of monetary and fiscal policy frameworks and institutions such as the Reserve Bank of Zimbabwe.

Table 9.1: Key statistics [38]

Real GDP growth (2013)	4.5%
GNI ⁴⁴ per capita (current US\$) (2013)	\$820
Population, total (2012)	13,061,239
Population by sex (2012)	Females - 6,780,700 (51.9%) Males - 6,280,539 (48.1%)
Poverty headcount ratio at national poverty line (% of population) (2013)	72.3%
Life expectancy at birth, total (years) (2012)	58
Literacy rate, adult total (% of people ages 15 and above) (2013)	91.3%
External debt US\$ (2013)	\$8.934 Billion

⁴³ The information provided in this chapter, unless otherwise stated, has been provided by officials from the government of Zimbabwe.

⁴⁴ Gross national income.

In 2014, the government introduced the 2013 to 3018 Zimbabwe Agenda for Sustainable Socio-economic Transformation [39] as the economic development blueprint and turnaround plan for Zimbabwe's development priorities.

Owing to strong partnerships and generous financial assistance by development partners, one of the major positive dividends of the economic stabilisation since 2009 was a noticeable improvement in the performance of social services delivery across all sectors.

However, unpredictable weather conditions, erratic rain patterns and economic restrictions still pose a threat to reverse the gains made thus far. To build on the recent gains, and in an effort to mitigate effects of climate change and economic challenges, the government and development partners are now focused on programmes aimed at building resilience and sustainability. These include interventions targeted at the health system.

HEALTH SYSTEM⁴⁵

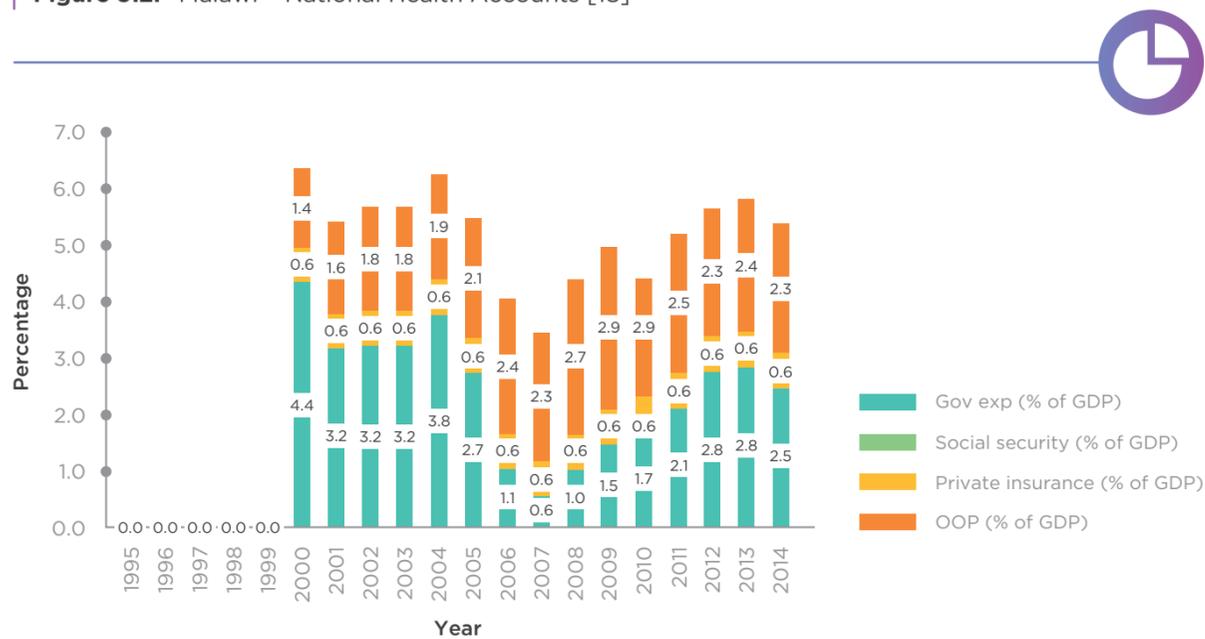
Zimbabwe operates a four-tier referral system which begins from primary care facilities. Referrals then flow to district hospitals, then to provincial hospitals and ultimately to central hospitals. The public health system is centrally coordinated by the ministry of health and child care (MOHCC).

Private health facilities also provide significant contributions to the total health delivery system. However, services tend to be expensive for the majority of the public. Therefore, most people and their dependants have to incur significant OOP expenditure to access treatment. Only a small number of people are protected by medical aid/insurance. (Figure 9.2)

Discussions are underway for the setting up of a National Health Insurance scheme to cater for families without adequate incomes. Separate discussions are also underway to set up a road accident victim's fund. Medical health insurers have also diversified into service provision, thereby presenting competition to traditional health services providers.

Government is also now amenable to both privatisation and the creative use of private actors by way of PPPs in health services delivery. The poor incomes of the general public require the provision of services at affordable cost to increase service access.

Figure 9.2: Malawi - National Health Accounts [18]



⁴⁵ Information supplied by government of Zimbabwe officials.

KIDNEY DISEASE

An area of significant concern in Zimbabwe is the inadequate availability of nephrology services, and a complete absence of kidney transplantation. The cost of dialysis in the private sector is also prohibitive at between US\$200 and US\$250 per session. Unfortunately, fees for these services are also charged at public institutions with sessional rates between US\$80 and US\$150.

Because of the above, the provision of nephrology services has been identified by MOHCC as suitable for a pilot PPP. The burden of kidney disease is however also not adequately measured at present due to the absence of a renal registry. Efforts are therefore underway to compile the figures.

Government has in the past years procured and installed dialysis equipment worth around US\$2.5 million in central hospitals to improve access. However, this still falls far short of what the country requires. Currently, Parirenyatwa Central Hospital has 18 machines while Harare and Mpilo Central Hospitals have 10 machines apiece. However, due to maintenance weaknesses, not all the machines are working.

In addition to the 38 machines procured for the public sector, there are a further 42 privately-owned dialysis machines.

Insufficient mortality data is also available for those on the dialysis programme. However, information from the public sector indicates that in 2015, about 8% of patients on dialysis treatment died (44 out of 570) while in 2016 only about 5% died (33 out of a total of 623).

The country has adopted the renal treatment guidelines from the South African Renal Society. Patients are diagnosed by physicians or nephrologists, based on creatinine and urea levels. Patients are also tested for HIV and hepatitis A, B and C. This allows for the proper allocation of patients to a specific dialysis ward. The hospital then carries out full blood counts to assess the level of haemoglobin before the patient commences dialysis.

In terms of consumables, i.e. dialyser membrane, blood lines, fistula needs etc., all are for single use only, with no sharing. The Fresenius dialysis machine is the most common brand in the country - accounting for 99% of all machines installed at government central hospitals. This is followed by Joyheal. In the private sector, in addition to the Fresenius brand, the B. Braun and the Gambro brands are also common.

In government central hospitals, patients on the dialysis programme are supplied with erythropoietin if their haemoglobin levels are less than 8g/dl, based on their transferrin and ferritin levels (iron profile). However, the patients have to buy the erythropoietin from private pharmacies at their own expense. All private patients get the special hormone supplement and the cost is borne by their medical aid scheme⁴⁶.

Kidney transplantation has however not occurred in Zimbabwe since 1992. Patients requiring such services have to pay around \$25,000 in India or \$40,000 in South Africa.

PROBLEM STATEMENT

Zimbabwe currently suffers from critical shortages of specialised medical services, including accessible and affordable nephrology facilities, which have led to a huge surge in medical-value travel/medical tourism to nearby South Africa or India and other countries. The lack of specialised nephrology services stems from:

- The unavailability of skilled consultants to offer nephrology services and to train upcoming medical personnel;
- The absence of requisite infrastructure and support services for both dialysis and transplantation; and

⁴⁶ Private health insurance.

A poor economic situation which causes medical care, including nephrology services, to become unaffordable to the majority of patients who have to pay OOP for such services.

PUBLIC-PRIVATE PARTNERSHIP INSTITUTIONAL FRAMEWORK

National legislation provides semi-autonomy to public hospitals, which allows them to undertake activities that benefit from the general public whilst ensuring their financial sustainability.

The legal framework for any of Zimbabwe's central, provincial or district hospitals to engage with private partners for the benefit of both the institutions and the public is therefore well established. It is this legal framework that has allowed the Chitungwiza and Parirenyatwa central hospitals to make attempts at entering into PPP arrangements for renal/nephrology and cardiothoracic specialties. The government of Zimbabwe has endorsed these initiatives – though plenty of room exists to take a more active role in facilitating partnerships.

PROPOSED PILOT

Aims

The pilot aim is to:

- Develop institutional frameworks for nephrology services, including transplantation, so as to increase both service access and affordability;
- Resume kidney transplantation services (which have not occurred since 1992) in collaboration with the private sector;
- Establish comprehensive renal registries that provide accurate information on kidney disease in Zimbabwe;
- Provide suitable in-service training for all medical and para-medical personnel relevant to nephrology services; and
- Promote autonomous well-run nephrology centres that provide cost-effective and affordable services across the country.

Technical rationale

While a purely public arrangement would face both financial and operational constraints, the use of a PPP allows for the establishment of a substantially expanded service that is able to leverage private (both domestic and international fee-paying patients) and public revenue streams together with management capabilities embedded in the private sector. These revenue streams will support up-front investments in equipment and services that can be recovered over time. The public objectives would be served by an expanded service available to public patients and the development and maintenance of strategic information sources for policymaking.

Project model

Given the demographics and economic realities, an approach based on cross-subsidisation (similar to approaches adopted in Bangladesh) is envisaged. This involves having a low, fixed tariff for the government patients, i.e. the poor and underprivileged, while charging a higher/variable tariff for private patients.

This involves:

- The formation of a *special purpose vehicle* as the channel for investing in the project. This is needed to enable the project to operate with efficient and streamlined decision-making and procurement modalities. This also allows the PPP to attract and retain high-quality staff (in both clinical and management functions).
- Strong competition for the best capabilities and equipment will be generated by allowing for international bidders. The winning bidder will provide the equipment and be responsible for recruiting and paying staff, funding all recurrent expenditure and basically running the project as a private profit-making entity.

