

A rapid assessment tool covering key health systems functions—

- Governance
- Health financing
- Health service delivery
- Human resources
- Pharmaceutical management
- Health information systems

A How-To Manual

Health Systems Assessment Approach



Health Systems Assessment Approach: A How-To Manual

Mursaleena Islam, Editor

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ACRONYMS

AIDS	acquired immunodeficiency syndrome
AIHA	American International Health Alliance
ANC	antenatal care
CBHF	community-based health financing
CBHI	community-based health insurance
CBOH	Central Board of Health
CD	compact disc
CIESIN	Center for International Earth Science Information Network
CMS	Central Medical Stores
CSR	corporate social responsibility
DALY	disability adjusted life years
DHB	District Health Board
DHMT	District Health Management Team
DHS	Demographic and Health Survey
DOH	Department of Health
DTC	Drug and Therapeutics Committee
EML	essential medicines list
EPI	Expanded Programme on Immunization [WHO]
ESHE	Essential Services for Health in Ethiopia
EU	European Union
GBD	global burden of disease
GDP	gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HALE	healthy life expectancy
HIDN	Health, Infectious Diseases and Nutrition [USAID]
HIS	health information system <i>or</i> systems
HIV	human immunodeficiency virus
HQ	headquarters
HR	human resources
HSS	health systems strengthening
IMAI	Integrated Management of Adult and Adolescent Illness
IMCI	Integrated Management of Childhood Illness
IMPC	Integrated Management of Pregnancy and Childbirth
IMR	infant mortality rate
INN	international nonproprietary name
IRC	International Rescue Committee
km	kilometer
LOE	level of effort
MCH	maternal and child health
MDGs	Millennium Development Goals
MENA	Middle East and North Africa
mg	milligram
ml	milliliter

MMR	maternal mortality rate
MOF	Ministry of Finance
MOH	Ministry of Health
NDRA	National Drug Regulatory Authority
NEML	national essential medicines list
NGO	nongovernmental organization
NHA	National Health Accounts
NMP	national medicines policy
OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket
ORS	oral rehydration solution
OSCE	Organization for Security and Co-operation in Europe
PEPFAR	President's Emergency Plan for AIDS Relief
PHC	primary health care
PHN	Population, Health, and Nutrition [USAID]
PHR _{plus}	Partners for Health Reform _{plus} Project
PPP	purchasing power parity
PTC	pharmacy and therapeutics committee
PVO	private voluntary organization
QAP	Quality Assurance Project
RDF	revolving drug fund
RPM Plus	Rational Pharmaceutical Management Plus Program
SHI	social health insurance
SO	Strategic Objective [USAID]
SOP	standard operating procedure
SOW	scope of work
STG	standard treatment guideline
SWAp	sector-wide approach
SWOT	strengths, weaknesses, opportunities, and threats
TB	tuberculosis
TB-DOTS	internationally recommended strategy for TB control [WHO]
TEHIP	Tanzania Essential Health Interventions Program
THE	total health expenditure
TOR	terms of reference
UMCOR	United Methodist Committee on Relief
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
USD	U.S. dollar
WDI	World Development Indicators [World Bank]
WHO	World Health Organization
YLD	years lost due to disability
YLL	years of life lost

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INTRODUCTION

The U.S. Agency for International Development (USAID) Office of Health, Infectious Diseases and Nutrition (HIDN) requested the development of a Health Systems Assessment Approach as part of its global Mainstreaming Health Systems Strengthening Initiative. The approach is meant to serve the following purposes—

- To enable USAID Missions to assess a country’s health system, possibly during early phases of program development or sector planning; this assessment will diagnose the relative strengths and weaknesses of the health system, prioritize key weakness areas, and identify potential solutions or recommendations for interventions
- To inform Population, Health, and Nutrition (PHN) officers and USAID Mission health teams about the basic elements and functions of health systems
- To improve the capacity of bilateral projects to achieve USAID’s health impact objectives through increased use of health systems interventions
- To aid health systems officials at USAID to conceptualize key issues, increase the use of health systems interventions in technical program design and implementation, and to improve the role of the Health Systems Division
- To inform Ministries of Health and other stakeholders on the relative strengths and weaknesses of the health system, priority issues, and potential solutions or recommendations for interventions and programs

The approach was developed by Health Systems 20/20, Partners for Health Reform*plus* (PHR*plus*), Rational Pharmaceutical Management (RPM) Plus, and the Quality Assurance Project (QAP), as a manual to meet the above objectives. The accompanying CD includes—

- The full manual
- Component 1 data—Excel spreadsheet
- Sample Assessment Budget Template (Annex 3B)—Excel spreadsheet
- Angola Pilot Test Assessment Report
- Benin Pilot Test Assessment Report

This can also be accessed via the Web at <http://healthsystems2020.org>.

Scope

This approach is designed to provide a rapid and yet comprehensive assessment of key health systems functions. The approach is organized around technical modules that guide data collection, and cover the following areas—

- Governance
- Health financing
- Health service delivery
- Human resources
- Pharmaceutical management
- Health information systems

Each module provides guidance for the user according to an indicator-based approach. The assessment approach is flexible and may encompass all modules for a more comprehensive view of the health care system or may focus on selected modules, according to the objectives of the assessment. A required core module provides basic background information on a country's key health indices and other important data related to its economy, health system organization, and population. Data collection entails a desk review of relevant documents and guided stakeholder interviews. A stakeholder workshop is to be held to present and verify findings and to elicit inputs into the analysis and recommendations.

Given that this is a rapid assessment of overall health systems functions and resources, it does not provide any assessment of vertical health programs. The manual does provide some guidance, however, for linking findings to the USAID Mission's strategic objectives and can inform an in-depth analysis of vertical programs (such as a family planning or malaria assessment).

The health systems assessment approach developed here will be most useful in countries where one or more of the following conditions apply—

- *The USAID Mission is beginning the strategic planning process.* The assessment findings could contribute to or inform the country strategic plan.
- *The USAID Mission is in the design phase of a new project or is starting a new project (e.g., bilateral).* The assessment findings could contribute to or inform the project's design, work plan, or both.
- *A country where a full health systems assessment has not been recently completed* (within the past two years). If a similar study has been conducted recently, a duplication of efforts, which would negate the need for another assessment, is highly likely. If an assessment has not been conducted recently, the need for one is emphasized.

User and Time Requirement

The target user of the manual is a USAID country mission, particularly PHN officers at the mission. The PHN officer may decide to work through the modules independently or with a team of USAID staff, consultants, or both. Each module is expected to take one to two person-weeks to complete, depending on the depth of assessment required.

Pilot Tests

The approach was pilot-tested in Angola in August 2005 and in Benin in April 2006. The current version of the manual incorporates feedback from these pilot tests. Outlines and web links of assessment reports prepared in Angola and Benin are included as annexes to Chapter 3, and the full reports are included in the CD accompanying this manual.

Organization of the Manual

Chapter 1 provides a summary of health systems strengthening, including definitions of health system and its functions. Chapter 2 provides an overview of the assessment approach developed for this initiative. Chapter 3 provides guidelines for planning and conducting the assessment. Chapter 4 provides guidelines for synthesizing findings, identifying health system strengths and weaknesses, and developing recommendations. Chapters 5–11 covers the seven technical modules; Chapter 5 is the core module and Chapters 6–11 are the 6 topical modules based on health systems functions.

CHAPTER 1

HEALTH SYSTEMS STRENGTHENING: AN INTRODUCTION

A previous version of this chapter was prepared by the Partners for Health Reformplus Project as a Technical Reference Material module on Health Systems Strengthening, for the Child Survival and Health Grants Program, 2005.

1.1 Introduction: Defining *Health Systems* and *Health System Strengthening*

At its broadest, health system strengthening (HSS) can be defined as any array of initiatives and strategies that improves one or more of the functions of the health system and that leads to better health through improvements in access, coverage, quality, or efficiency (Health Systems Action Network 2006).

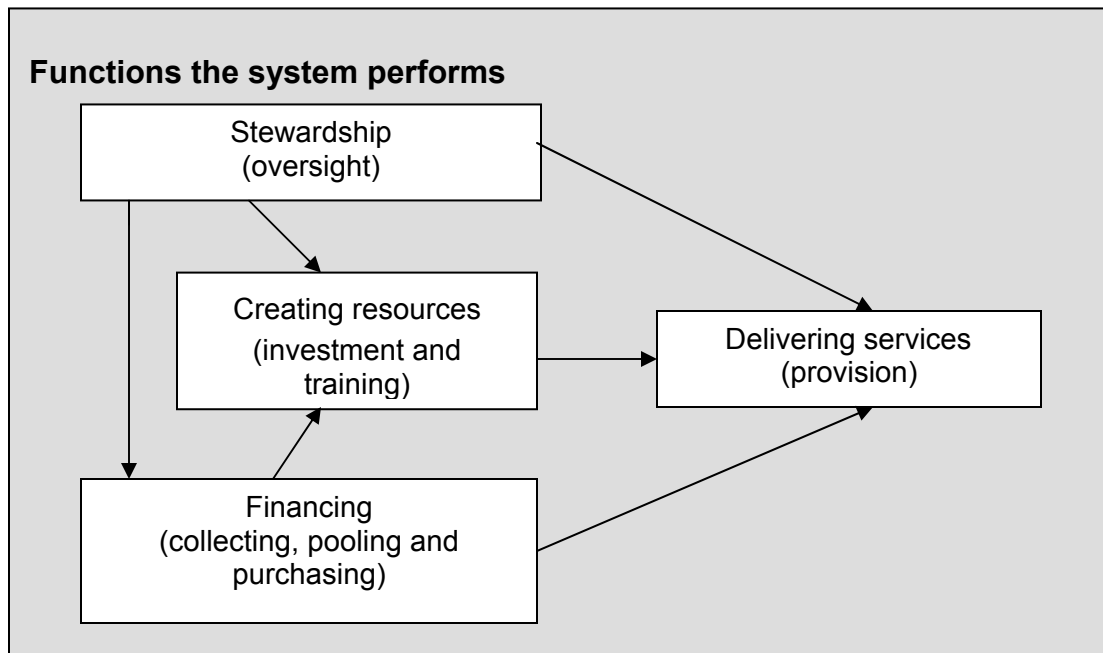
The purpose of this chapter on HSS is to—

- Provide U.S. Agency for International Development (USAID) Mission health teams and program implementers with a general overview of HSS
- Explain the relationship between efforts to improve the delivery of high impact services and overall HSS
- Suggest how USAID bilateral projects can benefit from HSS approaches to enhance project results and sustainability

The functions of the health system and the ways in which those systems can be strengthened are further detailed in the sections that follow. These issues are further discussed in Chapters 5–11 of this manual.

Health systems can be understood in many ways. The World Health Organization (WHO) defines health systems as “all the organizations, institutions, and resources that are devoted to producing health actions.” This definition includes the full range of players engaged in the provision and financing of health services including the public, nonprofit, and for-profit private sectors, as well as international and bilateral donors, foundations, and voluntary organizations involved in funding or implementing health activities. Health systems encompass all levels: central, regional, district, community, and household. Health sector projects engage with all levels and elements of the health system and frequently encounter constraints that limit their effectiveness.

The *World Health Report 2000* (WHO 2000) identifies the four key functions of the health system: (1) stewardship (often referred to as *governance* or *oversight*), (2) financing, (3) human and physical resources, and (4) organization and management of service delivery. Figure 1.1 illustrates the relationship between the four functions of health systems.



Source: Adapted with permission from WHO (2001).

Figure 1.1 Functions the Health System Performs

1.2 Stewardship (Governance), Policy, and Advocacy

The stewardship, or governance, function reflects the fact that people entrust both their lives and their resources to the health system. The government in particular is called upon to play the role of a steward, because it spends revenues that people pay through taxes and social insurance, and because government makes many of the regulations that govern the operation of health services in other private and voluntary transactions (WHO 2000).

The government exercises its stewardship function by developing, implementing, and enforcing policies that affect the other health system functions. WHO has recommended that one of the primary roles of a Ministry of Health is to develop health sector policy, with the aims of improving health system performance and promoting the health of the people (WHO 2000). Governments have a variety of so-called policy levers they exercise to affect health programs and health outcomes (Table 1.1).

Table 1.1 Government Policy and Health Programs

Governmental Policy Levers	Relevance to Health Programs
Size of the total government health budget	Sets the overall limit on what a government can spend
Financing mechanisms for funding the health care system (e.g., donor support, taxes, user fees, social insurance contributions)	Determine what flexibility the government has for financing health care and identify potential financial barriers that may exist for accessing care (e.g., fees, their levels, and exemptions)
Allocation of the government health budget	<p>Reflects how the government uses its tax resources to, for example, deliver services, employ staff, subsidize providers, regulate the sector, provide information, and configure the sector in terms of preventive vs. curative services, personnel vs. supplies, investment in human resources (training) vs. physical resources (hospital)</p> <p>Affects which programs are prioritized and what populations will benefit (rich vs. poor, urban vs. rural)</p>
Regulation of civil society organizations	Can facilitate or constrain the functioning of private voluntary organizations (PVOs), nongovernmental organizations (NGOs), and community organizations with regard to service delivery and the capacity such groups have to influence and advocate for health services
Political support to raise awareness for specific health messages and behaviors (e.g., clear government support for specific health messages such as prevention of HIV, contraceptive use, or TB treatment)	Can be powerful for stigmatized or polemic health initiatives and promoting high impact health interventions (e.g., hand washing)
Adoption of specific health standards or guidelines	Can improve the quality of care, expand or constrain the number of providers, and facilitate implementation of approaches such as Integrated Management of Childhood Illness (IMCI).
Regulation of pharmaceuticals	<p>Can improve medicine quality assurance and rational use of medicines</p> <p>Can influence the ability to bring medicines and supplies into the country</p>
Business regulations and taxation	Can influence the degree to which the private sector participates in health care—for example, import taxes can affect pharmaceutical sales; business regulations can hamper private providers from setting up practices; limitations on advertising can limit promotion of branded health products

An example of strong government stewardship in health can be found in Uganda, where the government’s proactive approach to preventing HIV/AIDS is likely to have reduced the incidence of the disease. The government provided an enabling environment by encouraging community-based initiatives and supporting mass communication campaigns, which promoted prevention and behavior change.

Furthermore, stewardship in health encompasses (1) activities that go beyond the health system to influence the main determinants of health (e.g., education, poverty, environment), and (2) other issues that are external to the health system, but which either foster or constrain its effectiveness. For example, a government may decide to tax imported medicines to increase general tax revenues or to protect local producers, but in doing so, will increase prices to consumers and impair access to these medicines. Stewardship in this area seeks to influence the broader environment in which the health system operates.

Emerging research evidence demonstrates that health is a key component to good development policy (Saunders 2004). The presence of poor health conditions in a country slows economic growth directly as societies lose potential workers and consumers to disease and disability. Attention to reducing child mortality and morbidity results in healthier children who can attend school and eventually contribute to economic growth when they become wage-earners. When child survival is the norm, parents tend to have fewer children and are able to invest more in their children's education and health.

Priorities in health policy also need to be elaborated at the national and local levels through health goals that address improving the health of the poor and reducing the gap between the poor and non-poor for an impact on child survival (Gwatkin 2000). Although the establishment of policy lays an essential foundation for a government's intention, its value depends on the evidence and effects of policy implementation.