The private partner will be expected to:

- Provide the necessary technical expertise to, for instance, ensure there is no cross-infection from any re-use of membranes;
- Provide managerial expertise, such as the preparation and implementation of standard operating procedures – thereby enhancing efficiency and contributing to cost reduction; and
- Build capacity, by training local personnel to be actively involved in the national roll-out of the programme.

Government's role/contribution

The government, through the MOHCC, will:

- Provide the land and buildings for the project;
- Create an enabling environment for the operationalisation of the project (legal and policy framework);
- Fund the subsidisation of the poor and government patients;
- Ensure quality-of-life for kidney patients by ensuring that kidney transplantation is prioritised so that patients do not remain on dialysis treatment for life⁴⁷; and
- In pursuance of the above objective, government must encourage donation of organs by the general population.⁴⁸

Development partner contribution

The reality is that under the current economic conditions, government will not be able to immediately fund the full subsidisation of the poor and underprivileged. A unique arrangement is therefore necessary for the success of the project. Some part of this subsidisation will be requested from development partners (to be distinguished from the public and private partners), at least for the initial phases of the project.

This is essential for the following reasons:

- If the issue of subsidisation is not addressed, then the service will continue to be inaccessible to the poor and will remain the preserve of the rich;
- External funding will ensure the sustainability of the project and make it attractive to potential bidders/investors; and

⁴⁷ This cannot be left to the private partner as they stand to gain from continued dialysis treatment of kidney patients and may therefore not be adequately motivated to pursue kidney transplants.

⁴⁸ This may not be easy, given the cultural abhorrence to the practice of donating body organs. Therefore, of necessity, the government must remove the cultural barriers to organ donations by carrying out educational programmes/campaigns to educate the public on the necessity of donating organs.



Subsidisation will make the project more viable and sustainable for ensuring that more customers are treated, thereby creating economies of scale that will help bring the overall cost of dialysis down from current levels.

The development partner will not be expected to fund the subsidy in perpetuity. The government will therefore establish a sustainability plan for the post-subsidy or post-donor era.

Potential for expansion beyond a pilot

The aim of the PPP framework is to build capacity in each of the six central hospitals in Zimbabwe, beginning with two institutions – one in the Northern Region (Harare) and one in the Southern Region (Bulawayo). This will address not only the need to balance the political/tribal dynamics, but will also reduce the cost of travel for nephrology patients. Eventually, once successful partnerships are well established and efficient services available at these institutions, the potential exists to enrol the rest of the central hospitals in a phased manner.

However, kidney transplantation will, for practical reasons, be established in only one region – Northern Region.

Support services will also be required in the delivery of:

- Nursing support;
- Blood bank; and
- Tissue typing.

Overall project timelines

The PPP is provisionally set for a period of five years, to allow for the effective setting-up of facilities, including the alignment of medical training institutions. However, to ensure that a valid return on capital can be achieved, consideration will also be given to a longer period – potentially up to 10 years.



Public-private partnerships typically involve large-scale interventions of one form or another and therefore require strong processes to develop and implement projects. **Chapter 10** offers detailed guidelines useful for any country seeking to expand the role played by PPPs. Once implemented, however, it is also necessary to learn from mistakes and make improvements to any new PPPs implemented. An overview of PPP appraisals, both before (to approve) and after project implementation, is therefore provided in **chapter 11**. **Chapter 12** concludes the book with a brief comment on certain of the main thematic elements arising from the earlier chapters.

PART 4

Guidelines for implementing health PPPs and the way forward



CHAPTER 10

Project development and implementation

INTRODUCTION

To effectively extract public value from PPPs, given their scale and risk-sharing nature, many countries have established legal frameworks which establish specific processes for project evaluation, procurement, management and monitoring and evaluation. For the purposes of this chapter, all these elements are regarded as *implementation*. While specifics may vary across countries, a fairly standard framework for implementation has been established, the main aspects of which are outlined.

PIPELINE DEVELOPMENT AND SCREENING CRITERIA

The most important factor in a successful PPP involves the identification and selection of projects which:

- Have a significant development impact, in terms of expanded access (particularly for the poor), and improved quality of healthcare;
- Are fiscally affordable and sustainable; and
- Respond to a demonstrable public need and gap in health services.

There is a tendency on the part of many governments to view PPPs as a way to finance expensive facilities and medical equipment, rather than to expand and/or improve medical services. Whilst PPPs are a powerful instrument for utilising private rather than public finance, this may be short-sighted in health PPPs since:

- Payments over the life of the project may involve a higher cost than funding obtained through public borrowings (loans or bond issues), despite any value-for-money analysis conducted at the time of project preparation.

- Given the limited fiscal space for health PPPs (since they are typically funded through long-term PPP payments), governments could get much greater development impact for the same fiscal outlays by selecting lower-cost, higher development impact PPPs.

- If the PPP involves financing but is not associated with risk-transfer involving clinical services and management, then the development impact will be significantly reduced. This is due to the fact that most countries not only need new medical infrastructure/equipment, but also improved quality of medical care and hospital management. So, if a government does utilise a PPP for a tertiary higher-cost facility, it should also ensure that, wherever possible, the PPP includes medical services and hospital management to get the full benefit.

To develop a pipeline of potential projects, governments should:

- Review the data/information on their health system and identify key healthcare service gaps, particularly vis-à-vis changing demographics and epidemiology;
- Consult broadly with ministry and community/public representatives to get their views on gaps and needs;
- Identify how these gaps could be alleviated through PPPs;
- Compile a potential list of PPP projects based on the above analysis;
- Undertake preliminary assessments of each project in terms of:
 - The potential impact on access numbers – of patients who would benefit, including their geographical location and, if feasible, their income/poverty level;
 - The project's annual PPP payment (using a *ballpark* model for obtaining rough estimates); and
 - Potential market interest.

The above analysis will be very preliminary and serves as a basis for ranking potential projects for further analysis and preparation. Using this ranking, a ministry can then prepare *pre-feasibility studies* on the top-ranking potential projects.

PROJECT DEFINITION AND PRE-FEASIBILITY STUDY

Once potential projects have been provisionally ranked, a government can then define the project in greater detail and conduct a pre-feasibility study, which should then be presented to the central PPP unit for a green light to proceed with project preparation and implementation. Further approval through an inter-ministerial PPP committee may also be necessary for the ministry to officially launch the project preparation.

The project definition/pre-feasibility should provide:

- A description of the services/infrastructure to be included;
- A demand and supply analysis indicating the scale of estimated demand and whether there are currently other providers;
- Alternative options, through a description of other options considered, and the rationale for the proposed PPP;
- Preliminary cost estimates (operating costs and capital costs); and
- Preliminary estimates of the annual PPP payment required to make the project financially viable for the PPP operator.

MARKET SOUNDING

Prior to officially launching a PPP project, the government should ideally conduct a preliminary market sounding to assess interest and to obtain feedback on critical issues. However, whether the government can do this prior to officially launching a tender process will depend upon the country's PPP law and procedures. Some laws allow for informal soundings prior to an official launch but restrict any communication after the tender launch to ensure equality and transparency in all communications with potential bidders.

In practice, if transaction advisers have been hired, it will be their responsibility to obtain preliminary feedback as they typically have extensive knowledge of the market and are in the best position to assess interest and concerns. Preliminary feedback may help shape the transaction structure to improve the chances of a successful tender.

AFFORDABILITY AND VALUE-FOR-MONEY ANALYSIS

Since health PPPs are typically funded through payments from the government, it is imperative that the government make an estimate of the expected fiscal cost to determine if the project will be fiscally affordable. Transaction advisors will construct financial models of the project to provide an estimate. This is generally used to set a cap for the bidding; i.e. *bids above the cap will be rejected*.

However, building a detailed financial model takes time. It is preferable if the government can get an early estimate so that it can at least decide whether to proceed with preparing the transaction and avoid any large surprises much later in the process. To this end, it is possible to use a *basic model* which provides a *ballpark estimate* (i.e. a very preliminary estimate which is in the ballpark of an accurate estimate). It allows the government and transaction advisor to plug in some estimates of some key variables to determine an estimated PPP payment. While this model provides no guarantee that the ultimate PPP payment, resulting from the tender, will be close to the initial estimate, it at least provides a ministry of finance with some guidance as to whether the transaction will be fiscally affordable.

An example of the structure of a ballpark model is offered in **Table 10.1**. Required input assumptions are reflected in blue. In this example, the government would need to make an annual PPP payment of US\$4million to the PPP operator for the operator to recover their capital and operating costs and attain a rate of return of 12% over the 20-year life of the project. The numbers are indicative only and meant to show the simple structure of the model and the data input requirements.

Table 10.1: Value-for-money assessment



PPP Period (years)	20
Number of beds	120
Gross area per bed (m ²)	90
Constructions costs/m ²	\$750
Construction/equipment cost ratio	1.5
Construction costs	\$8,100,000
Equipment costs	\$5,400,000
Total capital costs	\$13,500,000
Capital structure (%)	
Debt	60%
Equity	40%
Tax rate (%)	30%
Operating cost/bed/year (\$)	\$50,000
Operating costs/year	\$6,000,000
Annual PPP payment	\$4,000,000
Annual private revenue	\$4,000,000
Base loan interest rate	10.0%
Internal rate of return	12.0%

Even though the input assumptions are relatively few, it is important to have some benchmarks as a basis for the assumptions. In this case, hospital benchmarks are required for hospital area, the ratio of construction/equipment costs, and (most difficult) operating cost per bed. A technical expert with global and regional experience would be able to readily provide these benchmarks (which could be adjusted for the local environment).

Many PPP laws now require a value-for-money analysis, which typically involves an estimate of the life-cycle, risk-adjusted cost of a PPP compared to a *public sector comparator* (PSC), which is an estimate of the life-cycle cost of the project if it were implemented as a public-sector project. The methodology typically involves the following:

- Construct a model of the detailed costs of the project if implemented as a public-sector project (capital costs, operating costs, etc.);
- Construct a risk matrix, showing all the possible risks involved in implementing the projects;
- Estimate the probability of each risk occurring (e.g. 30%) under public-sector implementation;
- Calculate the estimated cost of each risk;
- Multiply the cost of each risk multiplied by the probability; and
- Adjust the PSC by the amount of each risk to provide the PPP cost.

This analysis allows a government to determine if the life-cycle costs would be less as a PPP than as a public-sector project. It should be noted that, while the methodology calls for precise estimates, it is quite difficult to accurately estimate both the probability of each risk and the potential cost at this stage in the project preparation, particularly if the country does not have an extensive history of similar transactions (as does the United Kingdom for instance).

While value-for-money analysis is helpful in determining whether a project should be undertaken as a PPP or public-sector project, a detailed financial model of the proposed transaction is still the most valuable way to estimate the proposed fiscal cost to the government and, therefore, of greatest utility to a ministry of finance.

MANAGING TRANSACTION ADVISORS

It is important for governments to hire professional transaction advisers to assist in the structuring, preparation and implementation of PPP transactions, particularly for the initial group of PPP transactions. Professional, experienced transaction advisers give potential investors and bidders confidence that the transaction has been properly prepared and reflects acceptable global practices. Generally, the transaction advisory team includes the following professional skills:

- Financial and transaction advisors:** to lead the team – they will do the transaction structuring, financial analysis and modelling, and manage all contacts with potential bidders.
- Technical consultants:** they will conduct technical due-diligence on the project, provide inputs and assumptions for all costing, and propose the technical performance standards to be included in the contract.
- Legal advisors:** they will conduct due-diligence on the legal framework to ensure it is conducive to a successful transaction (and, if not, they will propose legal revisions), do the legal drafting of all legal documents required (e.g. PPP contract, prequalification and tender procedures and direct agreement) under the supervision of the transaction (financial) advisors, and address all legal issues raised by potential bidders.
- Social and environmental consultants:** depending upon the project, the transaction advisory team may also have social and environmental consultants who will review the social and environmental aspects of a potential project and recommend mitigation measures where necessary. This may involve, *inter alia*, issues related



- to potential employee reductions (if the PPP project affects an existing facility/service), or environmental safeguards if the project involves issues such as medical waste.

- Public communication consultants:** would assist in public communications about the proposed project, including public consultations and hearings which may be required.

The government is responsible for hiring the transaction advisory team. Generally, it is preferable to hire a consortium than separate transaction (financial), legal and technical consultants, as the lead member (generally the transaction/financial advisor) will then assume overall responsibility for coordination and for the quality of the product. Moreover, it also facilitates control by the transaction advisor over the working of the team. If hired separately, there is a greater risk that different advisors will give conflicting advice to the government, which can lead to uncertainty and delays.

In hiring transaction advisors, the government should place highest importance on:

- The experience of the firm in similar transactions that were successful; and (more importantly)
- The experience of the proposed team members who will work on the project.

The fee structure for paying transaction advisors is also important. Typically, transaction advisors will charge:

- A fixed retainer fee; and
- A *success fee*, which is only paid if the transaction reaches “financial close”, i.e. after the PPP contract has been signed and financing has been secured by the private party.

Structuring the success fee is important to achieving the government’s objectives. Generally, success fees are structured either as a fixed amount or a percentage of some indicator (e.g. amount of private investment mobilised). In the case of health PPPs, it is generally the objective of governments to maximise access, rather than investment (which is an input, but not an output). For this reason, a fixed success fee may be optimal for most health PPP transactions.

Once the transaction advisory team has been hired, it is important to manage them according to an agreed timetable. To ensure that the work is efficiently focused on the transaction, it is recommended that the deliverables be exactly those that are essential for preparing and implementing the transaction, including:

- Transaction structuring report:** this is a summary of transaction structuring options and recommendations on the structure to be utilised and the key parameters. This should be reviewed and approved by the government to provide the green light to the advisors to draft the detailed legal documents.
- Information memorandum:** this provides information to potential investors on the macroeconomic context and the main details of the proposed transaction. It is designed to elicit interest on the part of private investors.
- Investor registration and due-diligence procedures:** the procedures for investor registration and for registered investors to have access to information on the project.
- Contract and annexes:** the detailed contract to be signed between the government and the winning bidder.
- Prequalification and tender procedures:** the procedures for qualifying registered investors to participate in the tender, and the content and procedures for submitting and evaluating bids.
- Financial model and estimate of maximum PPP payment:** the transaction advisors should make a recommendation to the government on the maximum PPP payment they should accept at the tender, with the supporting rationale.

Transaction advisors should focus on the above transaction-related deliverables and not get side-tracked on reports which are not germane to achieving the transaction.

TRANSACTION STRUCTURING

Typically, governments will commence a PPP project with a concept which will need further definition before it can be tendered. While this could be considered as a detailed feasibility study, in fact, it is more properly named a transaction structuring report, as it analyses the main aspects of the potential project (including demand, cost, investor market, etc.) and makes recommendations on the key parameters of the proposed transaction, with the supporting rationale.

Depending upon how well defined the project is, the transaction structuring report may also assess different options for the degree of private-sector participation and responsibility on key aspects such as capital financing, operational responsibility and risk sharing.

The transaction structuring report will typically address the following:

- Demand projections for the service;
- Preliminary financial projections, including financial support;
- Market sounding;
- Proposed risk matrix and public-private responsibilities; and
- Proposed bidding variable(s).

Ideally, the report will also include a *term sheet* which contains the main transaction parameters for government review and approval. This provides the basis for drafting of the detailed contract documents.

FINANCIAL MODELLING

The transaction advisers will be responsible for preparing a detailed financial model of the transaction. The model should show, *inter alia*:

- Key assumptions regarding costs and outputs;
- Financial projections (cash flow, balance sheet and income statement);
- Detailed projections of construction costs;
- Detailed projections of equipment costs;
- Detailed projections of operating costs;
- Detailed staffing projections;
- Payment estimates; and
- Value-for-money analysis (may be included in the model).

The most important output of the model is the estimated PPP payment, which will serve as the basis for the government to set a maximum cap for the tender. All bids above the cap will be rejected.

Some governments choose to announce the maximum cap publicly prior to the bid to make all bidders aware of it before preparing and submitting their bids. Other governments will hold the maximum in reserve, but disclose it to the auditor general prior to bid opening. In that manner, if bids are rejected, the auditor general can declare that the government set the maximum bid before bids were opened.

INVESTOR PROMOTION, REGISTRATION AND DUE DILIGENCE

Typically, governments initially promote the proposed project widely to attract as much interest as possible prior to officially launching the tender process. This involves issuing an *information memorandum* (or a more reduced teaser) describing the macroeconomic environment and the proposed project.

Most PPP laws require a formal process for communicating with interested parties, once the project has been officially launched. This involves:

- Publishing an advertisement for *expressions of interest*, by which interested parties register. Registration then entitles them to receive additional information on the project. It is recommended that the government not establish any technical or financial criteria at this stage of the process. However, to discourage frivolous parties from registering (possibly only to secure confidential information), it is recommended that governments charge a fee for registration.

Governments also need a formal process for issuing information to bidders and enabling them to conduct due diligence. In the past, governments would establish secure *data rooms* which registered investors could visit to view detailed project information. This has been replaced by web-based data rooms requiring passwords on the part of registered investors.

PUBLIC CONSULTATION

Some PPP laws (e.g. Brazil) include a requirement for public consultation, which typically includes one or more public meetings in the affected area. This may occur prior to issuing the draft PPP contract to registered investors, or after, depending on the legal requirement.

A public consultation process allows the government to explain its rationale and expected benefits of the project. But, it also provides an opportunity for affected parties to voice any concerns about the project and for the government to adjust project parameters if required.

As noted, most transaction advisory teams include a communications consultant to help the government manage its public consultation and information programme.

PPP CONTRACT AND TECHNICAL ANNEXES

The core of any PPP transaction is the contract between the government and the private partner. In general, the main topics covered in the body of the contract and the annexures are indicated in **Table 10.2**.

Table 10.2: Summary of main topics addressed in a PPP contract

Main topics in the body of the contract:	
• Definitions	• Performance standards
• Parties	• Reporting and audit
• Objectives	• Monitoring
• Conditions precedent	• Penalties
• Site	• Guarantees
• Government obligations	• Dispute resolution
• Operator obligations	• Force majeure
• Construction phase	• Step-in rights
• Operations phase	• Termination
There are typically 20-30 technical annexes for a PPP contract, which typically include the following:	
• Functional requirements for the facility	• Methodology for periodic PPP payment adjustments
• Functional requirements for the equipment	• Methodology for extraordinary PPP payment adjustments
• Output requirements for services	• Detailed penalty calculations
• Performance measures	• Termination methodology and calculations

RISK ALLOCATION

One of the most important elements of the PPP contract is the allocation of risks between parties. However, it is not sufficient to state, for example, that “construction risk will be borne by the private party”. The contract needs to be very specific.

Outlined in **Table 10.3** are illustrative risk matrices for two different kinds of hospital PPPs:

- **A PFI project**, where the operator is responsible for construction, equipment, maintenance and all non-clinical services and the government is responsible for all clinical services and for hospital management; and
- **A full PPP project**, where the operator is responsible for construction, equipment, maintenance, all non-clinical services and hospital management.