As such, health system assessment should take account of the degree of government decentralization and the levels and authorities that are the key decision makers in health. Which levels have authority over planning, budgeting, human resources, and capital investment? Is the health sector represented at the district council level? Does the district have a role in policy development, resource allocation, and human resource planning? These dimensions underscore the need to approach health system performance and strengthening by understanding the interaction and linkages that exist between health financing, service delivery, and management of human resources in the health sector.

1.2.1 Performance Criteria

Understanding the health policies of the national government, and its international commitments, allows for informed development of advocacy for improved health care *access, equity, and quality*. In addition, national policies affect the system's ability to deliver *efficiency*, thereby affecting the overall *sustainability* of the system and its ability to function into the foreseeable future from a financial and organizational perspective. These performance criteria are defined and further explained in Annex 1A.

1.2.2 Sustainability

A stronger health system is fundamental to sustaining health outcomes achieved by the health system. Sustainability typically cannot be guaranteed through changes at the local level only. For example, health providers can be trained at the local level, but if these providers cannot be

retained or supervised or if medicines and supplies are not available, then health gains will be limited.

Sustainability of health programs can be addressed on several levels: institutional, program, community, and health outcomes. Below in Table 1.2 are some examples of how each level of sustainability defined for child survival can be linked to the broader health system to contribute to sustainability.

Table 1.2 Linking Priority Health Services Sustainability in the Health System

Level of Sustainability	Health System
Institutional	Ensures legal framework is in place to facilitate establishment and sustainability of private organizations Develops sustainable management and financing systems within organizations
Programmatic	Seeks consistency between priority health services and broader health information systems (HIS), quality standards, and other elements Shares programmatic successes with health officials and policymakers for broader application in the health system
Community	Broadens community involvement to include advocacy for policies that support sustainability of priority health services
Health outcome	Ensures— <ul style="list-style-type: none"> • Strong government stewardship • Pro-low-income health policies • Political leadership to promote community and household actions that, in turn, promote priority health services • Adequate health financing for services and resources • A provider payment system that rewards delivery of primary care • Effective licensing of professional providers • A functioning pharmaceutical and commodity supply system • A functioning HIS that tracks priority health services indicators

1.3 Health Financing

1.3.1 Why Health Financing Is Important

Health financing is a key determinant of health system performance in terms of equity, efficiency, and quality. Health financing encompasses resource mobilization, allocation, and distribution at all levels (national to local), including how providers are paid. Health financing refers to “the methods used to mobilize the resources that support basic public health programs, provide access to basic health services, and configure health service delivery systems” (Schieber and Akiko 1997). Understanding health financing can help answer questions such as the following—

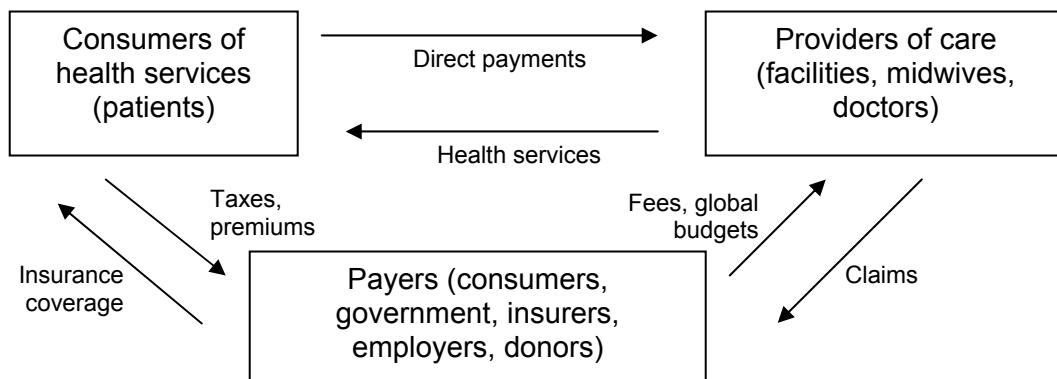
- Are resource mobilization mechanisms equitable? Do the wealthier subsidize the poor and those most in need?
- Is the distribution of resources equitable? Efficient? Or are wealthier populations benefiting more from public financing than are poorer populations?
- Do provider payments reward efficiency? Quality?

By understanding how the government health system and services are financed, programs and resources can be better directed to strategically complement the health financing already in place, advocate for financing of needed health priorities, and aid populations to access available resources.

Many health sector programs are involved in strengthening health financing systems by mobilizing resources, advocating how resources should be allocated, and configuring health service delivery. Some examples of successful health financing interventions with impact on priority services are found in Annex 1B

1.3.2 The Health Financing System

The health financing system consists of the payers, providers, and consumers of health services and the policies and regulations that govern their behavior (see Figure 1.2). The simplest example is when the patient pays the provider directly, whereby the consumer and payer are the same person.



Source: Adapted from Schieber and Akiko (1997).

Figure 1.2 Financing Flows in the Health System

1.3.3 Sources of Health Financing

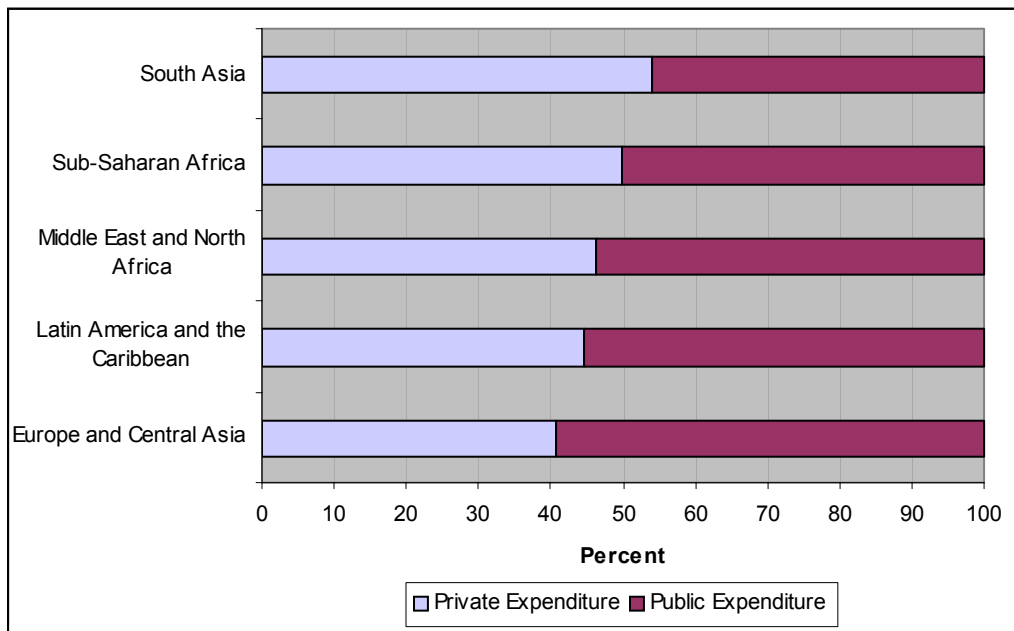
Health systems in developing countries are financed through a mix of public, private, and donor sources. The mix of sources varies widely.

Public sources are governments that raise funds through taxes, fees, donor grants, and loans (Schieber and Akiko 1997). Typically the Ministry of Finance allocates general tax revenue to finance the Ministry of Health budget. Most government health budgets are historical; that is, they are based on budgets from previous years that are adjusted annually to account for inflation or at the same rate as most other government spending. These budgets usually have separate line items for personnel, hospitals, pharmaceuticals, supplies, fuel, and training, and they finance only recurrent costs. Capital investments are often found in a separate budget that may be paid for through donor grants or loans.

In decentralized health systems, district health authorities are often given power to allocate nonpersonnel, noncapital investment funds at the local level to social sector budgets such as education and health. This flexibility allows for some local priority-setting according to needs within social sectors. A few countries use global health budgets that give recipients (e.g., district health authority or hospital) discretion over how to allocate the budget.

Private sources include households and employers who pay fees directly to providers in both public and private sectors, pay insurance premiums (including payroll taxes for social health insurance), and pay into medical savings accounts and to charitable organizations that provide health services. Household out-of-pocket payments form a large source of health financing in many developing countries (Zellner, O’Hanlon, and Chandani 2005).

The private sector is an important source of health financing in most developing countries. Figure 1.3 shows that private expenditure on health is large compared with public expenditure in all regions. Private expenditure is primarily in the form of out-of-pocket expenditures by households (WHO 2006).



Source: WHO (2006) data

Figure 1.3 Percentage Expenditure on Health—Private versus Public

Reliance on user charge financing at the point of service puts a greater burden of ill health on poorer households. In the case of catastrophic health events, the need to pay can impoverish families or cause them to forego treatment.

Out-of-pocket payment in the public sector is a common means of public financing for health (Schieber and Akiko 1997). A user fee is a type of **cost sharing** for public programs. In addition to resource mobilization, user fees can prevent excessive use of services. In Zambia, the government shares the cost of health services with the population through user fees, and the funds retained are usually used at the local level to supplement staff salaries or purchase supplies.

To promote equity, countries implementing user fees usually have an **exemption** policy for certain groups of individuals or circumstances. Exemptions usually target specific services and populations, such as immunizations or children under five. Significant challenges can arise in applying an exemption policy on a consistent basis, as is illustrated in Table 1.3, because of varying practices and policies in a decentralized system and difficulties in verifying income status of individuals and households.

Table 1.3 Health Centers Reporting Fee Exemption Practices in Three Regions in Ethiopia (percentages)

Exempted Service	Amhara	Oromia	Southern Nations, Nationalities, and Peoples
Immunization	100	100	100
Prenatal care	94	100	95
Family planning	89	100	86
Delivery	50	67	71
HIV services	28	20	52
Malaria treatment	0	67	5

Note: The table illustrates the percentage of surveyed health centers that exempt fees for priority services. *Source:* Excerpted from John Snow, Inc (2005).

Fee waivers are another form of exemption whereby selected groups, such as civil servants, war veterans, or the verifiably poor, are exempted from payment. Many countries have attempted to define eligible groups according to poverty indicators, but ensuring equity in implementation is generally difficult (John Snow, Inc. 2005).

Donors finance health systems through grants, loans, and in-kind contributions. PVOs often are financed by donors and voluntary contributions. The **sector-wide approach** (SWAp) is a financing framework through which government and donors support a common policy and expenditure program under government leadership for the entire sector. A SWAp implies adopting common approaches across the sector and progressing toward reliance on government procedures and systems to disburse and account for all funds. Many countries with SWAp mechanisms have a diversified funding mix, including grant-funded projects.

Under the SWAp, **basket funding**—a common funding pool to which SWAp partners contribute—enables flexibility in allocating funds according to government priorities and programs. This approach differs from project financing and vertical programs, in which funds are provided for a specific purpose and may be managed independently of the government budget or priorities. Another means by which donors can commit funds to government health programs is through **budget support**. These grants or loan contributions to the general treasury can have particular earmarks for sectors, such as health and education, and can be used for purposes identified by the relevant ministries.

1.3.4 Health Insurance Systems and Mechanisms

Health insurance is a system whereby companies, groups, or individuals pay premiums to an insurance entity to cover medical costs incurred by subscribers. Depending on how an insurance system is structured, it can pool the premium payments from the rich and healthy with the poor and sick to improve equity and thus prevent impoverishment by covering medical costs from catastrophic illness or injury. Health insurance does not create new funds for health and can increase inequities (e.g., if members are mainly the better-off).

In the public sector, **social health insurance** (SHI) programs are set up as mandatory insurance systems for workers in the formal sector. SHI contributions, which are typically payroll taxes from both employers and employees, are placed in an independent or quasi-independent fund separate from other government finances. SHI contributions may improve equity by mandating larger contributions from higher paid workers (Normand 1999). SHI has been successful in Organisation for Economic Co-operation and Development countries, which have a large and robust formal sector. Thailand, some of the Eastern European countries and former Soviet republics, and many countries in Latin America have well-functioning SHI systems. SHI systems in countries such as Morocco, Egypt, and Mexico cover substantial populations in which a household member works in the formal sector; however, the majority of the population in each country is not covered, including the poorest. SHI systems in low-income countries generally lack the resources to provide wide coverage of quality health services, although some SHI systems have their own facilities or contract with NGOs and commercial providers to expand access.

Whereas social insurance primarily pools risk across income groups, **private insurance** is based on the distribution of risk between the sick and the well (Normand 1999). Private insurance is quickly growing in developing countries as the private sector in many regions expands and employers seek ways to provide health insurance to their employees. Unlike social insurance, private insurance is often “risk-rated,” meaning that those who are judged more likely to need care pay a higher insurance premium. This arrangement often limits those covered by private insurance to employees—who as a group are lower risk—and benefits do not reach lower income populations and those in the informal sector.

Box 1.1
CBHF Schemes vs. Conventional Health Insurance

“CBHF schemes share the goal of finding ways for communities to meet their health financing needs through pooled revenue collection and resource allocation decisions made by the community. However, unlike many insurance schemes, CBHF schemes are typically based on the concepts of mutual aid and social solidarity” (Bennett, Gamble Kelley, and Silvers 2004).

Both private insurance and SHI mainly cover those working in the formal sector, whereas **community-based health financing** (CBHF) reaches those in both the formal and informal sector, often in rural agricultural communities (Box 1.1). CBHF schemes, or mutual health organizations as they are known in West Africa, are community- and employment-based groupings that have grown progressively in several regions of Africa in recent years (Atim and others 1998). Through CBHF schemes, communities contribute resources to a common pool to pay for members’ health services, such as user fees at a government facility or medical bills from a private health facility. Most CBHF schemes have a designated list of benefits, some focusing on primary health care, whereas others shield members from the catastrophic costs of hospitalizations.

In Rwanda, CBHF schemes have resulted in better access to quality health services for scheme members, resulting in a high level of membership (Butera 2004). Some schemes generate surpluses, which are sometimes used to subsidize premium contributions for the poorest households in the community, contributing to financial equity.

1.3.5 Provider Payments

An important goal of the health system is to assure the right incentives for providers. Provider payments are categorized as either prospective or retrospective. Prospective payments are a set amount established before services are provided, such as capitated or case-based payments (Barnum, Kutzin, and Saxenian 1995). Retrospective payments, typically referred to as fee-for-service payments, are made after the services have been provided.

How providers are paid affects their behavior. The payment mechanism can promote or discourage efficiency; affect quality, supply and mix of providers, and supply and mix of services; and determine which patients receive care. The main types of provider payment mechanisms are salaries, fee-for-service, capitated payment (a fixed amount per person, which is the way health maintenance organization providers are paid), and case-based payment (fixed amount per diagnosis, such as the Diagnosis-Related Groups, or DRG systems, used by Medicare). The provider payment system can include incentives for provision of child health and other essential services.

A lesson learned from health financing reform is the value of experimentation with different payment methods to achieve optimal methods for local conditions. Testing reforms in local demonstration sites to determine impact allows policymakers to make corrections before launching national-level reforms (Wouters 1998).