Risk (PFI)	Sub-Risk	PFI	PFI	Full PPP	Full PPP
		Private	Public	Private	Public
Design	Delays/cost overruns due to government changes in functional design requirements Defects in detailed design	✓	✓	✓	✓
Construction	Delays/cost overruns due to land ownership issues				✓
	Delays in authorising permits				✓
	Delays/cost overruns due to poor performance of contractor	✓	✓	✓	✓
	Delays/cost overruns due to unavailability or poor performance of sub-contractors			✓	✓
	Delays/cost overruns due to government changes in facility functional/construction requirements		✓	✓	✓
	Delays/cost overruns due to changes in environmental standards or delays in environmental approvals		✓	✓	✓
	Delays/cost overruns due to unforeseen soil conditions		✓	✓	✓
	Delays/cost overruns due to archaeological site		✓	✓	✓
	Delays/cost overruns due to lack of infrastructural site (power, water, etc.)		✓	✓	✓
	Delays due to import restrictions		✓		✓
Equipment	Cost overrun due to increases in equipment costs or changes in FX rates	✓		✓	
	Delays or unavailability from equipment suppliers	✓		✓	
	Delays in installing/testing equipment due to facility not being ready	✓		✓	
	Defects in equipment	✓		✓	
	Unavailability of equipment for operational purposes	✓	✓	✓	
Operations	Lack of medical technicians to operate equipment		✓		
	Cost increases in non-clinical services	✓		✓	
	Cost increases in clinical services (e.g. medical supplies, pharmaceuticals, medical salaries)	✓		✓	
	Cost increase due to salary increase - non-clinical employees	✓		✓	
	Cost increase due to salary increase - clinical employees	✓		✓	
	Labour strike by non-clinical employees	✓		✓	
	Labour strike by clinical employees within facility	✓		✓	
	Performance failures on non-clinical services	✓		✓	
	Performance failures on clinical services				✓
	Electricity outages				✓

Table 10.3 : Indicative risk matrices for two alternative hospital public-private partnerships



Risk (PFI)	Sub-Risk		PFI		Full PPP	
	Private	Public	Private	Public	Private	Public
Sponsor default	✓				✓	
Demand		Sponsor or parent defaults on obligations		✓		✓
Credit		Patient volumes higher or lower than per contract		✓		✓
Economic		Delays in government paying operator	✓		✓	
Political		Devaluation (assuming no devaluation adjustment in contract) Inflation (assumes contract indexes PPP payment for inflation) Interest rates	✓	✓	✓	✓
Legal		Changes in government which adversely affects contract		✓		✓
Regulatory		Change in laws adversely affecting contract		✓		✓
Environmental standards		Changes in regulations adversely affecting contract		✓		✓
		Change by government adversely affecting operator cost/operations				✓

FUNCTIONAL/OUTPUT REQUIREMENTS

As the PPP concept involves specifying outputs and functional requirements, not inputs, a health PPP contract will typically specify:

- The types of treatments (referencing global or national standards where appropriate);
- The volume of patients to be treated (frequently specified as a minimum-maximum band);
- The functional requirements of the facility, such as number of beds, outpatient and inpatient area, patient-flow requirements etc.;
- The functional requirements of medical equipment (e.g. 64-slice spiral CT); and
- The functional requirements of other equipment (e.g. water treatment requirements for haemodialysis).

It is important to note that the functional requirements for equipment should not be specified to favour any particular manufacturer (though it will be the responsibility of the PPP operator, not the government, to select the equipment supplier and procure the equipment).

Inputs will be up to the PPP operator, within national regulatory standards. This will include, *inter alia*:

- Construction materials;
- Equipment suppliers;
- Medical supplies;
- Sub-contractors (construction and operational);
- Staffing levels and salaries (note: there may be national standards regarding staffing ratios which are applicable to all providers); and
- Amount of investment.

PERFORMANCE MEASURES AND PENALTIES

All health PPP contracts include specific performance measures, typically related to the volume of patients treated and the efficiency and quality of care. Performance measures for PPPs, which include clinical services, may include such elements as:

- Volume of patients treated:
 - Expressed as a range between a minimum and maximum in a specified period, disaggregated by inpatients, outpatients and emergency patients; and
 - Volumes above the maxima (which generally trigger an upward payment adjustment).
- Quality of care:
 - Percentage of patients readmitted to an emergency department within 30 days;

- Percentage of inpatients readmitted to hospital within six months; and
- Case-mix-adjusted mortality rates.

Non-clinical services (for PFI projects):

- Percentage availability of medical equipment and operating theatres; and
- Number of reported failures in specified services.

While hospital efficiency is generally measured by indicators such as case-mix-adjusted *average length of stay and occupancy* (ALOS) rate, these are, in fact, products of the patient volumes and do not necessarily require a separate performance measure, i.e. volume targets can be set high enough to require efficient ALOS and bed turnover.

Public-private partnerships for clinical support services (e.g. laboratory and radiology) and specialised clinical services (e.g. dialysis) will have specific performance measures related to those services.

Generally, PPP contracts include a penalty regime with specified penalties for various performance failures. In principle, the size of the penalty is expected to be commensurate with the monetary damage caused by the failure (although this is often difficult to calculate when drafting a penalty regime), with escalating penalties for further infractions.

One important factor to consider in setting penalties is that PPP projects often include separate construction and operational phases and PPP operators generally depend on commercial loans to fund the construction and the procurement of equipment. The operational phase commences when construction/equipping is completed and the facility is commissioned.

Lenders expect that the operator's cash flow for debt repayment (related to the capital phase of the project) will not be affected by operational penalties. In other words, penalties should not be so high as to affect the cash flow required for debt repayment.

This is often difficult for governments to accept, as most believe that there should not be limits on penalties during the operational phase. However, it is a universal requirement among lenders and should be reflected in the drafting of the penalty regime.



PAYMENT STRUCTURE

There are multiple optional payment structures for health PPPs:

For clinical support services (e.g. laboratory and radiology) and specialised clinical services (e.g. dialysis): a payment per test or service performed is appropriate. For laboratory services, this requires a detailed fee schedule, as there may be hundreds of different types of tests. Radiology may also involve a detailed fee schedule. For dialysis, it is typically a payment per haemodialysis treatment. The only issue is whether or how to reimburse the provider for Erythropoietin (EPO), which may be used for up to half the patients, and for transport costs. One option, which was used for a Romania dialysis PPP, is to pay the operator a blended rate for all treatments, with the assumption that 50% would require EPO.

For hospital PFI projects, these are almost universally paid as a fixed *availability* payment. These costs are typically fixed (or relatively fixed) and independent on patient volumes. So, it is relatively easy for bidders to calculate and bid a fixed availability payment, and for contract payments to be structured as a fixed availability payment.

For full hospital PPPs:

- Hospital services involve a wide range of treatments, each with their own cost structure and (unpredictable) patient volumes. For these reasons, most providers would prefer a payment structure that reflects the case-mix (complexity) of the patients and the differing cost structure between types of patients and treatments. In many OECD countries, insurers (public and private) pay according to a diagnosis-related grouper or DRG coding system, which pays on the basis of the complexity (and hence cost) of the overall patient case-mix of the hospital.
- At the same time, most governments do not like the demand and cost uncertainty associated with a DRG system. Moreover, most emerging market countries do not yet have in place the sophisticated coding system required for a DRG methodology. They prefer a fixed payment to provide greater budget certainty. However, they provide the bidders with an indicative case-mix (patient volumes by type of patients) in the contract so that bidders can estimate a global fixed payment which would provide them with sufficient reimbursement. For that reason, most payments for *full* PPPs are structured as *fixed payments*.
- Nevertheless, experience is showing that demand is often higher than originally estimated in the contract. This is due to the fact that a new hospital serving a poor area will often result in a huge increase in demand from the local population, even if only replacing an outdated public hospital, as the population has much higher expectations from a PPP hospital. For this reason, it may be necessary to negotiate a higher fixed payment early in the project to reflect this higher-than-expected demand. This diminishes somewhat the initial advantage of the government choosing a fixed payment to provide greater budget certainty.

LINKING PAYMENT TO PERFORMANCE

While the PPP payment may be structured as a fixed amount, it can still be paid according to performance. For example, a recent hospital PPP had the following payment structure:

A 70% payment based on volume, ranging from 83% to 100% or the greater of contracted volumes.

The 70% payment was further disaggregated in terms of:

- Inpatients (weighted 72.5% of the volume payment);
- Emergency and outpatients (weighted 21.0% of the volume payment); and
- Diagnostic tests (laboratory and radiology) and outpatient procedures (weighted 6.6% of the volume payment).

It is important to highlight that the volume payment did not drop below 83% (regardless of actual volumes), as this was the amount deemed necessary for debt repayment (see earlier discussion).

A 30% payment based on achievement of 30+ performance measures

(each weighted to aggregate up to 30%). These performance measures related to such aspects as:

- **Medical quality:** rates for hospital-acquired infections, readmission to emergency department, readmission as inpatients, mortality rates (general, surgical, cardiac, sepsis), waiting time in emergency, waiting time for surgery, patient satisfaction percentage, etc.;
- **Efficiency measures:** occupancy rate, bed turnover rate, average length of stay;
- **Medical staffing:** percentage of doctors as specialists, nurses to bed ratio, number of occupational accidents, number of hours of educational training; and
- **Institutional:** introduction of clinical protocols.

Within the first 24 months, both the volume targets and the weightings were reset to reflect a higher-than-expected patient demand and different proportionate volumes of types of patients and tests. This led to a resetting of the weightings.

REPORTING AND MONITORING

Public-private partnership contracts include provisions for reporting and monitoring. Typically, this is handled as follows:

- The PPP operator submits regular reports on its performance vis-à-vis the performance indicators in the contract (the contract will specify the format and content of the reports);
- The contract management unit will review the reports to determine contract compliance; and
- The contract management unit may also hire independent experts to review compliance.

The contract management unit will also calculate penalties (or deductions in the periodic PPP payment) based on compliance with the performance indicators and payment provisions in the contract.

STEP-IN RIGHTS

The government may enter into a separate agreement (direct agreement) with the lenders to enable the lenders to take remedial measures in the event the operator is in default. This may include the right of lenders to step in to take over the contract and to replace the operator. Typically, the government will require that the replacement operator meets the same eligibility criteria applied in the original tender.

The contract may include similar rights for the government to step in and take over the PPP in the event of operator default.

DISPUTE RESOLUTION

Typically, the contract includes procedures for resolving disputes. The contract usually includes the principles that:

- Parties should seek amicable solutions on a good faith basis; and
- If this fails, there should be specific recourse to arbitration or the courts.

Many contracts include the establishment of a joint committee, composed of representatives of each party, with the responsibility for overall supervision of the project and remedying problems and disputes as they arise, prior to advancing to the courts or arbitration.

In infrastructure, there are sectoral regulatory agencies, which frequently address and resolve disputes. Additionally, many infrastructure PPP contracts include the concept of external experts to address disputes and make recommendations on resolution. For example, the Bucharest water/sanitation PPP contract includes the establishment of a three-person expert panel (technical, financial and economic experts) to address disputes as they arise. The panel has addressed more than 20 issues since its creation and has been an important factor in the PPP's continued success since it commenced operations (as a PPP) in 2000.

Governments may wish to include an expert panel in the contract for large, high-profile health PPP projects.

As noted above in the principles, recourse to arbitration or the courts is also necessary in the event that there is no resolution of disputes. International investors/operators favour arbitration according to internationally accepted procedures rather than local courts. This is an important prerequisite for successful PPPs involving international bidders.

BIDDER PREQUALIFICATION

All countries undertaking PPP projects have some procedure for prequalifying interested parties for participating in the bidding process. This is deemed necessary to ensure that only those parties with the requisite technical and financial capacity are permitted to bid.

There are two main design issues:

- Setting the criteria; and
- The timing of the prequalification - in particular whether to conduct in advance of the tender, or whether to include it as the first stage of a tender.

For transparency purposes and to ensure objectivity, it is recommended that the criteria be:

- Quantitative and verifiable;
- Based on verifiable experience, not future commitments;
- Right-sized to fit the project (both technical and financial criteria); and
- Allow for the interested parties to fulfil through affiliates (as well as the parent company) and through a consortium.

As an example from infrastructure, for a PPP involving the provision of all water/sanitation services for a city of two million, the criteria may be:

- At least 5-years' experience operating a water/sanitation system for a city of at least two million people; and
- Equity, per the most recent balance sheet, of at least \$500 million.

Since there are many different types of health PPPs, the criteria must fit the type and size of the project. Outlined in **Table 10.4** are examples of criteria for different types of health PPPs.

Table 10.4: Indicative criteria for various types of health PPP



Type of Project	Estimated Investment	Estimated Size	Proposed Prequalification Technical Criterion	Proposed Prequalification Financial Criterion
Dialysis Centres	US\$15 million	3 centres @25 stations (150 patients) each	> 5 years' experience operating dialysis centres > 75 stations in aggregate	Equity of at least \$10 million
Radiology Centre	US\$5 million		> 5 years' operating radiology centre	Equity of at least US\$5 million
Hospital PFI (no clinical services)	US\$75 million	200 beds	Constructed and facility-managed at least 2 hospitals of 200 beds or more within last 5 years (may require a consortium between contractor and FM operator to fulfil the criteria)	Equity of at least US\$100 million
Hospital "full" PPP	US\$75 million	200 beds	Constructed at least 2 hospitals of 200 beds or more within the last 5 years. Currently managing and providing all services in at least 1 hospital of 200 beds or more. Note: the above will likely require an operator and contractor.	Equity of at least US\$100 million

As already noted, the requirements should be flexible enough to allow interested parties to meet the requirements through affiliates (which requires a precise legal definition), or jointly with other companies.

An added issue is the safety record of the bidders, which is much more difficult to specify quantitatively in the criteria, but which is important. For example, a government may reasonably wish to exclude parties which have had major fires or high mortality rates in their hospitals. These types of factors are very difficult to quantify. It is possible to add a more generic criterion along the lines of "a satisfactory facility and patient safety record in operating its hospitals". However, this will likely lead to complaints (and possibly lawsuits) if one or more bidders is disqualified on these grounds. That is why it is always preferable to limit the criteria, wherever possible, to quantifiable and verifiable criteria.

It is not necessary to include issues related to bankruptcy or tax liabilities in the prequalification criteria. Most tender procedures require bidders to sign affidavits that they are not in bankruptcy and either affidavits or evidence from the tax authority that they have no outstanding tax liabilities (usually, the latter is only applied to the local tax authority of the government which is conducting the tender).

TENDER PROCEDURES

After the PPP contract, the tender procedures are the most important element of a PPP transaction. The tender typically has three steps, which bidders must successively pass to move to the next step:

- A legal envelope;
- A technical envelope; and
- A financial envelope.

Legal envelope

The legal envelope generally includes several legal documents from the bidder concerning the legal status of the bidder (or parties if it is a consortium presenting a bid), and a number of declarations to be signed. The government will review these documents to ensure that they are in order. Of particular interest is whether the bidder has in any way changed its status or composition since registration or prequalification.

Tender procedures typically require that the party which has provided the prequalification experience, or which is deemed by the government to be essential to the successful implementation of the PPP, have either a majority or controlling shareholding in the bidding company. A key aspect of the legal envelope is verifying this.

Many PPP laws and procedures require a company to be locally incorporated. An important issue is whether this is required before a company submits its bid, or whether it can be fulfilled as a condition of contract effectiveness after bid award. The latter is more flexible and may facilitate more bids, particularly in countries where incorporation is difficult and time consuming. However, it will depend on the legal requirements under the PPP law (or whichever law is governing the tender).

Technical envelope

There are two main, and widely differing, approaches to the content and evaluation of technical envelopes.

Technical proposal

Under this approach, bidders are typically required to submit one or more of the following:

- A concept design (if the PPP involves construction of a new facility);
- A business plan;
- An investment plan;
- A financing plan;
- A list of medical equipment and specifications;
- A human resources plan, showing staffing levels/mix and possibly curricula vitae for major personnel; and
- A staff training plan.

The rationale for this approach is that governments need to review the proposed approach and key inputs to be satisfied that the bidder will develop and operate the project satisfactorily.

The main disadvantages of this approach are:

- It is very time consuming and costly for bidders to prepare these documents. It will add months to the tender process and may dissuade some bidders from participating.
- It is time consuming for the government tender committee to review (typically takes months).
- Assessing these documents is likely to be very subjective and, hence, rejection of bidders on the basis of these documents may lead to complaints and legal action.
- The legal and practical validity of these documents during project implementation is questionable. Generally, the winning bidder must comply with the performance requirements of the contract. To the extent that the technical proposal also becomes part of the legal documents of the project, there will very likely be inconsistencies between the original technical proposal and the contract requirements. And, indeed, market and project circumstances may well result in the technical proposal being obsolete.

Moreover, a requirement for detailed technical proposals may reflect a government that is more accustomed to public procurement (which focuses on inputs) than PPPs (which focus on outputs). The core principle of PPPs is that governments should focus on specifying output/functional requirements, and allow the PPP operator to determine the optimal inputs (within legal/regulatory restrictions) to achieve the outputs. Governments would then enforce the contract by monitoring achievement of outputs, not by evaluating use of inputs.

It should be emphasised that governments and lenders will view this differently. Governments will need to focus on outputs and enforcing performance, not inputs. Lenders, on the other hand, will expect to see detailed business plans, as they are financing the operator directly and want to be sure the project is financially viable.

Technical experience

In comparison, a different approach is to limit the technical envelope to the technical experience of the bidder (or bidding consortium), either as prequalification (if not done earlier) or to confirm that the bidder has maintained the prequalification criteria set and fulfilled earlier. This is a much simpler approach and less onerous and time-consuming than the approach involving detailed technical proposals. Under this approach, reviewing the technical

envelopes typically takes one day versus several months if detailed technical proposals are required (as described above).

Governments will often argue that they need to see technical proposals because there may be creative differences between bidders which need to be evaluated and cannot be standardised in a contract or non-technical bid. However, in most cases, creativity is simply a matter of a government deciding whether it wants a certain requirement in a contract or not. For example, governments may want to give extra points for aspects such as *green standards* in a hospital. In fact, it is usually preferable to simply state in the contract that the facility must meet a specified standard (e.g. LEED Platinum⁴⁹). The same rationale can be provided to other aspects where there may be a tendency to award points. It is preferable to standardise technical requirements and bid on one variable (price).

In practice, many governments apply some mix of both approaches (technical proposal versus no technical proposal). For example, for a PPP involving construction of a new hospital, governments that do not require detailed technical proposals will still require bidders to submit concept designs. Governments do not want to risk that the winning bidder design an unacceptable facility after bid award.

The challenge in this case is prescribing how the concept designs will be evaluated without introducing considerable subjectivity. In one example, the government specified in the tender document the detailed functional requirements that needed to be met in the concept design. The designs were then evaluated against these designs. This was a straightforward evaluation and was completed in one day for three different bidders. Proposals were evaluated on a simple pass/fail basis.

Financial envelope/proposal

Bidders who have passed both the legal and technical stage would then proceed to the opening of the financial envelopes. For transparency and objectivity, it is preferable to limit the financial proposal to one number and avoid complicated weighted formulae (either within the financial proposal or between the technical and financial proposal).

For example, in a water/sanitation concession, it might be the average initial tariff per m³. For health PPPs, it may be more complex, depending upon the payment structure (see **Table 10.4**).



⁴⁹ Leadership in energy and environmental design.

Table 10.5: Indicative bid structure for various types of health PPP



Type of PPP	Bid Structure
Haemodialysis	<ul style="list-style-type: none"> The fee per haemodialysis treatment To compensate for patients also requiring EPO, bids could be expressed as a blended average (with an assumption in the tender documents about the percentage of patients requiring EPO, and the bidder bearing the risk that the actual percentage is higher)
Laboratory	<ul style="list-style-type: none"> Laboratories typically involve hundreds of different types of tests, each with a different cost structure (it would not be feasible to have bidders bid different fees for each test) Optimal approach would be to specify a fee structure in the tender documents and have bidders bid a uniform % variation (e.g. 10% discount) Similar to laboratories, diagnostic imaging typically has a large number of tests, though far fewer than laboratories
Radiology	<ul style="list-style-type: none"> Two approaches which have been successfully used in tendering are: <ul style="list-style-type: none"> Specifying the fee schedule in the tender documents and having bidders bid a uniform % variation (as above with laboratories) Grouping the tests in 4 to 6 weighted categories and having bidders submit proposed fees for each category, and then awarding to the bidder with the lowest weighted average
Radiotherapy	<ul style="list-style-type: none"> Fee per radiation treatment
Hospital (PFI type)	<ul style="list-style-type: none"> Annual (fixed) availability payment
Hospital (full - including clinical services)	<ul style="list-style-type: none"> Annual (fixed) PPP payment
Private administration of public health insurance	<ul style="list-style-type: none"> Premium per enrollee to be paid by the government

It should be emphasised that, although the bids may be structured as a single fixed payment, the contract will include performance measures, which may affect how much of the payment is actually made.

In reviewing financial bids, the government must also ensure that the winning bid is within the pre-established cap (whether pre-announced or not). In the event that no bids are within the cap, the tender will be declared *null-and-void*.

Another issue is whether bidders should submit their financial models with their financial bid. There are two potential reasons for considering this:

As a **basis for making future adjustments in the PPP payment**. It is recognised that adjustments may well be necessary and, in the absence of the government having its own model, it is acceptable to use the bidder's model. An alternative, rather than using the bidder's model, is for government to hire external consultants to review and calculate adjustments. Either approach is feasible.