1.4 Human and Physical Resources

The third function of the health system is the recruitment, training, deployment, and retention of qualified human resources; the procurement, allocation, and distribution of essential medicines and supplies; and investment in physical health infrastructure (e.g., facilities, equipment).

The human resources interventions in Table 1.4 illustrate the link between common human resources problems—such as maldistribution, poor motivation, and poor capacity—and higher level system issues.

Table 1.4 HSS for Human Resources

Human Resource Issues	Possible National-Level HSS Interventions
Production of right number and mix of health workers by medical, nursing, and allied health schools	Long-term planning and coordination with Ministry of Education to, for example, promote training of more primary care physicians and fewer specialists
Management and supervision for quality assurance, worker motivation, and production and use of health information	Organizational development at the Ministry of Health, job descriptions and worker performance systems to increase accountability, and links to training and improved health outcomes Civil service reform to allow reform of provider payment systems Coordinating with and strengthening professional regulatory bodies to build support for and reinforce interventions in, for example, compensation and training
Compensation, including provider payments and benefits, to improve retention and performance	Provider payments that reward quality and productivity or reward deployment to specific geographic areas Integration of compensation for community health workers
Continuing education and training for public, private sector, and community health workers	Investment in health training institutions Integration of child health training curricula into local medical and nursing schools Linking training to job roles, supervision, and compensation to ensure that new skills are applied and reinforced, and to licensing or accreditation standards
Ensuring the availability of medicines, supplies, equipment, and facilities so health workers can perform	Financing reforms to increase financing of essential medicines, supplies, and equipment Donor coordination and sector-wide planning for investments in facilities Strengthening of procurement and logistics systems

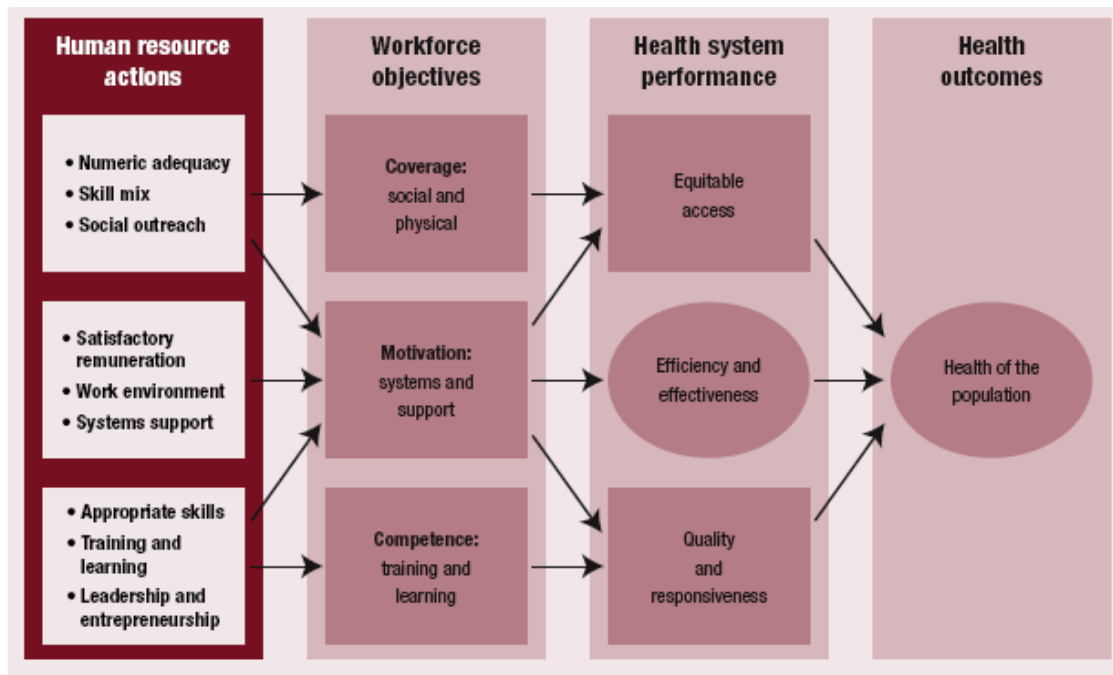
1.4.1 Human Resource Management in the Health Sector

WHO notes that human resources are the most important part of a functional health system (WHO 2000). Recently, attention has focused on the fact that progress toward health-related Millennium Development Goals (MDGs) is seriously impeded by a lack of human resources in health, with serious implications for child survival and health goals. In many cases, PVOs and

their service providers are filling the gaps left by insufficient public health workers, inaccessible private health providers, or both.

For government health workers, evidence shows that effective public management can contribute to improved performance of workers. New public sector management philosophy calls for responsibilities to be delegated to local areas with responsibility for specific tasks and decision making at the local level, a focus on performance (outputs and outcomes), a client orientation, and rewards or incentives for good performance (World Bank 2004).

As illustrated in Figure 1.4, the appropriate training, distribution, and support of health care workers has multiple management, technical, and resource dimensions. A key human resources challenge concerns compensation for health workers. Government or local remuneration norms are often too low to motivate workers, and policy to guide international agencies to apply standardized rates is often lacking.



Source: Joint Learning Initiative (2004, p. 5).

Figure 1.4 Managing for Performance

Key human resources issues and their impact on the system (Joint Learning Initiative 2004) include the following—

- *Low, and possibly declining, levels of medical human resources.* In many developing countries, medical education programs are not producing enough doctors and other health workers. This deficit is compounded by the outflow of trained staff from the public sector to the private sector and from developing countries to industrialized countries and, particularly in Africa, by the loss of health workers to HIV/AIDS.

- *Geographic imbalances.* Urban areas have higher concentrations of trained health care personnel than rural areas; incentives to work in remote areas are lacking.
- *Imbalance of skills' mix and poor skills.* Unskilled staff provide services for which they are unprepared. Training is often poor, and little or no training to update skills is available. As a result, mistreatment and misdiagnosis can be commonplace.
- *High degree of absenteeism.* Related to inadequate compensation and supervision, civil service laws or cultural obstacles preclude terminating staff who do not perform well.

Appropriate solutions to these issues are affected by a wide range of related problems, including the lack of public funds for health programs, inadequate training facilities, and competing regional efforts for health workers.

1.4.2 Medicines, Supplies, and Logistics Systems

Access to essential medicines and supplies is fundamental to the good performance of the health care delivery system. Availability of medicines is commonly cited as the most important element of quality by health care consumers, and the absence of medicines is a key factor in the underuse of government health services.

WHO estimates that one-third of the world's population lacks access to essential medicines. Problems in access are often related to inefficiencies in the pharmaceutical supply management system, such as inappropriate selection, poor distribution, deterioration, expiry, and irrational use. Where medicines are available, price may be a barrier for the poor. Pharmaceutical subsidies, fee waivers, and availability of affordable generic medicines are some of the pharmaceutical financing approaches that can mitigate barriers to access.

Weak regulation of the pharmaceutical market is associated with poor quality control, presence of fake and substandard medicines on the market, growing drug resistance problems due to irrational use, dispensing by unqualified practitioners, and self-medication in lieu of seeking qualified health care.

Improved pharmaceutical supply management is an element of many health sector reform efforts. Promising improvements in pharmaceutical supply systems have been made in some countries; however, many continue to struggle with a mix of inefficient public sector and private supply systems. Decentralization of health sectors has in some cases intensified the problem, establishing logistics systems in the absence of trained human resources, infrastructure, and management systems at the decentralized levels. Where more efficient systems have been established, countrywide access may still remain weak.

1.5 Organization and Management of Service Delivery

This health system function includes a broad array of health sector components, including the role of the private sector, government contracting of services, decentralization, quality assurance, and sustainability. This section is not intended to be all-inclusive but rather to briefly describe

some of the key organizational and managerial components of the health system that can directly or indirectly affect health service delivery. For a brief description of how government policy and regulation affect the organization and management of service delivery, see Section 1.1.

1.5.1 Decentralization

Governments pursue decentralization to improve administrative and service delivery effectiveness, increase local participation and autonomy, redistribute power, and reduce ethnic and regional tensions; decentralization is also used as a means of increasing cost efficiency, giving local units greater control over resources and revenues, and increasing accountability (Brinkerhoff and Leighton 2002).

Decentralization deals with the allocation of political, economic, fiscal, and administrative authority and responsibility from the center to the periphery. Most experts agree that there are several types of decentralization (Rondinelli 1990)—

- *De-concentration*: the transfer of authority and responsibility from the central office to field offices of the same agency
- *Delegation*: the transfer of authority and responsibility from central agencies to organizations outside their direct control, for example, to semiautonomous entities, NGOs, and regional or local governments
- *Devolution*: the transfer of authority and responsibility from central government agencies to lower level autonomous units of government through statutory or constitutional measures
- *Privatization*: sometimes considered a separate type of decentralization

Health sector programmers should be prepared to take advantage of the opportunities that decentralization presents and be aware of the constraints it may impose, in whichever stage of decentralization the country is in. (See Table 1.5)

Table 1.5 Decentralization Opportunities and Constraints and Implementation Issues

Opportunities	Constraints and Implementation Issues
<ul style="list-style-type: none"> • Greater citizen participation to identify health needs and decide how to use health resources • Increased equity, solidarity, efficiency, and self-management • More efficient use of public resources • Better and faster response to local demands • Improved accountability and transparency • Public-private collaboration at the local level • Increased health worker motivation 	<ul style="list-style-type: none"> • Delegation of responsibility without delegation of authority or adequate resources • Lack of capacity at the decentralized levels • Lack of political support at the central level • Lack of clarity regarding new roles • Disruption of existing systems such as the health information system and pharmaceutical supply • Disruption of public health programs such as immunization • Loss of federal employment benefits when workers shift to subnational level

In practice, decentralization efforts have had mixed results. HSS seeks to assist countries to implement decentralization more effectively by—

- Clarifying new roles
- Aligning resource allocation with responsibility
- Building capacity at decentralized levels so staff can absorb new responsibilities
- Building capacity at the central level in its new role of policy formulation, regulation, and performance monitoring

1.5.2 Private Sector

The private sector is a key source of health services, and its coverage is rapidly increasing. (See Box 1.2) Use of government health services is too low to affect indicators such as child mortality without the contributions of private sector health services, including NGO services (WHO 2003). Information from the Multi-Country Evaluation of Integrated Management of Childhood Illness has shown that IMCI must be adopted by private sector health services, in addition to government health services, to achieve a reduction in child mortality in some countries.

The private health sector is typically defined to comprise “all providers who exist outside of the public sector, whether their aim is philanthropic or commercial, and whose aim is to treat illness or prevent disease” (Mills and others 2002). Private sector actors include the following—

- Private providers including for-profit (commercial) and nonprofit formal health care providers (private hospitals, health centers, and clinics) and traditional and informal practitioners, including traditional midwives and healers
- Community-based organizations and civil society groups that do not directly provide health services, but provide complementary or related services such as advocacy groups, voluntary support groups, and community-based health insurance schemes
- Wholesalers and retailers of health or health-related commodities such as medicines, oral rehydration solution (ORS), insecticide-treated nets, and contraceptive supplies; retailers may range from pharmacies with qualified

Box 1.2
Evidence of the Role of the Private Sector

Review of *Demographic and Health Survey* data from 38 countries shows that 34 to 96 percent of children in the poorest income quintile who seek treatment for diarrhea, and 37 to 99 percent of children who seek care for acute respiratory tract infection receive that care in the private sector.

In India, the private sector distributes 65 to 70 percent of the oral rehydration solution used in the country.

In sub-Saharan Africa, the majority of malaria episodes are initially treated by private providers, mainly through the purchase of medicines from shops and peddlers.

Source: Bustreo and others (2003)

pharmacists to small unregulated medicine stalls in the private sector and general retailers who carry health-related products

- Private companies that take actions to protect or promote the health of their employees (such as company clinics or health education programs)
- Private health insurance companies that offer insurance and can also influence provider incentives via their contracting and payment mechanisms

Annex 1C summarizes the variety of types of interventions that have been used to engage the private sector in the delivery of health products and services.

The following strategies could be used for health sector organizations to work with the private sector—

- Extending services in critical areas such as HIV/AIDS care through private health workers and providing clinical updates and training in management skills
- Engaging in contracting arrangements to supplement government service provision
- Social marketing of products for health improvement, such as condoms, ORS, insecticide-treated bed nets, and micronutrients
- Working with employer-based services to extend and improve priority services
- Informing or educating private providers about effective health service approaches such as IMCI (Waters, Hatt, and Peters 2003)

1.5.3 Contracting

Contracting of health services is an instrument by which governments can take advantage of private sector resources in the health sector. *Contracting* refers to any public purchasing or donor financing of services from private providers, both for-profit and nonprofit, and encompasses a broad spectrum of services. These services include, among others, the direct provision of health care, the training of health providers, management services, and the education of communities and households.

Governments in the developing world are increasingly contracting with NGOs either to deliver government-financed primary health care or to support government delivery of such care. This practice rests on the premise that the traditional organizational form of the public sector, with its hierarchical bureaucracy, has low and limited efficiency, and that the introduction of private management and support can enhance the efficiency of public spending on these services. Another rationale is that NGOs are often located in remote areas and capable of increasing access to and improving the quality of basic health services through their greater flexibility in management and their higher accountability.

The evidence of the impact of contracting on access, quality, equity, and health status is limited, however. A recent review by Liu and others (2004) identifies only 17 journal entries related to

the issue of contracting out primary health care services in developing countries. Overall, the existing literature highlights the need for extensive additional research on the effects of contracting of primary health care services on access, quality, and efficiency.

1.5.4 Quality Assurance

Quality assurance is a health system element that has grown in importance as costs of care have escalated and consumer awareness and demand for quality services have increased. Many studies demonstrate that use of services and willingness to pay are strongly related to patient perceptions of quality. Improved health outcomes are closely linked to quality improvements. Quality functions and institutions are found in various parts of the health system, for example, professional licensing, hospital and health facility accreditation, infection control committees, supervisory structures, national policy and standards committees, quality assurance committees within clinical services at various levels, and drug quality assurance authorities. Quality improvement processes may be at work in many areas of the system, via a wide range of instruments: standard treatment guidelines, in-service training programs, management quality assurance processes, medical records audit, health facility inspection, and peer review systems, among others.

1.6 Health Information Systems

HIS form an essential part of the larger body of health management information systems, the elements of which have a common purpose—to inform and guide decision making. Lack of capacity and progress in measurement and analysis of health information are well-known constraints to national policy making and resource allocation. HIS in many countries suffer from poor management and insufficient resources. At the facility level, health workers commonly spend 40 percent or more of their time filling in HIS forms (Bertrand, Echols, and Husein 1988) but may make little use of the data for decision making. HIS are beset with demands for change and expansion to meet the requirements of new programs and projects, often in the absence of a national policy and planning for this vital component of the health system.

Health management information supports decision making at various levels of the system, from central-level policy development to local monitoring of primary health care activities. Although data tend to move to higher levels in the system for compilation and analysis, use of the data for management at the district, facility, and community level is critical.

For the HIS to function adequately, certain prerequisites need to be in place, such as the following—

- *Information policies:* in reference to the existing legislative and regulatory framework for public and private providers; use of standards
- *Financial resources:* investment in the processes for the production of health information (collection of data, collation, analysis, dissemination, and use)
- *Human resources:* adequately trained personnel at different levels of government

- *Communication infrastructure*: infrastructure and policies for transfer, management, and storage of information
- *Coordination and leadership*: mechanisms to effectively lead the HIS

A functioning HIS should provide a series of indicators that relate to the determinants of health (i.e., socioeconomic, environmental, behavioral, and genetic determinants or risk factors) of the health system, including the inputs used in the production of health and the health status of the population. Such a list of indicators should be defined by the users of information at different level in a consensus-building process.

The HIS structure and functional format reflects the organizational structure of the health system and functions and the degree of decentralization at its various levels. Having a clear understanding of the overall, big-picture organization of the health care system is thus critical, as is an understanding of the division of responsibilities among the different levels which, in many countries, are (1) national or ministry level, (2) regional or provincial level, (3) district level, and (4) the health center or facility. The role of the private sector and its participation in the HIS should also be understood in advance as well as the role of other ministries.

1.7 HSS Strategies and Implications

In sum, projects that aim to expand and improve service delivery risk limiting their impact if they do not take into consideration the health system in which the services operate. In fact, HSS issues should be addressed at the pre-project assessment stage and remain in focus throughout project design and implementation.¹ When systems issues are not addressed, service delivery programs often fall short of their potential. For example, a family planning program may train volunteers in counseling, referral, and resupply of contraceptives, but if the system for commodity supply is weak, poor service outcomes and dissatisfied clients will likely be the results. In other words, the investment in mobilizing and training family planning volunteers will not, on its own, necessarily result in a successful family planning program.

Evidence from recent studies of child survival programs shows that health system constraints (such as high staff turnover, low quality training of health workers, poor supervision, lack of continuous supplies of pharmaceuticals and vaccines) are major impediments to increasing coverage of child health services (Bryce and others 2003). Health programs may be able to increase and sustain their impact by contributing to broader health system interventions through assessing, testing, and demonstrating system strengthening approaches. Table 1.6 provides some examples of system strengthening approaches to a sample of constraints typically faced by health programs.

¹ HSS may be a lesser priority for emergency projects, those that focus on humanitarian aid, or those that are short-term rather than sustained development efforts.

Table 1.6 Typical System Constraints, Possible Disease/Service-specific and Health System Responses

Constraint	Disease or Service-Specific Response	Health System Response(s)
Financial inaccessibility (inability to pay formal or informal fees)	Exemptions/reduced prices for focal diseases	Development of risk pooling strategies
Physical inaccessibility	Outreach for focal diseases	Reconsideration of long-term plan for capital investment and siting of facilities. Coordination and joint planning with departments of transport and roads.
Inappropriately skilled staff	Continuous education/training to develop skills in focal diseases	Review of basic medical and nursing training curricula to ensure that appropriate skills are included in basic and in-service training.
Poorly motivated staff	Financial incentives to reward delivery of particular priority services	Institution of proper performance review systems, creating greater clarity of roles and expectations as well as consequences regarding performance. Review of salary structures and promotion procedures.
Weak planning and management	<i>Continuous education/training workshops to develop skills in planning and management</i>	Restructuring ministries of health. Recruitment and development of cadre of dedicated managers.
Lack of intersectoral action and partnership	<i>Creation of special disease-focused cross-sectoral committees and task forces at the national level</i>	Building systems of local government that incorporate representatives from health, education, and agriculture, and promote accountability of local governance structures to the people.
Poor quality care of care	Training providers in focus diseases or services	Development of monitoring, accreditation and regulation systems.

Source: Travis et al. (2004).

The overview in this chapter is intended to serve as a basic introduction to HSS issues. In-depth technical and contextual information is needed to apply many of the approaches presented here. Readers are encouraged to refer to the HSS technical assistance and tools cited in Annex 1D.

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Annex 1A. Definition of Performance Criteria

Equity is a normative issue that refers to fairness in the allocation of resources or the treatment of outcomes among different individuals or groups. The two commonly used notions of equity are horizontal and vertical equity.

- **Horizontal equity** is commonly referred to as “equal treatment of equal need.” For example, horizontal equity in access to health care means equal access for all individuals irrespective of factors such as location, ethnicity, or age.
- **Vertical equity** is concerned with the extent to which individuals with different characteristics should be treated differently. For example, the financing of health care through a social health insurance system may require that individuals with higher income pay a higher insurance contribution than individuals with lower income (similar to progressive taxation).

Efficiency refers to obtaining the best possible value for the resources used (or using the least resources to obtain a certain outcome). The two commonly used notions of efficiency are allocative and technical efficiency.

- **Allocative efficiency** means allocating resources in a way that ensures obtaining the maximum possible overall benefit. In other words, once allocative efficiency is reached, changing the allocation and making someone better-off without making someone else worse-off is impossible.
- **Technical efficiency** (also referred to as *productive efficiency*) means producing the maximum possible sustained output from a given set of inputs.

Access is a measure of the extent to which a population can reach the health services it needs. It relates to the presence (or absence) of economic, physical, cultural or other barriers that people might face in using health services. Several types of access are considered in the field of health care, but the two types that are primarily investigated in this assessment are financial access and physical access.

- **Financial access** (also referred to as *economic access*) measures the extent to which people are able to pay for health services. Financial barriers that reduce access are related to the cost of seeking and receiving health care, relative to the user’s income.
- **Physical access** (also referred to as *geographic access*) measures the extent to which health services are available and reachable. For example, not having a health facility within a reasonable distance to a village is physical access barrier to health care for those living in the village.

Quality is the characteristic of a product or service that bears on its ability to satisfy stated or implied needs. Quality is defined as “that kind of care which is expected to maximize an inclusive measure of patients’ welfare after one has taken account of the balance of expected

gains and losses that attend the process of care in all of its parts” (Eisele and others 2003, citing Donabedian 1980).

Sustainability is the capacity of the system to continue its normal activities well into the future. The two commonly used notions of sustainability are financial and institutional sustainability.

- **Financial sustainability** is the capacity of the health system to maintain an adequate level of funding to continue its activities (for example, ability to replace donor funds from other sources after foreign assistance is withdrawn).
- **Institutional sustainability** refers to the capacity of the system, if suitably financed, to assemble and manage the necessary nonfinancial resources to successfully carry on its normal activities in the future.

Annex 1B. Examples of How Selected HSS Interventions Have Influenced the Use of Priority Services

Examples of Successful HSS Interventions	Description of Intervention	Positive (▲) or Negative (▼) Effect on Health System Performance	Outcomes in Terms of Service Use or Health Impact
<p>Contracting of private health care service management: Pereang District Cambodia</p> <p>(Soeters and Griffiths 2003)</p> <p>This example addresses all services</p>	<p>Contracting with an international NGO to manage a network of district health facilities from 1999 to 2003</p>	<p>▲ Access to health services increased, even with official user fees, because the fees were less than the "informal" user fees demanded from government-managed facilities. Out-of-pocket household expenditures decreased.</p> <p>▲ Quality was shown to improve as a result of performance-based incentives.</p> <p>▼ Equity may have been compromised because the poor were not given user fee exemptions.</p> <p>▼ Informal private activities to earn extra income by privately contracted managers may have negatively affected quality and efficiency.</p>	<p>Use of basic health services increased dramatically among the privately managed facilities. The increases in use were primarily attributed to improved quality and financial access.</p>
<p>Example of social insurance in Bolivia</p> <p>(Schneider and Dmytraczenko 2003)</p> <p>This example focuses on maternal and child health services but may also be applicable to other services.</p>	<p>SNMN (Spanish acronym for National Insurance for Mothers and Children) was implemented in 1996. The plan reduced out-of-pocket expenditures and covered a range of maternal and child health services. The intervention was implemented in the midst of a decentralization initiative.</p>	<p>▲ Access was shown to increase as a result of decreased financial barriers.</p> <p>▼ Sustainability was an issue because reimbursement rates did not meet actual facility expenditures.</p> <p>▼ Inefficiency was also an issue as patients sought care in higher level facilities (no co-payments).</p>	<p>Use of formal maternal and child health services increased as a result of the insurance scheme, but use by the poorest groups increased less than by other groups.</p>

Examples of Successful HSS Interventions	Description of Intervention	Positive (▲) or Negative (▼) Effect on Health System Performance	Outcomes in Terms of Service Use or Health Impact
<p>Tanzania Essential Health Interventions Project (TEHIP) (De Savigny and others 2004)</p>	<p>The TEHIP's primary aim was to test the World Bank's <i>World Development Report 1993</i> suggestion that health can be significantly improved by adopting a minimum package of health interventions to respond directly and cost-effectively to evidence about the burden of disease.</p> <p>Incremental, decentralized, sector-wide health basket funding and a tool kit of practical management, planning, and priority-setting tools to facilitate evidence-based district level decision making were introduced to accomplish the above.</p>	<p>▲ Efficiency (allocative) and equity: the introduction of TEHIP tools significantly improved budget allocation directing resources to high priority, cost-effective interventions, some of which had previously been underfunded.</p> <p>▲ Efficiency (technical): Stronger planning, management, and administration at the district level from tools for decision making.</p> <p>▲ Quality: District managers' adoption of IMCI improved quality of child health services and capacity of health workers. Possible increased adult patient attendance at facilities for IMCI may also benefit from worker capacity.</p>	<p>Child mortality in the two districts fell by over 40 percent in the five years following the introduction of evidence-based planning; and death rates for men and women between 15 and 60 years old declined by 18 percent.</p>
<p>Monetary incentives in primary health care and effects on use and coverage of preventive health care interventions in rural Honduras (Morris 2004)</p> <p>This example focuses on maternal and child health services.</p>	<p>In this cluster-randomized trial, municipalities of high malnutrition prevalence were selected with the objective of increasing demand for preventive health care in pregnant women, new mothers, and children under three years by—</p> <p>Using conditional payments to households (the household-level package)</p> <p>Improving quality of peripheral services by providing resources and training (service-level package)</p> <p>The baseline survey was conducted in 2000, with a follow-up in 2002.</p>	<p>▲ Access to services increased through decreased financial barriers.</p> <p>▼ Efficiency and quality: Transferring resources to local health teams proved legally and logistically difficult and could not be properly implemented, even though quality training was given. No significant impact could be attributed to the service package alone, possibly in part because of the partial implementation of this service package. The difficulty of this transfer of resources is cited as a finding itself.</p> <p>▼ Sustainability: Questions remain about the long-term sustainability of cash transfer programs, enforcement of conditionality vouchers, or both.</p>	<p>This intervention had a large impact on coverage of prenatal care and well-child checkups (18–20 percentage points each), specifically from the conditional payment package.</p> <p>Increased frequency of contact facilitated timely immunization series initiation for children; however, measles coverage and tetanus toxoid for mothers were not affected.</p>

Source: *Partners for Health Reformplus (2005)*

Annex 1C. Summary of Private Sector Interventions

Intervention	Description	Expected Results	Additional Sources of Information
Social marketing	Social marketing is the use of commercial marketing techniques to achieve a social objective. In developing countries, donors have used social marketing to increase access and use of products such as contraceptives, oral rehydration salts, and insecticide-treated nets.	Social marketing is a well-established and proven strategy for increasing access and use of essential health products.	<p>Armand, F. 2003. <i>Social Marketing Models for Product-Based Reproductive Health Programs: A Comparative Analysis</i>. Washington DC: USAID/Commercial Market Strategies Project.</p> <p>Kikumbih, N., K. Hanson, A. Mills, et al. 2005 The Economics of Social Marketing, The Case of Mosquito Nets in Tanzania. <i>Social Science and Medicine</i> 60: 269–381.</p> <p>Chapman, Steve, and H. Astatke. 2003. <i>The Social Marketing Evidence Base: A Review of 87 Research Studies</i>. Washington, DC: PSI, 2003.</p>
Vouchers	Vouchers have been used to subsidize the price of health services and products to target populations with the goal of improving access to and use of those services and products.	<p>Vouchers increase consumer choice and affordability of care from private sector providers through subsidy of goods or services.</p> <p>Developing countries have only recently begun experimenting with voucher programs for health products and services.</p>	<p>Islam, Mursaleena. 2006. <i>Primer for Policymakers—Vouchers for Health: A Focus on Reproductive Health and Family Planning Services</i>. Bethesda, MD: PSP-One/PHRplus, Abt Associates Inc.</p> <p>Sandiford, Peter, A. Gorter, and M. Salvetto. 2002. <i>Vouchers for Health: Using Voucher Schemes for Output-Based AID</i>. (Public Policy for the Private Sector, Viewpoint, No. 243.) Washington DC: World Bank.</p> <p>World Bank. 2005. <i>A Guide to Competitive Vouchers in Health</i>. Washington, DC: The World Bank, 2005</p>
Contracting out	Governments contract with private providers (both not-for-profit and for-profit) to deliver individual or a bundles of health services.	Contracting out expands private sector coverage of particular services via government finance and may (through contract specification) improve quality of care. Sometimes, contracting out is said to improve efficiency and quality through competition.	<p>Loevinsohn, Benjamin, and A. Harding. 2004. <i>Buying Results: A Review of Developing Country Experience with Contracting for Health Service Delivery</i>. Washington, DC: World Bank.</p> <p>Liu, Xingzhu, D. Hotchkiss, S. Bose, et al. 2004. <i>Contracting for Primary Health Services: Evidence on Its Effects and a Framework for Evaluation</i>. Bethesda, MD: PHRplus.</p>

Intervention	Description	Expected Results	Additional Sources of Information
Public–private partnerships	Private companies join with government, international organizations, or nonprofits to focus on addressing a social need.	Such partnerships leverage private sector resources for the delivery of health products and services.	<p>Marek, Tonia, C. O'Farrell, C. Yamamoto, and I. Zable. 2005. <i>Trends and Opportunities in Public-Private Partnerships to Improve Health Service Delivery in Africa</i>. Washington, DC: World Bank.</p> <p>Rionda, Zynia L. 2002. <i>A Compendium of Corporate Social Responsibility Activities Worldwide</i>. Washington DC: USAID/Catalyst Consortium.</p> <p><i>Building on the Monterrey Consensus: The Growing Role of Public-Private Partnerships in Mobilizing Resources for Development</i>. Cologne/Geneva: World Economic Forum, 2005.</p> <p>PSI. 2005. <i>Corporate AIDS Prevention Programs: Fighting HIV/AIDS in the Workplace</i>. Washington, DC: PSI.</p>
Provider networks and franchises	Networks and franchises are an affiliation of health services providers grouped together under an umbrella structure or parent organization.	Networking providers has been found to be effective to ensure a standard of quality and price for given services. It also allows for the scale-up of services through individual private providers.	<p>Chandani, Taara, S. Sulzbach and M. Forzley. 2006. <i>Private Provider Networks: The role of Viability in Expanding the Supply of Reproductive Health and Family Planning Services</i>. Bethesda, MD: Bethesda, MD: Private Sector Partnerships-One (PSP-One) Project, Abt Associates Inc.</p> <p>Montagu, Dominic. 2002. <i>Franchising of Health Services in Developing Countries</i>, Health Policy and Planning, 17(2):121-130. Cambridge: Oxford University Press.</p> <p>Tsui, Amy. 2005. <i>Franchising Reproductive Health Services: What can the private health sector in Three Developing Countries Contribute?</i> Public Health Grand Rounds Lecture. Baltimore, MD: Johns Hopkins University Bloomberg School of Public Health, Jan. 26, 2005.</p>