To **validate the financial viability of the bid**. Governments may be concerned that the winning bidder made a lowball bid, either because of a mistake or to win the tender with the expectation of renegotiating later. However, it is recommended that governments not attempt to validate the financial viability of a winning bid, either by examining the bidder's financial model or by attempting to assess the viability of the bid through other

means. Rejecting a bid on this basis undermines the bid process, is subjective, may be difficult to defend and would very likely lead to legal challenges.

Lastly, governments may require that bidders include an indicative financing letter from a lender. However, this is best handled by inclusion in the legal envelope, not the financial proposal.

UNSOLICITED OFFERS

While PPP laws favour tendering, most PPP laws include some reference to unsolicited offers and how they may be handled. There are variations between countries, however. The different approaches typically involve some variation of:

Authority to sign a sole-sourced contract, provided: (a) the proposal involves a unique proprietary component or a project related to national security; and/or (b) the cost to the government or to consumers can be justified in terms of quantifiable market comparators (e.g. the generating cost per kWh of a power plant).

The government may proceed with a tender for the project, but the sponsor who originally submitted the proposal may receive a premium during the bid, either in terms of a percentage of the bid amount and/or reimbursement of the sponsor's costs in preparing the proposal.

For health (and all other) PPPs, the process for unsolicited offers will need to follow the local PPP law. It may be somewhat more complicated in health because many times the proposals will be for private projects (i.e. for private-paying patients), but the sponsors are seeking additional government funding for financial viability. In these cases, it is less clear cut as to whether this is a PPP, though one could argue that the inclusion of any government funding automatically converts it into a PPP.

Subject to the procedures set out in the legal framework for unsolicited offers, the following approach is recommended for health:

It is recommended that a government only consider a sole-sourced proposal if the proposed government subsidy: (a) involves reimbursement for treatment of public patients; and (b) the reimbursement rate can be justified in terms of some type of market or national health insurance comparator.

Otherwise, unless the proposal contains proprietary or confidential information, it is recommended that the government modify the project concept to maximise the development impact and then conduct a public tender (rather than negotiate a sole-sourced contract). In this manner, the government can both structure the project to meet its objectives/needs and obtain better offers through a tender.

COMMERCIAL AND FINANCIAL CLOSE

Following the *bid award*, the next step is *commercial close*, involving the signing of the contract by both parties. Optimally, the tender process will have been structured to preclude the need or opportunity for any post-award negotiations. This can be accomplished by:

- Issuing a draft version of the detailed PPP contract for review/comments by the registered bidders⁵⁰;
- Issuing the final detailed version prior to the tender; and
- Not allowing any conditioned bids at the tender (which opens the door for post-bid negotiations, as well as making it difficult, if not impossible, to compare bids).

⁵⁰ This ensures that their comments are reflected, to the extent possible, in the final version before the tender.

If this process has been followed, it is quite feasible for parties to sign the contract immediately following formal government approval of the tender award.

The remaining measures required before the project can be implemented are:

Fulfilment of the conditions precedent (or conditions of effectiveness) specified in the contract. Typically, these involve local incorporation of the winning bidder consortium (if not done prior to the bid), securing government permits for specific aspects, etc. In drafting the contract, the government should avoid having a long list of conditions of effectiveness, or simply transferring difficult issues to effectiveness rather than addressing them prior to the tender.

Financial close involves the winning bidder signing loan agreements with lenders for the project. If the bidder lined up tentative financing prior to the bid (as is sometimes required in tender procedures), this will be straightforward. Otherwise it may take time.

The biggest issue in securing financial close is if the lenders want major changes to the PPP contract, which may be difficult for governments to accommodate either because: (a) the PPP law does not provide such flexibility; or (b) losing bidders may legally challenge on the grounds that this undermined the bidding process.

To minimise this risk, it is imperative that the transaction advisors communicate early and often with lenders in preparing the transaction so that the draft and final versions of the PPP contract reflect terms that are acceptable to most lenders.

Governments need to press their advisors throughout the process for feedback from interested bidders, investors and lenders – not only during the formal review of the draft PPP contract, but during the entire process.

CONTRACT MANAGEMENT

Global experience in health PPPs has demonstrated that:

Issues often arise in the first 12 to 18 months (after project start-up) which need immediate attention. These may involve higher-than-expected demand (and costs), delays in government payments, or construction/commissioning problems.

While governments have the capacity to prepare and tender PPPs, this is usually with the strong support of a professional transaction advisory team. Governments often lack the same capacity and professional support in the contract management phase.

Unlike infrastructure, where there are usually professional, autonomous regulatory agencies for transport, energy and telecommunications, no similar entities exist in the health sector, which results in weaker capacity to address issues.

To address these concerns and weaknesses, governments need to make a concerted effort to develop this capacity as early as possible. It is recommended that:

- Governments put in place institutional capacity for PPP contract management;
- Government officials attend training courses on health PPPs, particularly related to contract management; and
- Governments hire professional advisors to assist in contract management, particularly for higher-profile, more complex PPPs.

CHAPTER 11

Health public-private partnership appraisal

INTRODUCTION

This chapter offers guidelines and advice useful to institutions primarily responsible for appraising health project proposals for possible PPP projects. This information also serves to assist project developers to understand how proposals can be appraised.

Projects will typically take one of the following forms:

- Purely private projects (*private-for-private*) involving no government subsidy or funding and aimed at private-paying patients/customers; or
- Public-private-partnerships involving a government contract and some funding for provision of services/facilities to publicly-funded patients.

Project proposals may be presented by sponsors or governments, or developed jointly with a funder.

HEALTH SYSTEM CONTEXT

To properly appraise a health project, the fundamental characteristics of the country's health system needs to be understood as there are major differences between countries that can affect the functioning and potential viability of a project. The following information should therefore be collected and understood.

- The proportion of overall health expenditures financed from the government (directly or via public insurance), private insurance and OOP payments.
- The availability of private insurance, as it will provide for a stronger base for contracting directly with private insurers and allow higher-cost treatments. If a country is heavily dependent on individual OOP payments, credit risk is increased and will generally limit medical services to lower-complexity/lower-cost services.
- The scale of the middle class now paying (or prepared to pay) OOP for quality services. The larger the population with the ability to pay, the lower the credit risk and the greater the opportunity (depending upon competition).
- The scope and scale of public insurance should be known, including how it is funded and administered.
- Additional revenue opportunities arising from public insurance. This is useful where it will at least be able to cover the variable costs of public patients. The ease of contracting/reimbursement with the public insurance



- scheme also needs to be determined as, in practice, it is often too burdensome to consider.
- The roles of the public and private sector (for-profit and not-for-profit) in service delivery.
- The size of the private sector, including locations and service types. The goal is to get a rough idea of the size, role and growth of the private sector in health and which medical services are provided by the private sector. This will help to identify gaps which could be taken up by a new entrant.
- Legal/institutional/regulatory context for purely private projects (GECL):
 - What are the legal/regulatory constraints for private health companies in entering and operating in the market?
 - This is crucial for determining the major constraints which the project may face. The team may benefit from detailed country-specific assessments undertaken elsewhere.
- Legal/institutional/regulatory context for PPP projects (GECL):
 - An assessment of PPP laws, regulations, policies and administrative responsibilities (including the role of MOH). This assessment is crucial for assessing the ease/difficulty and process for implementing health PPPs (and, hence, evaluating potential health PPP projects).
 - An overview of the country's basic health indicators and key gaps in health care.
- Review key demographics (age of population), health indicators (e.g. infant/maternal mortality rates, life expectancy) and epidemiological data (main causes of death, incidence of cancer, heart disease, etc.).⁵¹

ASSESSMENT

When considering a private project, the sponsor should present a feasibility study or, optimally, a business plan. Outlined below are additional issues (to those presented in the previous section) that should be reviewed when considering a private project.

Market analysis

A market analysis provides an indication of the market-related conditions that may influence the demand for health services and goods central to the viability of a particular project. The following are the standard requirements for a market analysis.

- Review the market assumptions/data concerning the type of services to be delivered and estimated number of patients (with multi-year projections).
- Describe the main competitors and expected market share of proposed project.
- Assess the assumptions regarding patient-mix (domestic and foreign) as well as their income levels.
- Evaluate whether any required assumptions are adequately supported by professional market studies or assessments.
 - Often initial business cases include overly-optimistic assumptions about patient volumes and growth rates.

⁵¹ This helps determine if the proposed project - whether purely private or PPP - would help address an important (and perhaps increasing) health problem.

- Assumptions that the project will either attract patients who are now going abroad for treatment, sometimes at a cost to government, and/or attract foreign patients from neighbouring countries or the region are overly optimistic. Generally, only very well-established brand-name health companies can reach these markets.

Technical analysis

Technical analyses largely focus on static features of a project. The following are standard technical analyses required for health projects.

- Proposed designs for any facilities should be assessed for patient flow and operations.
 - The designs of hospitals have changed significantly in recent years. Modern hospitals have fewer beds than previously and considerable space for outpatient consultations, day procedures (e.g. endoscopy) and diagnostics (laboratories and imaging).
 - Functional designs should also optimise patient flow and incorporate suitable ratios of gross square metres per bed.
- Medical equipment proposals should be right-sized for functional requirements. This is important as modern medical equipment has considerable capacity and may not be fully utilised unless the sponsor can attract external patients.
- Proposed suppliers and contractors should be carefully checked.
 - The track record and reliability of suppliers and contractors should be examined.
 - The main construction contractor's record should be examined for on-time and on-budget completion and any subsequent safety performance.
- Input costs (construction, equipment) vis-a-vis market comparators should be reviewed.
 - Construction costs are typically expressed as US\$ per m². Data on other hospitals constructed in the country or region should be collected and an assessment made of the forecast construction cost vis-a-vis these comparators.
- Key operating assumptions, such as occupancy rates and average length of stay, should be reviewed.
 - Generally, future occupancy rates and the speed of achieving the projected peak occupancy rates (e.g. 85% to 90%) are often over-optimistic. Most new private hospitals only reach 60% capacity after 4 to 5 years. This is important for assessing cash-flow projections.
 - For a hospital, ALOS is the most important crude measure of management efficiency. It varies depending upon the complexity of patient cases and treatments (case-mix). A maternity hospital with low-complexity patients will typically have an ALOS of under three days. By way of comparison, a tertiary hospital with many complex cases (e.g. transplants, cardiac surgery) may have an ALOS of around seven to eight days.
 - It is important to review the projected case-mix of the proposed facility and assess whether the forecast ALOS is in line with the case-mix and is achievable.