Intervention	Description	Expected Results	Additional Sources of Information
Accreditation	Assessment of a health care organization or a private provider's compliance with a pre-established performance standard.	Accreditation is a strategy for improving the performance of providers against a pre-established quality standard.	<p>Heerey, Michelle, and Edgar Necochea. 2005. <i>An Overview of Accreditation and Certification for Improving Health Service Quality</i>. Baltimore, MD: JHU-CCP.</p> <p>World Health Organization. 2005. <i>Accreditation in Healthcare Services—A Global Review</i>, Washington, DC: WHO.</p>
Policy reform	The laws, policies, regulations, and procedures that affect the environment for private sector provision of health services can be changed. These policies range from laws that restrict private providers to lack of appropriate policy oversight of the private sector by government.	Policy reform increases private sector participation by removing unnecessary policy obstacles to private sector participation.	<p>Ravenholt, B., R. Feeley, D. Averbug, and B. O'Hanlon. 2006. <i>Navigating Uncharted Waters: A Guide to the Legal and Regulatory Environment for FP Services in the Private Sector</i>. Bethesda, MD: Private Sector Partnerships-One (PSP-One) Project, Abt Associates Inc.</p> <p><i>PHRplus</i>. 2.1. <i>Working with Private Providers to Improve the Delivery of Priority Health Services</i>. Bethesda, MD: PHRplus.</p> <p>Marek, Tonia, C. O'Farrell, C. Yamamoto and I. Zable. 2005. <i>Trends and Opportunities in Public-Private Partnerships to Improve Health Service Delivery in Africa</i>. Washington, DC: World Bank.</p>
Training, continuous education for private providers	Knowledge and skills of private providers are improved through a variety of training techniques including direct training, continuous medical education, and detailing.	Training improves knowledge, skill, and quality of care of private providers.	<p>Smith, E., R. Brugha, and A. Zwi. 2001. <i>Working with Private Sector Providers for Better Health Care: An Introductory Guide</i>. London: Options and LSHTM.</p>

Annex 1D. HSS Technical Assistance and Tools

Systems Strengthening Area	Assessment and Improvement Technical Assistance and Tools
HSS diagnostics	<ul style="list-style-type: none"> • Tools and methods for diagnosing the sources of system weakness (in financing, policy, organization and management, resource allocation, quality, and commodities)
Financing	<ul style="list-style-type: none"> • Financing policy development • Cost analysis • Basic accounting tools • National health accounts • Tools for community-based insurance and pre-payment schemes • Insurance development (national, social) including actuarial tools • Financial sustainability plans
Policy	<ul style="list-style-type: none"> • Stakeholder analysis • Political mapping • Equity analysis techniques • Policy analysis methods • Advocacy tools • Public and private sector relationship • Regulation
Organization and management	<ul style="list-style-type: none"> • Efficiency assessment • Health and financial management information systems (national, regional, district, and facility) • Accreditation guidelines • Health worker motivation • Health facility organization and productivity • Contracting with public and private providers
Resource allocation	<ul style="list-style-type: none"> • Resource planning models • Resource requirements projection tools • Provider payment methods • Cost-effectiveness analysis
Subsector-specific tools (HIV/AIDS)	<ul style="list-style-type: none"> • National health accounts subanalysis • Financing and Subsidy Strategy Development Tool • AIDSTreatCost (ATC) model • GOALS computer model for funding allocation • Workplace quality model
Commodities management	<ul style="list-style-type: none"> • Medicines and supplies policy • Inventory management tools • Demand forecasting models • Ordering and dispatching tools
Quality assurance	<ul style="list-style-type: none"> • Quality thesaurus • Provider self-assessment tools • Patient exit interviews • Tools for supervision for quality

Source: Schott and Makinen (2004)

CHAPTER 2 OVERVIEW OF THE APPROACH

2.1 Introduction

The health systems assessment approach presented in this manual is an indicator-based approach for rapid assessment of the health system, using secondary data, document review, and stakeholder interviews. It is designed to allow you to diagnose health system performance by identifying system strengths and weaknesses and then developing strategies and recommendations based on an understanding of priorities and programming gaps in the country. The approach attempts to fill a gap in assessment approaches by providing a structured tool that examines a wide range of health system components, synthesizes information, and transforms findings into recommendations and strategies for action. Whereas other tools examine in detail specific components of the health system¹ or describe the health system,² no tools, this tool provides for a rapid or comprehensive assessment of the overall health system of a developing country.

The primary client and audience for this assessment and its ensuing recommendations is the U.S. Agency for International Development (USAID) Mission in the assessment country. Recommendation development is outlined with the Mission's interests and objectives in mind. With minor modifications in emphasis and presentation, however, this approach can also be used for other primary audiences, such as the Ministry of Health. Note too that the assessment does not have a disease-specific focus, but you may have to address disease-specific issues in developing recommendations for the Mission, based on its priorities.

This manual provides guidelines for planning and conducting the assessment, synthesizing findings, generating recommendations, and preparing an assessment report. It is broken down into a general description of the health system environment (Chapter 5 “Core Module”) and six technical areas that include indicators and guiding questions. (See Box 2.1) In addition, the manual itself may serve as an educational and reference tool.

You may decide to work through all or only a subset of the technical modules, depending on the assessment objectives. The core module (Chapter 5) is mandatory and should be completed in all cases. It allows you to understand the country-specific contextual background before working through one of the remaining six technical modules (Chapters 6–11). Each module is estimated to take one to two person-weeks to complete, depending on the information available for the assessment country. Depending on how you organize the assessment, it can be accomplished in a

Box 2.1

The approach includes seven modules—

- Core module
- Stewardship
- Health financing
- Service delivery
- Human resources
- Pharmaceutical management
- Health information systems

¹ Examples include assessment tools developed by RPMPlus for pharmaceuticals and those developed by the Health Metrics Network for health information systems.

² Examples include guidelines for health systems profiles developed by the Pan American Health Organization and the European Observatory on Health Systems and Policies.

concentrated period or spread out over a longer period, and multiple modules can be completed simultaneously. In addition, a stakeholder workshop is recommended to validate findings, receive feedback, prioritize results, and discuss recommendations. (See Box 2.2. Chapter 3 provides detailed guidelines for planning and conducting the assessment.

Reading through all the chapters of the manual before embarking on the assessment is recommended. This step will facilitate your understanding of the requirements and expectations necessary for appropriate assessment planning. In particular, read Chapter 4 along with the technical module chapters before starting the analysis. Chapter 4 outlines the process of synthesizing findings; assessing strengths, weaknesses, and root causes; and then prioritizing areas for action.

Box 2.2

Assessment Steps

1. Plan assessment, including stakeholder workshop (Chapter 3).
2. Conduct assessment (Chapters 5–11).
3. Synthesize findings and develop recommendations (Chapter 4).
4. Discuss and validate findings and recommendations and develop priorities through stakeholder workshop (Chapter 4).
5. Prepare an assessment report (Chapter 3).

Tip!

This approach does not call for any primary data collection beyond stakeholder interviews. Thus, you should apply sound judgment in quoting information and using evidence from secondary sources for deriving conclusions. For example, it may be best not to quote or use information that cannot be verified from multiple sources. In addition, anonymity of interviewees may have to be preserved.

2.2 Conceptual Framework for the Health Systems Assessment Approach

The conceptual framework for the assessment approach was developed based on extensive discussions among partners and USAID staff. It builds on the World Health Organization (WHO) definition of health systems (see Chapter 1) and its delineation of four major health system functions: stewardship (also called *governance*), financing, creating resources, and delivering services. The six technical areas (each represented by a module) fall within these functions.

Figure 2.1 provides a visual presentation of the six technical modules integrated into WHO's health systems functions, presented earlier in Figure 1.1. Figure 2.1 builds on Figure 1.1 in the same way that the conceptual framework for this assessment approach builds on the health systems functions defined by WHO. Note that not all aspects of each of WHO's health systems functions have been addressed in the six technical modules in detail. These areas were chosen based on their primary relevance to USAID investment strategies.³

³ Other factors that affect the health system, but involve other sectors, such as education, environment, water, and sanitation, are also not included.

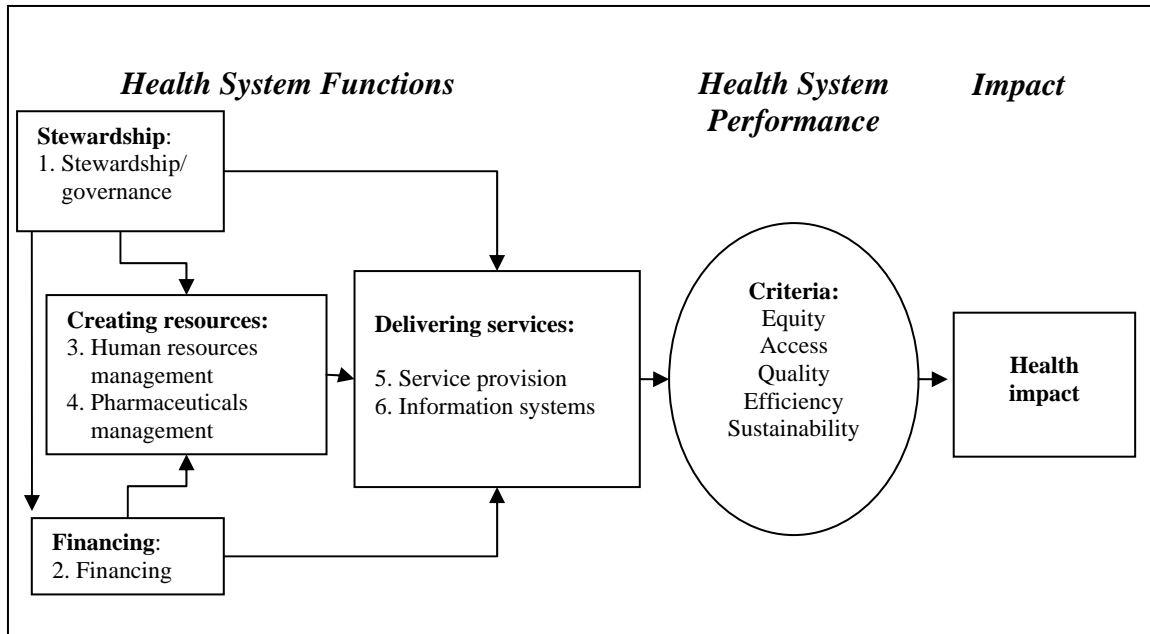


Figure 2.1 Conceptual Framework for Health Systems Performance

The approach suggests using the data collected to synthesize contributions of each technical area to health systems performance in terms of the following performance criteria: equity, access, quality, efficiency, and sustainability (which are defined in Annex 1A).

2.3 Overview of the Technical Modules

The approach has been developed in modular form, where each module relates to a specific health system function, with the exception of the core module, which is designed to provide background information relevant to all the modules. As mentioned, you can choose to do all or a selection of the technical modules, depending on the needs of your assessment. A brief description of each module is provided here. Annex 2A provides a full list of the indicators and qualitative questions by topic area in each module.

- **Core module** covers basic sociodemographic and economic information for the assessment country and an overview of the health system and the general health situation of the country. It covers the topic areas of political and macroeconomic environment, business environment and investment climate, top causes of mortality and morbidity, structure of the main government and private organizations involved in the health care system, decentralization, service delivery organization, donor mapping, and donor coordination.
- **Governance module** addresses the information assessment capacity of the health system, policy formulation and planning, social participation and health system responsiveness, accountability, and regulation.

- **Health financing module** covers sources of financial resources; the pooling and allocation of health funds, including government budget allocation and health insurance; and the process of purchasing and proving payments.
- **Health service delivery module** examines service delivery outputs and outcomes; the availability, access, utilization, and organization of service delivery; quality assurance of healthcare; and community participation in service delivery.
- **Human resources (HR) module** covers systematic workforce planning, HR policies and regulation, performance management, training/education, and incentives.
- **Pharmaceuticals management module** evaluates the health system's pharmaceutical policy, laws, regulations; selection of pharmaceuticals; procurement, storage and distribution; appropriate use and availability of pharmaceuticals; access to quality pharmaceutical products and services; and financing mechanisms for pharmaceuticals.
- **Health information systems (HIS) module** reviews the current operational HIS components; the resources, policies, and regulations supporting the HIS; data availability, collection, and quality; and analysis and use of health information for health systems management and policy making.

2.3.1 Module Components

Each module is set up in two components, both indicator-based.⁴

Component 1 is based on internationally comparable data. This assessment component includes indicators for which data are available from international data sets. This provides quick background information for each technical module with readily available data. These data (with a listing of sources) are included in the CD that accompanies this manual (filename: Component 1 data). Instructions on how to use the data are provided in Chapter 5 (Section 5.2), and these instructions are valid for all technical modules.

Component 2 is based on country-level document review and stakeholder interviews. This assessment component uses multiple indicators, both quantitative and qualitative. The assessment combines a desk-based assessment of documents with stakeholder interviews to identify strengths and weakness in the technical area and relate them to health system performance. The stakeholder interviews are meant to complement the desk-based assessment, provide information on the health system performance indicators that cannot be obtained from document review, and explore possible recommendations. A list of suggested materials to review and stakeholders to interview is provided for each indicator, along with suggested probing questions to be used for obtaining more detailed information.

⁴ Certain modules (such as, the governance module) rely more on developing a qualitative profile of that health system function and does not rely solely on indicators.

2.3.2 Indicators

To the extent possible, indicators are presented in a consistent format across modules using the standardized template below (Table 2.1). The governance module (Chapter 6) is an exception; in that module, assessment involves analysis of different issues and does not follow the indicator-based approach.

Table 2.1 Format for the Indicators

Element	Description of Information Covered for Each Element
Indicator title	
Definition, rationale, and interpretation	<p>Provides a definition or description of the indicator and the reason why the indicator is important for the assessment (the rationale for including it)</p> <p>Also provides brief guidance on how to measure the indicator and how to interpret the findings</p>
Suggested data source	<p>Provides suggestions on the types of documents from which data on the indicator can be obtained</p> <p>Also provides cross-references to related indicators in other modules using the clearly labeled phrase “Module link”</p>
Stakeholders to interview	<p>Provides suggestions on types of stakeholders to interview for further information related to this indicator</p> <p>This element will be included with Component 2 indicators only</p>
Issues to explore	<p>Provides suggestions on issues and topics for further probing, including the reasons why</p> <p>This element will be included with Component 2 indicators only</p>
Notes and caveats	<p>Includes any caveats that the user should be aware of (such as, challenges in data collection due to inconsistent definitions) and could include suggestions on how to change or customize the indicator depending on what data is available in the country</p>

Figure 2.2 provides a schematic presentation of the assessment approach.