Clinical protocols

Clinical protocols are important in medical facilities to ensure that there are standardised procedures in place for different types of medical treatment. Patient safety in medical treatment is self-evidently important as patient deaths (either a higher-than-normal mortality rate or deaths due to medical negligence) is negative both for the patients and the viability of the project. Clinical experts should review whether clinical protocols will be in place and how an operator plans to ensure compliance.

Staffing and management

Management is the most important factor in a project and often the weakest, as many private health project proposals are sponsored by physicians who lack experience in managing a medical facility, particularly a hospital. The curriculum vitae of the proposed manager should therefore be carefully reviewed to ensure she/he has a good track record managing health facilities. An IDD or *integrity due diligence* check should also be performed.

The proposed management team and structure should also be examined with reference to, *inter alia*, experience and track record.

Staffing requirements should also be based on appropriate staff ratios according to industry standards for the types of facility concerned. This analysis should also account for staff costs based on expected conditions of employment.

Financial analysis

Revenues

Revenue estimates are central to any project involving, *inter alia*, patient payments as part of their viability. Revenue assumptions are sensitive to patient mix (e.g. private-paying versus publicly-funded), fee structures for private patients (assess the proposed fee structure versus relevant market comparators), and insurance status (OOP payments are less certain than insurance-based reimbursement).

Operating costs

Operating costs should be examined by relevant category and compared to market comparators.

Capital structure

For projects that involve the raising of capital, the following are issues that need to be considered in any evaluation:

- The type of bank financing and whether it is the most appropriate type of instrument (e.g. loans and/or equity).
- The debt/equity assumptions. Private health projects tend to be higher risk than other sectors. Sponsors may propose high debt/equity ratios (e.g. 80/20, 90/10), but donor banks tend to require equity at around 40% to 50%.
- The equity investor's experience and sponsor's financial strength should be carefully assessed.
- The proposed dividend policy should be reviewed.
- Assumed financial ratios (liquidity, profitability and debt service ratios) should be assessed to see whether they are realistic in view of market comparators.

Governance and ownership structure

As with the project management, the track record of shareholders is a valid consideration relevant to the viability of a project. An integrity due diligence should be performed on shareholders to ensure there is no record of corruption and malfeasance. In addition, the following should be evaluated: the proposed ownership structure, control over operational decision making, and reporting requirements and audit plans.

Environmental and social assessments

Environmental concerns are particularly relevant to health projects due to the resulting waste products. It is therefore important to determine the following in relation to each project:

- What is the environmental category of the project?
- Does it require a separate environmental impact assessment? If so, how has this been completed?
- Do the facility designs and operations comply with appropriate environmental standards?



- What are the key environmental risks in the project?
- What types of medical waste will be produced? How will it be collected/disposed of? Are these procedures consistent with relevant standards?
- Does the facility design comply with appropriate safety standards? Will procedures be in place to ensure continued compliance? (Safety is a very important issue as catastrophic events like hospital fires can have enormous negative consequences.)
- What are the expected greenhouse gas emissions associated with the project?
- Does the project design incorporate green design features? For instance, what is the specified LEED rating associated with the project?
- What is the expected social impact of the project? Does it require a separate social impact assessment?
- Does the proposed project involve any possible relocation of residents? If so, how many will be impacted? What legal procedures are in place for resettlement? Do these procedures comply with relevant requirements?

Note: as this section deals only with purely private projects, it is assumed that there will not be any negative employment effects (as may be the case for PPPs).

Project legal analysis

The following are the standard legal considerations.

- What is the legal structure of the project company? Is it a registered company in the target country?
- Are there any outstanding or expected legal actions against the company or its shareholders?
- Does the company own the land where the facility is to be located? Is it free of liens?
- Do the proposed or actual contracts with contractors, equipment suppliers and employees comply with local legal requirements?

Risk analysis

All major risks associated with a proposed project, including contingent liabilities, should be evaluated carefully. This includes: the overall credit risk of the project (related for instance to any demand analysis) and the identification and assessment of other risks which may be relevant based on the project nature and the context relating to its implementation.

Additionality and development outcome assessment

A number of additional factors that could inform the viability and appropriateness of a project include the following.

- What are the alternative sources of capital financing?
- What are the expected development outcomes for the project? For instance, patients treated, amount of private investment mobilised, etc. How realistic are the estimates?
- Does the project include any targeting for low-income patients? For example, 20% of beds for poor or in-poverty patients? Is this sufficient? Will this likely be achieved?
- Is it possible to estimate the impact on women and children? And on employment?
- How will development outcomes be measured and monitored during the project implementation? Are suitable procedures in place to enable measurement and monitoring?

PROJECT ASSESSMENT OF PPP PROJECTS

This section covers *additional elements* that are required for the review of PPP projects where a majority of the operational funding will come from a government or MOH using a PPP contract. A distinction is made here between the following two types of PPP: first, projects which are awarded using a competitive tender or sole-sourced; and second, projects which involve medical services (and are therefore higher risk) or only infrastructure (and are therefore lower risk).

Competitive tenders

For projects that have been awarded through a competitive tender, the following should be examined:

The PPP legal and regulatory framework:

- Has the process fulfilled the requirements of the PPP law?
- Are there any impediments in the legal framework that may hinder project implementation?
- Are there any regulations which may hinder implementation?⁵²

The PPP contract:

- What is the risk allocation and is it properly balanced in view of the project type?
- Is the payment structure fixed or variable? If only an availability payment, how achievable is it? If it is for medical services as well, is it a fixed or variable payment? Is it linked to performance – volume and/or quality?
- What are the payment adjustment mechanisms? Are there periodic adjustments to the payment? What is the basis for any adjustments? What are the indices used? Do the indices appropriately reflect the underlying cost structure?
- What performance targets/penalties are in place to ensure that the project is feasible and acceptable from a lender's perspective? For example, once a facility has been completed and commissioned, project penalties should not affect debt repayment requirements.
- What are the contract monitoring and management arrangements? These would include: lender rights, such as step-in rights, which provide the lender with adequate remedies in the event of non-performance; and are there appropriate dispute resolution and arbitration mechanisms?⁵³
- Are the proposed termination procedures by either party, or both parties if mutually agreed, acceptable from an international lender's perspective?

Financial viability of the bid:

- If the winning bid was based on the lowest PPP payment, the lending institution needs to ensure that bid is financially viable.
- The lending institution should review the bidder's financial model and review all assumptions (as it would for a private project).
- It is however not recommended that the government reject a financial bid on the grounds that it is not financially viable, as this would undermine the bid process.

The credit risk of the payer:

- Which government agency is the payer?⁵⁴
- What is the creditworthiness of the payer?
- Is the funding subject to annual appropriations approval by cabinet or the legislature? What is the risk that the annual amounts will not be approved? What is the risk that the annual amounts won't be disbursed by the payer?
- Are there any guarantees from the MOF? How credible and enforceable are the guarantees?

Demand risk:

- For infrastructure-only projects (not involving clinical services), there is usually no demand risk borne by the operator, who is responsible only for making the facility and all equipment available, but not for treating patients. In such cases, the volume of actual patients tends not to affect the PPP operator unless any of its costs can be linked to patient volume. An assessment needs to review whether, in infrastructure-only PPPs, the operator bears any demand risk and, if so, whether the payment reflects this.
- For PPPs involving medical services, there will be an important demand risk, either because patient volume is much lower than expected or much higher than expected. The situation varies largely by type of clinical service PPP. In most specialised clinical service PPPs (dialysis, laboratory and radiology), payment is on a per-treatment basis, so the main risk is that the public hospital or health centres will not refer sufficient patients to cover fixed and variable costs. Hence, it is important for the PPP to have some type of contractual guarantee that the hospital or public health centres will refer its patients (and perhaps with a stated minimum volume) to the PPP.

On the other hand, for hospital PPPs, governments typically make a fixed payment, with some demand cap (i.e. provided demand does not exceed some specified maximum). However, experience in emerging markets is that demand often far exceeds initial forecasts because many more patients will seek treatment once they see a quality facility is in place. In these cases, renegotiation is often necessary. This contingency therefore requires careful review to ensure that the PPP contract includes satisfactory provisions for payment adjustments in the event of higher-than-cap demand (and not just depend on renegotiation).⁵⁵

Operator assessment:

- For PPPs, the same assessment as described above for private projects should be performed, but additionally review its track record for PPPs.
- Compared to private health projects, PPPs tend to be more sensitive politically and with the public (whose expectations were low for public-sector facilities, but will be much higher for privately-managed facilities for public patients). Hence, the operator and company shareholders need to be carefully reviewed.

The financial structure and type of bank instrument requested:

- The proposed instrument (e.g. a loan from Bank A) should be reviewed for suitability. Account should be taken of whether alternative instruments are more suitable – such as partial risk or partial credit guarantees.

The capacity of the government for contract monitoring/management:

- Experience is showing that one of the biggest weaknesses of health PPPs is the capacity of government (typically MOH) to monitor the contract, comply with the government's obligations, and manage issues as they (inevitably) arise. As a result, disputes quickly arise about payments, compliance with *inter alia*

⁵² For example, there may be health regulations on staffing ratios or other aspects which impede operation.

⁵³ For instance, are the procedures acceptable from an international lender's perspective? And is the arbitration approach based on international procedures?

⁵⁴ Payers can include: the MOH or a public health insurance agency.

⁵⁵ Which may be affected by available budget, which may limit the scope for renegotiation.

performance targets and actual patient volumes. Such disputes, if not satisfactorily dealt with early, can fester and cause mistrust between the parties and lead to early termination; a result which is likely to prove damaging for all parties concerned.

It is therefore essential to assess a government's capacity in this area and, if necessary, to include technical assistance to strengthen the capacity where required. It should be noted that this is more of a risk in health PPPs than infrastructure PPPs. In infrastructure, there are usually established professional regulatory agencies in place for, *inter alia*, performance monitoring and price adjustments. There are no comparable regulators in health (where regulatory bodies tend to focus more on accreditation, licensing and certification).