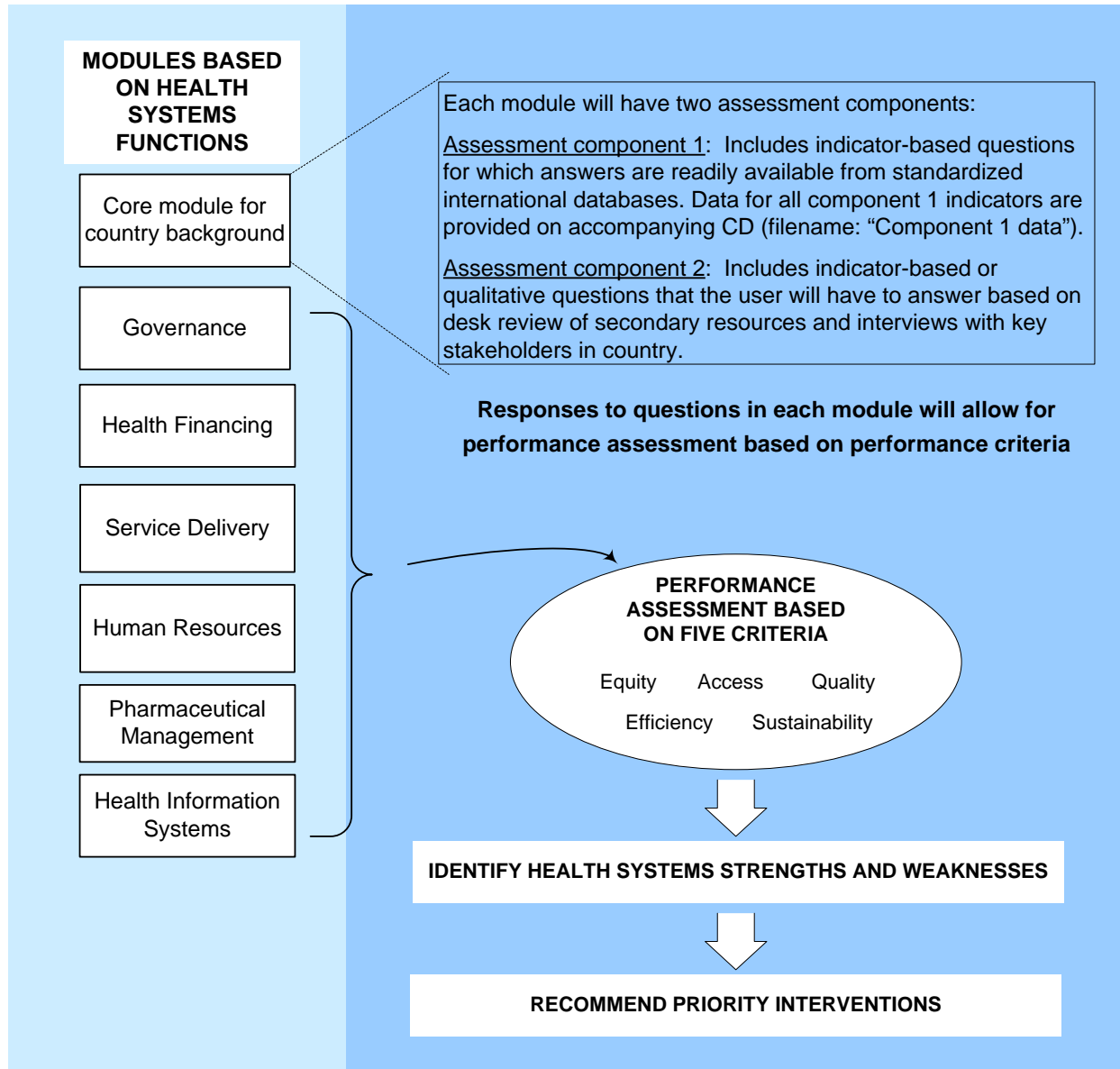


Figure 2.2 Schematic Presentation of the Approach

Note from Figure 2.2 that the modules are designed to provide a series of findings related to Component 1 and Component 2 indicators that allow you to gauge the functioning of that technical area and its contribution to overall health system performance (against the five performance criteria), and to develop a list of the area’s specific strengths and weaknesses and an appraisal of opportunities and threats. These findings then permit you to develop possible options for interventions to address these strengths and weaknesses, taking advantage of opportunities and minimizing threats. After completing the individual modules, you will synthesize the results across modules and develop overall priorities for systems strengthening (see Chapter 4). A stakeholder workshop is strongly recommended for validating findings, identifying priorities, and discussing recommendations (see Chapter 3 for planning the workshop).

Implementing the assessment approach will permit you to measure the performance of the health system being assessed, to identify health system weaknesses and strengths, and to develop priority interventions to promote desired performance enhancements based on the criteria defined above.

2.4 Output of the Assessment

One of the key outputs of the assessment process will be an assessment report addressed to the assessment's primary audience: the USAID Mission. Both the stakeholder workshop and the health system assessment report should highlight key findings, identify health system strengths and weaknesses, and provide recommendations for priority interventions. Recommendations should reflect priorities and objectives of the USAID Mission, although key findings and potential interventions could be put forth for other donors or organizations, including local stakeholders, to address or implement. Chapter 3 discusses planning and conducting the assessment including report preparation and provides a suggested outline for the report. Chapter 4 provides guidance for synthesizing findings across the modules and presenting results.

Annex 2A. List of Indicators by Topic Area in Each Module

Indicator Map—Core Module (Chapter 5)

Component	Topical Area	Indicator Number and Content
Component 1	Population Dynamics	1. Population, total
		2. Population growth (annual %)
		3. Rural population (% of total) Urban population (% of total)
	Reproductive Health	4. Contraceptive prevalence (% of women aged 15–49)
		5. Fertility rate, total (births per woman)
		6. Pregnant women who received 1+ antenatal care visits (%) Pregnant women who received 4+ antenatal care visits (%)
		7. Prevalence of HIV, total (% of population aged 15–49)
	Mortality	8. Life expectancy at birth, total (years)
		9. Mortality rate, infant (per 1,000 live births)
		10. Mortality rate, under age 5 (per 1,000)
		11. Maternal mortality ratio (per 100,000 live births)
	Income and Inequity	12. GDP per capita (constant 2,000 USD)
		13. GDP growth (annual %)
		14. Per capita total expenditure on health at international dollar rate
		15. Private expenditure on health as % of total expenditure on health
		16. Out-of-pocket expenditure as % of private expenditure on health
		17. GINI Index
Component 2	Political and Macroeconomic Environment	Not applicable
	Business Environment and Investment Climate	
	Top Causes of Mortality and Morbidity	
	Structure of the Main Government and Private Organizations Involved in the Health Care System	
	Decentralization	
	Service Delivery Organization	
	Donor Mapping	
	Donor Coordination	

Indicator Map—Governance Module (Chapter 6)

Component	Topical Area	Indicator Number and Content
Component 1	Not applicable	1. Voice and Accountability
		2. Political Stability
		3. Government Effectiveness
		4. Rule of Law
		5. Regulatory Quality
		6. Control of Corruption
Component 2	Information/Assessment Capacity	7. Describe the general state of routine systems for collection, reporting, and analyzing data (in terms of efficiency, frequency, and quality) on vital registration statistics, health status, health services, health financing, and human resources.
		8. Based on the level of decentralization, is the information available at subnational and local levels adequate to inform health officials at those respective levels?
		9. Is information collected, analyzed, and used at the point of generation or merely reported up to a higher level?
		10. Describe the technical capacity of the Health Planning Unit (or other appropriate group) to absorb, analyze, and translate findings from the information collected into viable, appropriate health plans and policies.
		11. How and with what frequency are data from health information systems presented to policy makers?
		Policy Formulation and Planning
	13. Does the MOH identify policy changes needed to achieve the objectives in the strategic health plan based on sound technical review of performance?	
	14. To what extent do health policy makers work effectively with the legislative and executive branches of government to gain approval of sound public health and health care policies?	
	15. How does the government coordinate or harmonize donor inputs (funding and policy priorities)?	
	16. What proportion of major external sources of funding are coordinated with and complement an agreed upon government health plan?	
	17. Does the MOH fulfill its public health function by engaging in health policy development and actions (including communication with national, local, and special interest advocacy groups) to raise awareness of policies that affect public health such as legislation on tobacco use, road safety, family planning, and HIV/AIDS prevention?	

Component	Topical Area	Indicator Number and Content
Component 2 (continued)	Policy Formulation and Planning (continued)	18. Does the MOH engage national, local, and special interest advocacy groups to develop health policies?
	Social Participation and System Responsiveness	19. Who participates (i.e., persons or representatives of stakeholder groups) in setting the health policy agenda or in defining and prioritizing health needs and services at the national level?
		20. Who participates (i.e., persons or representatives of stakeholder groups) in setting the health policy agenda or the definition and prioritization of health needs and services at the local level?
		21. Does the MOH reach out to the general public with information, education, and communication to raise awareness and change behavior for priority health issues such as tobacco use, road safety, family planning, and HIV/AIDS prevention?
		22. What mechanisms are in place to track the responsiveness of health officials to stakeholder input (such as requests for representation on advisory bodies, requests for a share of funding, and incorporation of public input into health policy)?
		23. Are health system goals, objectives, and performance targets clearly articulated and communicated to the public by the MOH?
	Accountability	24. Do health authorities regularly communicate with constituencies and partners at the national, subnational, and local levels on priority health issues?
		25. Does a national health policy or legislation exist to define the role and responsibilities of the public health sector?
		26. Has the government provided and published guidance for prioritizing health expenditures based on available resources and assessed need?
		27. Is an adequate system in place to monitor and evaluate progress toward stated health objectives as well as changes in performance resulting from changes in policies and priorities?
		28. Are reports on government health sector performance produced and made available to the general public and civil society?
		29. Inquire about financial accountability of public authorities.
		30. Is information from research, media, opinion polls, advocacy, and watchdog groups available to public and private stakeholders?

Component	Topical Area	Indicator Number and Content
Component 2 (continued)	Accountability (continued)	31. To what extent does the press cover health policy debates?
		32. Does any legislation or regulation address medical malpractice?
		33. Is there a functioning consumer defense movement or league, and to what extent does it focus on health related issues?
	Regulation	34. What do the health laws mandate? Do they clearly define roles and responsibilities in the health sector?
		35. Describe the government system for licensure of health professionals; regulation of the safety, minimum physical infrastructure, and equipment availability for different types of health facilities; adequate regulation to ensure the safety, efficacy, and quality of medicines, as well as the appropriateness and accuracy of product information; and protection of consumer rights.
		36. Do governmental regulatory agencies have the necessary resources (human, technical, financial) to enforce existing legislation and regulations?
		37. Does a functioning system (public or private) exist for accreditation or certification (or both) for health professionals and for hospitals and health facilities?
		38. Does the MOH or other government agency review, evaluate, and propose revisions of laws and regulations to assure that they reflect current scientific knowledge and best practices for achieving compliance?
		39. To what extent does the government enforce regulations in areas of public health concern including (but not limited to) protection of drinking water and clean air standards, enforcement of laws governing the sale of alcohol and tobacco to minors, and childhood immunizations
		40. Has the government attempted to form partnerships with those in the regulated environment to support compliance?

Indicator Map—Health Financing Module (Chapter 7)

Component	Topical Area	Indicator Number and Content
Component 1	Revenue Collection: Amount and Sources of Financial Resources	1. Total expenditure on health as % of GDP
		2. Per capita total health expenditure, at average exchange rate (USD)
		3. Government expenditure on health as % of total government expenditure
		4. Public (government) spending on health as % of total health expenditure
		5. Donor spending on health as % of total health spending
		6. Out-of-pocket spending as % of private health spending
Component 2	Pooling and Allocation of Financial Resources— <i>Government budget formulation and allocation</i>	7. Ministry of Health budget trends
		8. Process of MOH budget formulation
		9. MOH budget allocation structure
		10. Central and local government budget allocations for health in decentralized systems
		11. Percent of government health budget spent on outpatient/inpatient care
		12. Percent of government health budget allocation in rural/urban areas
		13. Percentage of government health budget spent on salaries of health workers, medicines and supplies, and other recurrent costs
		14. Local level spending authority
	Pooling and Allocation of Financial Resources— <i>Health insurance</i>	Not applicable
	Purchasing and Provider Payments	15. Policies for user fee payments in the public sector
		16. Allocation of user fee revenues
		17. Informal user fees in the public sector
		18. Contracting mechanisms between MOH and public or private service providers
	Indicators for health insurance schemes	Health Insurance: Coverage, Funding, and Policy Issues
A2. Services covered by health insurance		
A3. Funding mechanisms and sustainability of health insurance		
A4. Provider payment mechanisms under health insurance		

Indicator Map—Health Service Delivery Module (Chapter 8)

Component	Topical Area	Indicator Number and Content
Component 1	Availability of Service Delivery	1. Number of hospital beds (per 10,000 population)
	Service Delivery Access, Coverage, and Utilization	2. Percentage of births attended by skilled health personnel per year
		3. DPT3 immunization coverage: one-year-olds immunized with three doses of diphtheria, tetanus toxoid, and pertussis (DPT3) (%)
		4. Contraceptive prevalence (% of women aged 15–49)
		5. Pregnant women who received 1+ antenatal care visits (%)
	Service Delivery Outcomes	6. Life expectancy at birth, total (years)
		7. Mortality rate, infant (per 1,000 live births)
		8. Maternal mortality ratio (per 100,000 live births)
		9. Prevalence of HIV, total (% of population aged 15–49)
Component 2	Availability of Service Delivery	10. Number of primary care facilities in health system per 10,000 population
		11. Percentage of primary care facilities that are adequately equipped
		12. Availability of updated clinical standards for MOH priority areas, high burden diseases areas, and/or areas responsible for high morbidity and mortality
		13. The ratio of health care professionals to the population
	Service Delivery Access, Coverage, and Utilization	14. Percentage of people living within X kms of a health facility
		15. Financial access (select an indicator based on available data)
		16. User fee exemptions and waivers
		17. Number of primary care or outpatient visits per person to health facilities per year
		18. Private sector service delivery
	Organization of Service Delivery	19. Existence of corporate social responsibility (CSR) programs that offer health services among the country's largest employers
		20. Daily availability of full range of key primary health care services
		21. Number of vertical programs
		22. Level of informational continuity of care
Quality Assurance of Care	23. Level of vertical continuity of care	
	24. Existence of national policies for promoting quality of care	

Component	Topical Area	Indicator Number and Content
Component 2 (continued)	Quality Assurance of Care (continued)	25. Existence of adaptation of clinical standards into a practical form that can be used at local level
		26. Existence of clinical supervision by district level supervisor
		27. Percentage of supervision visits to health centers planned that were actually conducted
		28. Existence of other processes assuring quality of care besides supervision
	Community Participation in Service Delivery	29. Presence of official mechanisms to ensure the active engagement of civil society and the community in management of the health system
		30. Presence of official mechanisms to ensure the active engagement of civil society and the community in service delivery
		31. Existence of official mechanism for eliciting population priorities, perceptions of quality, and barriers to seeking care

Indicator Map—Human Resources Module (Chapter 9)