Sole source awards

For PPP projects that have been awarded on a sole-source basis, the following needs to be assessed:

- Is the awarding of the contract consistent with the legal requirements for accepting unsolicited offers?
- Is the rationale both rational and legal for awarding on a sole-source basis?
- An intelligence due diligence evaluation is required on the sponsor together with a creditworthy check.
- The cost of the PPP for the government should be evaluated relative to some market comparator so that it can be ascertained whether the cost is reasonable and justifiable.



CHAPTER 12

Conclusion

This book is the culmination of a learning exercise that sought to both frame the context for health PPPs in sub-Saharan Africa and to support and enable their development and implementation. Health systems development in Africa, as it is in India, is a work in progress. There is no clear end-point other than continuous investment and improvement of health coverage for all. Sub-Saharan Africa however faces the twin challenges of complexities derived from the nature of health systems and complexities arising from the regional context – urbanisation, poverty, inequality and rapid economic change. It has to meet these challenges by taking advantage of the opportunities created by technological change and the very nature of modern and emergent economies. Approaches to health coverage of 70 or even 20 years ago may no longer be efficient or responsive to societal needs. Emergent economies, such as those of Africa and India, therefore need to be adaptive and smart about how they make use of scarce resources. They also need to manage the market failures that plague poorly regulated private health systems that exclude the vulnerable and drive-up costs.

Having governments partner with the private parties in the achievement of public goals is therefore an important means to leverage public interventions to achieve results that would otherwise not be possible if pursued exclusively by public sector actors – at least in the medium to long term. While public actors are never precluded from procuring goods and services from the private sector, partnerships imply a deeper relationship. While nevertheless dependent on contracts and performance requirements, PPPs are instruments that can be directed toward the resolution of more complex public concerns. Particularly those that require raising substantial capital and accessing alternative sources of revenue, technical capacity and advanced technology. To be able to take advantage of PPPs, however, requires that governments develop significant capacity in the selection, design, procurement and management of large-scale contracts and partnerships. Without this capacity, PPPs will be poorly designed and implemented. With this capacity, ministries of health will be able to act faster and at greater scale.

To illustrate the diversity of possible health PPPs, the book presents information of projects actually implemented in a range of countries including specific case studies. In total, 12 case studies are presented, eight from India and four from South Africa. In addition, the three pilot proposals from Burkina Faso, Malawi and Zimbabwe provide practical information on what is possible in three quite different contexts within sub-Saharan Africa. The range of PPP health projects includes: BW management, laboratory services, build-operate-transfer, dialysis, hospital management, diagnostic imaging, oncology services, patient administration including electronic medical records, hard and soft core services, equipment maintenance, financing subsidised insurance and public financing initiatives.

In addition to specific project-oriented PPPs, private health systems represent a potential means to achieve UHC together with publicly-funded and provided free health systems. However, unregulated private health systems can also threaten to undermine coverage goals. From the experiences of South Africa outlined in **chapter 6**, both the opportunities and risks are laid out. As with normal PPPs, including private health systems in a domestic coverage strategy requires investments in regulatory frameworks and platforms. These need to protect access to risk pools,

prohibit discrimination on the basis of health status, ensure efficient competition, achieve transparency on the *value-for-money* of both health insurers and providers, and manage costs. On the whole, developing countries have not developed well-functioning coverage models and substantial scope for improvement therefore exists.

The RSBY in India, discussed in **chapter 5**, provides an interesting variant on traditional social health insurance approaches, including regulated markets. Here, the PPP establishes a private insurance solution for BPL families that require 100% subsidies from government. Rather than wait until a perfect free public service has been established, the government of India leverages existing health financing and provider capacity without exposing state finances to any open-ended risk typical to private health insurance markets. Competitive bidding processes combined with contracting have consequently allowed BPL families to access reasonable coverage for catastrophic expenses where no reasonable public alternative would have been possible in the medium term.

To serve as a resource for sub-Saharan African countries, this book therefore provides practical guidance on: definitions of PPPs; the case for PPPs in Africa, i.e. where they will be of most value; the establishment of regulatory frameworks for PPPs; multiple case studies; regulatory frameworks for private health systems and guidelines for implementing and appraising PPPs. While the forms of PPP described in this book may be time-bound and will quite possibly become outdated in a few years, the way of thinking about PPPs should remain applicable to a wide range of African and developing country contexts well into the future. While PPPs remain only one strategic option amongst many in the achievement of UHC, they are likely to become a permanent feature of any modern growing and accountable health system. To this end it is hoped that this book contributes to the effective deployment of PPPs in African health systems and thereby to systemic improvements in the quality of healthcare available to all.

REFERENCES

1. World Health Organization, *World health report 2010: Health systems financing: the path to universal coverage*. 2010, World Health Organization: Geneva.
2. Kutzin, J. *Health financing for universal coverage and health system performance: concepts and implications for policy*. Bull World Health Organ, 2013. **91**, 601-611 DOI: <http://dx.doi.org/10.2471/BLT.12.113985>.
3. Partnership for Health PPPs in Africa Project. *Developing coordinated public-private partnerships and systems for financing health in Africa*. 2014. Lilongwe Malawi.
4. OECD, *African economic outlook 2016: Sustainable cities and structural transformation*. 2016: OECD publications.
5. Ostry, J.D., A. Berg, and C.G. Tsangarides, *Redistribution, inequality and growth*. 2014, International Monetary Fund. p. 30.
6. World Bank, *World development indicators*, W. Bank, Editor. 2017.
7. Leive, A. and K. Xu, *Coping with out-of-pocket health payments: empirical evidence from 15 African countries*. Bull World Health Organ, 2008. **86**.
8. Su, T.T., B. Kouyaté, and S. Flessa, *Catastrophic household expenditure for health care in a low-income society: A study from Nouna district, Burkina Faso*. Bull World Health Organ, 2006. **84**.
9. van den Heever, A.M., *The role of insurance in the achievement of universal coverage within a developing country context: South Africa as a case study*. BMC Public Health, 2012. **12**(1): p. S5.
10. Forrer, J., et al., *Public-private partnerships and the public accountability question*. Public Administration Review, 2010. **70**(3): p. 475-484.
11. de Bettignies, J.E. and T.W. Ross, *Public-private partnerships and the privatization of financing: An incomplete contracts approach*. International Journal of Industrial Organization, 2009. **27**(3): p. 358-368.



12. National Treasury PPP Unit, *Public Private Partnership Manual, National Treasury PPP Practice Notes issued in terms of the Public Finance Management Act*, N. Treasury, Editor. 2004.
13. Mahapatra, A., *Enabling environment for PPP, in Workshop on developing coordinated public private partnerships and systems for health in Africa*. 2014: Lilongwe, Malawi.
14. Bovaird, T., *Public-private partnerships: from contested concepts to prevalent practice*. International Review of Administrative Sciences, 2004. 70(2): p. 199-215.
15. Saussier, S., C. Staropoli, and A. Yvrande-Billon, *Public-private agreements, institutions, and competition: When economic theory meets facts*. Review of Industrial Organization, 2009. 35(1): p.1.
16. Guasch, J.L., *Granting and renegotiating infrastructure concessions: Doing it right*. 2004: World Bank.
17. National Health Systems Resource Centre, *National health accounts estimates for India 2013/14*, G.o.I. Ministry of Health and Family Welfare, Editor. 2016, National Health Systems Resource Centre,.
18. World Health Organization, *Global Health Observatory data repository*. 2017.
19. Government of India, *10th five-year plan*, P. Commission, Editor. 2002.
20. Ministry of Health and Family Welfare (India), *National health policy 2002*, M.o.H.a.F.W. (India), Editor. 2002: India.
21. Africa, R.o.S., *Constitution of the Republic of South Africa*. 1996.
22. van den Heever, A.M., *South Africa's universal health coverage reforms in the post-apartheid period*. Health Policy, 2016. 120(12): p. 1420-1428.
23. Republic of South Africa, *Public Finance Management Act (No.1 of 1999 as amended by Act 29 of 1999)*, M.o. Finance, Editor. 1999.
24. National Treasury, *Public-private partnership manual: National Treasury PPP practice notes issued in terms of the Public Finance Management Act*, N. Treasury, Editor. 2004.
25. Roman, D., *Public private partnership project of the Department of Health Provincial Government of the Western Cape experience of the Lentegour Psychiatric Hospital and Western Cape Rehabilitation Centre for persons with physical disabilities*. 2010, PPP Contract Manager for the Western Cape Department of Health.
26. Wits Business School, *Case study on the public-private partnership between Kwazulu Natal Department of Health and Impilo Consortium at Inkosi Albert Luthuli Central Hospital for the PPP unit*. Undated.
27. Council for Medical Schemes, *Compiled data from multiple annual reports*. 1980 - 2013.

28. Republic of South Africa, *Competition Act, No.89 of 1998*. 1998.
29. World Health Organization, *Malawi: statistical profile*. 2015.
30. Ministere De L'economie Et Des Finances (Burkina Faso), *Projections Demographiques De 2007 a 2020*, I.n.d.I.s.e.d.I.d. Ministere De L'economie Et Des Finances, Editor. 2009: Burkina Faso.
31. United Nations Development Department, *Human Development Report 2016, Human Development for Everyone*. 2016, New York: United Nations Development Department,.
32. Republic of Burkina Faso, *The Constitution of Burkina Faso*. 1991: Burkina Faso.
33. Republic of Burkina Faso, *Public Private Partnership in Burkina Faso, National Plan for Economic and Social Development 2016*.
34. Republic of Burkina Faso, *Organization of the Management of Biomedical and Similar Waste*. 2008: Burkina Faso.
35. Government of Malawi, *Malawi, health sector strategic plan, 2011 - 2016: Moving towards equity and quality*, M.o.h. (Malawi), Editor. 2011.
36. National Statistical Office (Malawi), *Key Indicators*, National Statistical Office (Malawi), Editor. 2017.
37. World Health Organization, *WHO country cooperation strategy 2008-2013: Malawi*. 2008: India.
38. United Nations Country Team (Zimbabwe), *Zimbabwe country analysis*. 2014.
39. Government of Zimbabwe, *Zimbabwe agenda for sustainable socio-economic transformation - Towards an empowered society and a growing economy*. 2013: Zimbabwe.





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