Component	Topical Area	Indicator Number and Content
Component 1	Human Resources (HR) Data	1. The ratio of five cadres of health care professionals to the population
Component 2	Planning	2. The distribution of health care professionals in urban and rural areas
		3. HR data—presence of human resources data system
		4. The existence of a functioning HR planning system
		5. HR dedicated budget
		6. Presence of job classification system
	Policies	7. Compensation and benefits system that is used in a consistent manner to determine salary upgrades and merit awards
		8. Formal process for recruitment, hiring, transfer, promotion
		9. Employee conditions of service documentation (e.g., policy manual)
		10. Presence of a formal relationship with unions (if applicable)
		11. Registration, certification, or licensing is required for categories of staff in order to practice
		12. Salary
		13. Job descriptions are present
	Performance Management	14. Supervision (especially clinical supervision)
		15. Percentage of supervision visits to health centers planned that were actually conducted
		16. There is a formal mechanism for individual performance planning and review
		17. Incentives, monetary and non-monetary
	Training and Education	18. There is a formal in-service training component for all levels of staff
		19. There is a management and leadership development program
		20. There are links and “feedback loops” between the organization and pre-service training institutions

Indicator Map—Pharmaceutical Management Module (Chapter 10)

Component	Topical Area	Indicator Number and Content	
Component 1	Not applicable	1. Total expenditure on pharmaceuticals (% total expenditure on health)	
		2. Total expenditure on pharmaceuticals (per capita average exchange rate)	
		3. Government expenditure on pharmaceuticals (per capita average exchange rate)	
		4. Private expenditure on pharmaceuticals (per capita average exchange rate)	
Component 2	Pharmaceutical Policy, Laws, and Regulations	5. Is there a National Essential Medicines Policy (NMP) or other government document that sets objectives and strategies for the pharmaceutical sector based on priority health problems?	
		6. Is there a comprehensive pharmaceutical law?	
		7. Is there a National Drug Regulatory Authority (NDRA) responsible for the promulgation of regulations and for enforcement?	
		8. Is there a system for pharmaceutical registration?	
		9. Does the pharmaceutical registration system generate revenue for the MOH?	
		10. Is there a system for the collection of data regarding the efficacy, quality, and safety of marketed products (postmarketing surveillance)?	
		11. Do mechanisms exist for the licensing, inspection and control of (1) pharmaceutical personnel, (2) manufacturers, (3) distributors/importers, and (4) pharmacies/drug retail stores?	
		Selection of Pharmaceuticals	12. Is there a national essential medicines list (NEML)?
			13. Is there an active national committee responsible for managing the process of maintaining a national medicines list?
			14. What is the total number of pharmaceuticals (in dosage forms and strengths) on the NEML?
			15. Are international nonproprietary names (INN) or generic names used for products on the list?
	Procurement	16. Are there standard operational procedures (SOPs) for conducting procurement of pharmaceuticals in the public sector?	
		17. Are generic or INN used for MOH procurement of pharmaceuticals? (Generic names are to be differentiated from generic branded products.)	
		18. On average, how many procurements are conducted per year?	
		19. On average, what percentage (by value) of MOH pharmaceuticals is procured through competitive bid?	

Component	Topical Area	Indicator Number and Content
Component 2 (continued)	Procurement (continued)	20. Is there a procurement pre- or post-qualification process for suppliers and products based on review of objective information about product safety, efficacy, and quality?
		21. Are samples requested and tested as part of the procurement process?
		22. Are quantities of pharmaceuticals to be procured based on reliable estimates?
	Storage and Distribution	23. Is distribution of (some or all) pharmaceuticals managed through a push or pull system?
		24. Are there independent supply systems for vertical programs (such as tuberculosis, malaria, HIV/AIDS)? For what programs?
		25. Value of inventory loss (as % of average inventory value) over 12 months
		26. At each level of the distribution system (central, regional, district, facility), are there refrigeration units (such as refrigerators or coolers) with functional temperature control?
	Appropriate Use	27. Are there any functioning mechanisms/tools in place to improve the use of medicines in hospitals and health facilities?
		28. Are there national therapeutic guides with standardized treatments for common health problems?
		29. Are the treatment guidelines used for basic and in-service training of health personnel?
	Availability	30. What percentage of a set of unexpired tracer items is available (at time of study and over a period of time) in a sample of facilities?
	Access to Quality Products and Services	31. What percent of the population has access to a public or private health facility/pharmacy that dispenses pharmaceuticals?
		32. Are there any licensing provisions or incentives in place to increase geographic access by consumers/patients to quality products and services through private wholesalers and retailers?
		33. Population per licensed pharmacist or pharmacy technician
		34. Population per authorized prescriber
		35. Population per drug retail outlet in the private sector
		36. Percent of households more than 5/10/20 km from a health facility/pharmacy that is expected to dispense a set of tracer items in stock
	Financing Pharmaceuticals	37. What proportion of the annual national expenditure on medicines is by the government budget, donors, charities, and private patients?
		38. Is there a system to recover the cost of pharmaceuticals dispensed in MOH facilities?
		39. Is there a price control mechanism for pharmaceuticals in the private sector?

Indicator Map—Health Information System Module (Chapter 11)

Component	Topical Area	Indicator Number and Content
Component 1	Health Status Indicators— <i>Mortality</i>	1. Maternal mortality ratio reported by national authorities
		2. Mortality rate, under age 5 (per 1,000)
	Health Status Indicators— <i>Morbidity</i>	3. HIV prevalence among pregnant women aged 15–24
		4. Proportion of children under 5 years who are underweight for age
	Health System Indicators	5. Number of hospital beds (per 10,000 population)
		6. Contraceptive prevalence rate (% of women aged 15–49)
		7. Percentage of disease surveillance reports received at the national level from districts compared to the number of reports expected
Component 2	Resources, Policies, and Regulation	8. Availability of financial and/or physical resources to support designated items within MOH/central budget (or other central sources), regional, and/or district budgets
		9. Presence of international donors providing specific assistance to support strengthening the entire HIS or its individual and/or vertical components in more than one region
		10. Existence of policies, laws, and regulations mandating public and private health facilities/providers to report indicators determined by the national HIS
		11. Presence of a clear procedure for allocating resources and planning in the health system based on the information products of HIS (e.g., use of mortality and morbidity indicators to assess health status and allocate resources accordingly)
		12. Presence of mechanisms to review the utility of current HIS indicators for the planning, management, and evaluation process, and to adapt and modify accordingly
		Data Collection and Quality
	14. Percentage of private health facility data included in reported data	
	15. Availability of clear standards and guidelines for data collection and reporting procedures	
	16. Number of reports a typical health facility submits monthly, quarterly, or annually	
	17. Presence of procedures to verify the quality of data (accuracy, completeness, timeliness) reported, such as data accuracy checklists prior to report acceptance, internal data quality audit visits	
	18. Availability of a national summary report which contains HIS information, analysis, and interpretation (most recent year)	

Component	Topical Area	Indicator Number and Content
Component 2 (continued)	Data Analysis	19. Availability at each level of a sufficient number of qualified personnel and infrastructure to compile and analyze information
		20. Evidence of ongoing training activities related to HIS data collection and analysis
		21. Presence of written guidelines specifying the methods and products of data analysis to be performed
		22. The data derived from different health programs/subsectors are grouped together for reporting purposes (or even integrated in a single document), and these documents are widely available
		23. Availability of appropriate and accurate denominators (such as population by age groups, by facility catchment area, by sex, number of pregnant women) for analysis
		24. Availability of timely data analysis, as defined by stakeholders and users
	Use of Information for Management, Policy Making, Governance, and Accountability	25. Use of data for planning, budgeting, or fundraising activities in the past year (e.g., a change in budget levels in response to a new major health issue, fund allocation/budgeting proposals utilizing HIS data for advocacy)
		26. Data or results of analyses are fed back to data providers to inform them of program performance

CHAPTER 3 PLANNING AND CONDUCTING THE ASSESSMENT

3.1 Chapter Summary

This chapter discusses the steps to plan and conduct a health system performance assessment using this manual. It should be used as a compendium of best practices for managing the logistical aspects of the assessment to make the best use of the analytical talent and skills set of the assessment team. After the U.S. Agency for International Development (USAID) Mission has selected the country where the assessment will take place, it will undertake the activities described in this chapter. The chapter's intended user is the person managing the assessment, and the design of the chapter assumes that that assessment manager and others involved in the assessment have desk research as well as field-based research experience.

The next chapter (Chapter 4, "Synthesizing Findings and Developing Recommendations") focuses on approaches for analyzing the data and assessment findings, and recommends proven methodologies for developing, validating, and prioritizing interventions.

The following key activities are involved in planning and conducting an assessment; some of them occur concurrently—

1. Identify the needs and priorities of the USAID Mission.
2. Agree on the scope, time frame, and dates of the assessment.
3. Prepare an assessment budget.
4. Assemble an assessment team and assign responsibilities.
5. Prepare the logistics checklist.
6. Schedule and conduct team planning meetings.
7. Compile and review background materials.
8. Prepare a contact list and interview key informants.
9. Organize a stakeholder workshop.
10. Hold a post-assessment debriefing as needed.
11. Prepare the assessment report.

Several templates and samples of documents are provided as annexes to this chapter; others are available in the CD that accompanies this manual. Annexes for Chapter 3—

- Annex 3A. Template for Assessment Scope of Work
- Annex 3B. Sample Assessment Budget Templates (included electronically on CD only)
- Annex 3C. Sample Local Consultant Scope of Work
- Annex 3D. Sample Logistical and Task Checklist
- Annex 3E. Sample Team Planning Meeting Agenda

- Annex 3F. Sample List of Background Documents—Desktop Review for Azerbaijan Assessment
- Annex 3G. Sample In-Country Interview Schedule
- Annex 3H. Sample Contact List
- Annex 3I. Sample Stakeholder Workshop Agenda
- Annex 3J. Suggested Outline for Final Assessment Report
- Annex 3K. Outline of Assessment Report from Pilot Test in Angola—Angola Health System Assessment (full report included electronically on CD that accompanies this manual or available for download at www.healthsystems2020.org)
- Annex 3L. Outline of Assessment Report from Pilot Test in Benin—Benin Health System Assessment (full report included electronically on CD that accompanies this manual or available for download at www.healthsystems2020.org)

3.2 Activity 1: Identify the Needs and Priorities of the USAID Mission

Once you have decided to proceed with a rapid health system assessment, you will need to address a few key points before moving forward—

- **Review the purpose of this assessment tool** and what kind of information it can provide to the Mission (see Chapter 1, “Health Systems Strengthening: An Introduction” and Chapter 2, “Overview of the Approach”). Make sure that the information from the assessment will match the type of information needed by the Mission and its programs.
- **Identify any special needs the Mission may have** (e.g., specific areas of interest) and determine if this assessment tool can meet that need. The tool is designed to assess overall health system performance. It does not focus on specific health programs or conditions, such as Integrated Management of Childhood Illness or tuberculosis. If program-specific information is needed, the assessment organizers and the Mission should agree on an approach to address these needs. Strategic priorities may also require special consideration.
- **Identify recent or upcoming in-country studies or activities** that may be useful to the assessment. The Mission and other organizations working in the country may be aware of recent studies, health sector (or subsector) assessments, or other publications that may be useful in planning and preparing for this assessment. This research will also help to identify overlaps between the proposed assessment and any recent or future activities in-country.
- **Determine which modules would be most relevant.** Given the priorities and needs of the USAID Mission, this assessment could cover all the technical modules or only a

subset of them. Note that the core module is mandatory and must be completed regardless of the overall scope.

- **Define structure and scope of the final assessment report.** Annex 3J provides a suggested outline for the final assessment report. Discuss this report with the USAID Mission and reach an agreement for the overall structure and scope of the report. (Outlines of the assessment reports prepared as part of the Angola and Benin pilot tests are included as Annexes 3K and 3L and serve as examples.)

3.3 Activity 2: Agree on the Scope, Time Frame, and Dates of the Assessment

The final scope of your work will be influenced by the following considerations.

- The overall level of effort is based on *the number of modules to be applied*. An estimated two person-weeks per module will be required. This estimate is based on one week for preparatory work and report writing plus one week for fieldwork for each module. It does not include travel time.
- The time required will also be influenced by *the number of people on the assessment team*. For example, if all seven modules will be implemented, the team could be set up with two people who do three or four modules each, three people who do two or three modules each, or four people who do one or two modules each. The expertise of the team members, the ready availability of data, and type of final report requested will also influence the time requirements. Time for translation of materials may also need to be considered.
- The time and number of team members required will be also depend on *where the assessment will take place*. Although the assessment primarily focuses on data that can be collected at a national (central) level, you may find that conducting all or some of the assessment at a subnational level is appropriate, particularly in decentralized systems or in cases where information and systems must be verified at a provincial or district level. If a provincial- or district-level visit is to be conducted, you will need to consider the following issues.
 - *Site selection.* Work with USAID Mission and possibly a local bilateral or nongovernmental organization (NGO) project to identify possible locations or sites.
 - *Budgetary implications.* Most likely, you will have travel costs associated with the trip, and they need to be integrated into the budget. Furthermore, the level of effort for assessing regional or lower level agencies and stakeholders, in addition to central agencies, will imply a larger budget for interviews.
 - *Time implications.* If the in-country travel will take several days, you may need to extend the time of the assessment or send only part of the assessment team.

- *Technical considerations.* You may need to develop field questionnaires based on the modules to help team members ask the appropriate questions for the subnational level.
- Any *specific information needs* agreed to with the Mission will need to be considered.
- Estimate the time frame in which all assessment activities will be conducted. The availability of selected team members, holidays, and other events will determine the exact dates of the assessment. The assessment activities are not limited to the fieldwork, but also include time for organizational and logistic preparation, team member preparation, and post-fieldwork.

Draft the scope of work for the assessment early in the process to help inform potential assessment team members of their role and tasks. A template for developing the assessment scope of work is presented in Annex 3A.

3.4 Activity 3: Prepare an Assessment Budget

You will need to prepare the budget early in the planning process. An Excel[®] template, which is presented in Annex 3B (and is available on the CD that accompanies this manual), can be used to draft the budget. It should be updated as additional information becomes available, such as personnel daily rates and the cost of interpreters and translators, if needed. Some key considerations for the budget are listed below.

- Team member time
 - Planning time—technical lead and administrative or logistics support
 - Team member time—preparatory, fieldwork, and report preparation
- Travel costs (as needed)
 - Airfare
 - Per diem
 - Visa costs
 - Telecommunications costs (phone and Internet access)
- Contracted services (as needed)
 - Local consultant
 - Translator(s)
 - Driver(s) and car(s)

- Conference room facilities for the stakeholder workshop (room charge, food costs, and equipment rental)
- Other
 - Photocopies for reference materials, reports, and other documents
 - Postage (mailing of documents before visit, if needed)

3.5 Activity 4: Assemble an Assessment Team and Assign Responsibilities

The selection of the assessment team is a critical step in planning the assessment. Team members may include the Mission Population, Health and Nutrition (PHN) officer, other staff, staff from other USAID offices, in-country consultants, and external consultants. You will likely assemble the team and assign roles and responsibilities accordingly.

The roles, qualifications, responsibilities, and estimated level of effort of each assessment participant are described below.

3.5.1 The Assessment Coordinator's Responsibilities

The assessment coordinator is the point person responsible for the organization and logistics of the assessment. This person may be the Mission PHN officer or another designated person who will work in collaboration with assessment team members, the USAID Mission, and any local consultants. The assessment coordinator could be a member of the assessment team or could function in a purely organizational role.

The coordinator should have experience in organizing data collection efforts and managing consultants, and should have strong research and interpersonal skills. The person would ideally have some familiarity with the country's health sector, contacts with stakeholders, and advanced command of the language of the assessment country as well as English.

A local consultant may be hired to assist with the local coordination activities if the assessment coordinator is not based in the country. Responsibilities would need to be divided accordingly. If a local consultant is hired to take on part of the coordination activities, a local consultant scope of work will be necessary. A sample scope of work is supplied in Annex 3C.

Key responsibilities of the assessment coordinator are divided into preparatory work and support to the team during fieldwork.

3.5.1.1 The Assessment Coordinator's Preparatory Work

In advance of fieldwork, the assessment coordinator will need to do the following.

1. Prepare scopes of work, background documents, and the like.

2. Assist in selecting the assessment team.
3. Prepare the assessment logistics checklist and budget.
4. Manage logistical preparations, including the following—
 - a. Interface with USAID regarding logistics for the team.
 - b. Assist with invitations and arrangements for the stakeholder workshop.
 - c. Prepare the schedule of work for the team members (each team member will have independent and team or group meetings), including scheduling and confirming appointments. Provide guidance on appropriate informants in the health sector.
 - d. Obtain quotes for mobile phone rental for the team.
 - e. Plan travel.
5. Organize team meetings.
6. Work with the assessment team to obtain reports and other data sources required in advance and extract specified information.
7. Hire a local consultant (if needed).
8. Hire local translator(s) to work with the team (if needed).
9. Hire a car and driver to provide transportation for the team during the visit, including pick-up and drop-off at the airport.
10. Provide guidance on general work protocols for the team, including regular daily working hours (start, lunch, end), holidays, introductions, and language.
11. Establish protocols for interview note-taking, sharing notes among team members, and report preparation templates or formats before the trip begins.

3.5.1.2 The Assessment Coordinator's Support of the Team during Fieldwork

During the fieldwork, the assessment coordinator will need to do the following.

1. Meet with team at the start of field activities and participate in team meetings.
2. Assist the team as needed during the initial briefing meeting with USAID.
3. Assist the team to collect data as needed.
4. Interpret or translate as needed.
5. Help prepare for and participate in the stakeholder workshop.

- a. Confirm conference room arrangements (including availability of overhead digital projector, flipchart paper, markers, notepads, and pens among others).
 - b. Arrange for photocopies as requested by the team.
6. Contribute to Country Health Systems Assessment Report as needed.
 7. Travel to one or two provincial areas (as required).

The expected level of effort for the coordinator is a minimum of five days of preparatory work, plus time to support the team as needed during the fieldwork. Although the preparatory work is estimated at five days, this work would be done over a two-month period to allow time for the various planning steps to be taken. If the assessment coordinator is also a team member, the level of effort would need to be revised accordingly. Similarly, the level of effort may need to be revised if delays occur.

3.5.2 The Assessment Team Leader's Responsibilities

The assessment team leader is responsible for the overall management of team activities in the field and for the timely completion of the assessment. The team leader will do the following—

1. Lead the team and its activities; clarify the scope and timeline with the assessment coordinator, the team, and country counterparts.
2. Liaise with the assessment coordinator (and local consultant if needed) and the Mission on scheduling interviews, site visits, and logistics.
3. Coordinate with the assessment coordinator and the Mission to prepare for and conduct the stakeholder workshop.
4. Plan for daily activities during fieldwork with other team members.
5. Facilitate daily team meetings.
6. Deliver final assessment report to the USAID Mission. The team leader is likely to be the lead author of the assessment report, although one of the other team members can take on this role. Either way, the team leader will be responsible for finalizing the report and delivering it to the USAID Mission.

3.5.3 The Assessment Team Members' Responsibilities

Assessment team members should have a health-system background; knowledge of at least one of the areas of study (e.g., health financing, pharmaceuticals, human resources, health information systems); and preferably have the ability to speak, write, and read in the language of the assessment country to facilitate document review and interviews. Having these language skills will also reduce costs associated with interpretation and translation services. The assessment team will be responsible for the following tasks listed below.

3.5.3.1 The Team Members' Preparatory Work

In advance of fieldwork, team members will need to do the following.

1. Read through this manual.
2. Participate in team planning meetings and discussions.
3. Work through the modules they are assigned.
4. Prepare lists of documents needed and potential interviewees to submit to the assessment coordinator, based on the modules they are assigned.
5. Review, analyze, and understand Component 1 data for all the modules, which are derived from established databases.
6. Review background documents and prepare the desk study (Component 2) to the degree possible; at least some parts of each module can be completed with a desk study and the information verified during fieldwork. Note that the core module, particularly, should be completed as much as possible at this stage since it provides valuable background information for the entire team.
7. Identify information gaps, based on preparatory work, that are to be filled during fieldwork.

3.5.3.2 The Team Members' Fieldwork

The assessment tool was designed to be implemented in-country over one person-week per module. Note that this estimate does not include travel time and assumes that sufficient preparatory work is completed as described above. The level of effort may be revised based on the number of modules each team member is responsible for, the level of experience of the team members, and the like. Key fieldwork tasks required of the team are the following.

1. Meet with team at the start of fieldwork and participate in regular team meetings.
2. Collect data on assigned module(s) through document review and interviews.
3. Prepare preliminary analyses in cooperation with team members. Draft relevant sections for the Country Health Systems Assessment Report, including recommended potential activity areas and interventions.
4. Prepare for and conduct a stakeholder workshop.
5. Travel to rural areas or regional and district level locations, as required.

3.5.3.3 Report Preparation

Post-fieldwork activities will vary depending on the reporting needs of the Mission. Key post-fieldwork tasks are the following.

1. Finalize the Country Health Systems Assessment Report, including recommendations, based on input from the stakeholder workshop and mission staff.
2. Participate in follow-up meetings, as needed.

3.6 Activity 5: Prepare the Logistics Checklist

A sample checklist of tasks and logistical steps is presented in Annex 3D. You will need to make travel arrangements for team members not based in the country. In addition, depending on the country and the interests of the USAID Mission, you may need to plan for trips to areas outside of the central capital city. A local consultant may be particularly helpful in making these arrangements.

3.7 Activity 6: Schedule and Conduct Team Planning Meetings

Before the assessment, schedule a meeting for the team to review the purpose of the assessment, review the manual, and assign responsibilities. A second team meeting may be scheduled after the preparatory work has been completed and before fieldwork. The focus of this meeting should be the review of remaining information gaps and scheduling the fieldwork. At a minimum all team members and the coordinator should be present and participate. (This meeting may be conducted by conference call.) A sample team planning meeting agenda is presented in Annex 3E.

In addition, during the fieldwork, regular daily team meetings led by the team leader are recommended.

3.8 Activity 7: Compile and Review Background Materials

Compile background information on the country, and in particular any general health documents, early in the assessment process. Each module should have identified specific documents and types of documents from which relevant information may be obtained. A sample list of background documents that was prepared for Azerbaijan is included in Annex 3F.

The assessment coordinator should facilitate the collection of the documents and distribution to the team members. Hard copies of key documents can be compiled in a binder or electronically on a CD and shared at the first team meeting. Encourage team members to keep a list of all documents consulted and provide the list as part of the assessment report.

Information that is pulled from any document must be properly cited, so that the source of the information can be checked later if questions are raised about it. Simple tools may be used to manage the information that is gleaned from documents. For example, information pulled from documents may be entered into a database to facilitate sorting by topic. Software programs that can assist with this include Reference Manager[®] and MS Access.[®]

3.9 Activity 8: Prepare a Contact List and Interview Key Informants

Before fieldwork begins, you will need to consult with the USAID Mission, the assessment coordinator, and the team members to identify key informants. Other donors and stakeholders may be queried about potential key informants in advance of the fieldwork, and country reports can also provide a lot of names of people to follow-up with. The generic titles of likely key informants are listed in the individual modules. When selecting the specific individuals to be interviewed, specify the topics and types of information that will be discussed during the interview to make sure that the most appropriate person will be selected.

The local consultant can assist with scheduling the interviews. A sample interview schedule is presented in Annex 3G. A contact list of team members, Mission contacts, and interviewees should also be prepared and maintained throughout the assessment. A contact list template is presented in Annex 3H. One of the team members should be assigned the responsibility of maintaining this list.

This tool assumes that the assessment team members have some relevant field-based research experience. Nonetheless, you may want to remind them of good information gathering and interviewing practices. Box 3.1 provides some basic tips for conducting a successful interview.

This tool does not include questionnaires to be applied during interviews. Rather, the questions that need to be addressed to obtain data for the indicators are simply listed by topic without any

Box 3.1 Interview Tips

Insist on getting copies of documents and texts. Whenever a respondent refers to a study, policy, law, or other document, ask for a copy, or at least a citation for the document. If needed, get an independent translation. Having your own copy will allow for independent evaluation of the content of the document and serve to confirm the informant's interpretation of the contents.

Use consistent questions with flexible follow-up across all the sources interviewed. Interviews must be designed to get consistent information. Start with a list of questions, and try to cover all of them in the interview. In particular, when both the provider and patient are being interviewed, be sure to cover the same topics with each.

Seek information from multiple perspectives. For many reasons, different parties may perceive the same situation in different ways. An informant may be a great distance from the reality on the ground. Some informants may not be exposed to what is actually happening, or may only feel comfortable speaking to the ideal, or the way things should be.

Document interview notes promptly. Document your interview notes every night. If your team splits up to interview different informants, you can share your experiences through the notes. The notes then become an important resource as the team prepares the final report.

Source: Ravenholt and others (2005).

particular order with respect to the most likely respondent. In advance of the field visit, and as part of the documentation review, team members should draft country and site-specific (e.g., central versus regional) interview guides according to most likely respondent. Careful preparation will help avoid duplication of questions to the same individual and will also ensure that the sequence of the questions asked will be logical.

3.10 Activity 9: Organize a Stakeholder Workshop

The stakeholder workshop will be the final fieldwork activity for the assessment team. The stakeholder workshop is intended to be a forum in which stakeholders can—

- Review, discuss, and validate team’s major findings
- Provide input on their priorities, based on strengths and weaknesses discussed
- Provide input on the team’s recommendations
- Identify how they will or can be involved in follow-up activities, how to move forward, or how to provide feedback and recommendations on major options presented by the team

Organizing the workshop is the responsibility of the team leader in coordination with the USAID Mission. Key activities include the following.

- Identify invitees, set the agenda, and confirm dates.
- Send invitations.
- Reserve a location, such as a hotel conference room, and plan for coffee breaks (best done in advance or immediately upon arrival in-country).
- Reserve audiovisual equipment and procure other supplies such as flipcharts and markers (also best done in advance or immediately upon arrival in-country).
- Prepare presentations and handouts for the workshop.
- Meet with USAID before the workshop to review draft findings and agenda.

An example of a stakeholder workshop agenda is included in Annex 3I.

3.11 Activity 10: Hold a Post-Assessment Debriefing as Needed

In addition to the stakeholder workshop, the Mission may request a debriefing meeting after fieldwork is completed. This meeting may also be requested by USAID Washington depending on the availability of team members.

3.12 Activity 11: Prepare the Assessment Report

Assessment team members should start drafting their findings early, during preparatory and fieldwork. The assessment findings, recommendations, and discussion in the stakeholder workshop should be documented in the final report. Each module chapter contains guidance on summarizing findings. Annex 3J includes a suggested outline for the final report. Annexes 3K and 3L include outlines of the assessment reports prepared for the Angola and Benin pilot tests and serve as examples. Team members will need to agree on a timeline and approach for finalizing and disseminating the report, in consultation with the USAID Mission.

Reference

Ravenholt, Betty, Rich Feeley, Denise Averbug, and Barbara O'Hanlon. 2005. *Navigating Uncharted Waters: A Guide to the Legal and Regulatory Environment for Family Planning Services in the Private Sector*. Bethesda, MD: Private Sector Partnerships-One Project, Abt Associates Inc.

Annex 3A. Template for the Assessment of Scope of Work

SCOPE OF WORK Health Systems Assessment Approach [Country]

Background

USAID's Office of Health, Infectious Diseases and Nutrition (HIDN) has developed a Health Systems Assessment Approach as part of its global Mainstreaming Health Systems Strengthening Initiative. The Approach is meant to serve the following purposes:

- Allow Population, Health and Nutrition (PHN) officers from USAID (with the assistance of experts/consultants if necessary) to conduct an assessment of a country's health system. This includes diagnosing the relative strengths and weaknesses of the health system, prioritizing key weakness areas, and identifying potential solutions. This may be particularly relevant during early phases of program development.
- Inform PHN officers about the basic elements and functions of health systems.
- Improve the capacity of bilateral projects to achieve USAID's health impact objectives through increased use of health systems interventions.
- Help health systems officials at USAID to conceptualize key issues, increase the use of health systems interventions in technical programs, and to improve the role of the Health Systems Division to support these programs.

The assessment tool covers the following components of the health system—governance; health financing; human resources and health facilities; pharmaceutical supply system; and health information systems. More details on the assessment methodology and topical areas are in Annexes 1 and 2.

The technical team will be composed of three team members plus a local consultant. The team will include a Team Leader from [organization] and other team members from [organizations].

The team will be assisted by the USAID PHN officer in [country]. The assessment team will review documents and conduct interviews to gather specific information on the health system in [country]. The visit will conclude with a brief workshop with USAID representatives and other key stakeholders.

Overall Scope of Work

Assessment:

- Systematically assess strengths and weaknesses of the health system using health system assessment tool. The tool is designed to provide a broad assessment of the performance of the health sector. Topics to be covered are governance, health financing, human resources and health facilities, pharmaceuticals, and health information systems (see Annex 1).
- Provide general recommendations on potential activity areas for health system strengthening following from the strengths and weaknesses identified in the assessment.

- Conduct a stakeholder workshop at the end of the assessment visit to build consensus on what the key health system priority areas are.
- Liaise with the new PHN bilateral program in [country] to share findings and information.
- The assessment will not evaluate disease- or program-specific areas as the tool is not designed to do so. However, given the Mission's interest in tuberculosis and family planning issues, the team may be able to provide information as available that may be relevant to those two areas.

Tasks of Assessment Team Members

The allocation of tasks among team members will be discussed at team planning meetings.

Prior to team arrival (LOE: expected 5 days)

1. Participate in team planning meetings and discussions.
2. Review assigned module(s) and discuss any questions with module authors.
3. Review background data (Component 1 data will be compiled by [organization]).
4. Prepare a draft donor map based on a review of available documents.
5. Prepare lists of documents needed and potential interviewees (entire team). The lists will be provided to the local consultant who will compile the documents and facilitate translation as needed.
6. Review background documents and prepare the desk study (Component 2) to the degree possible. This activity will be supported by the local consultant who will work to obtain reports and other data sources required in advance and extract specified information.

During team visit (LOE: expected 15 days)

1. Meet with team upon arrival and participate in team planning meeting.
2. Collect Component 2 data through document review and interviews.
3. Assist in mapping current interventions/reforms to address weaknesses identified in assessment.
4. Prepare preliminary analyses in cooperation with team members. Draft relevant sections for the Country Health Systems Assessment Report, including recommended potential activity areas and interventions.
5. Prepare and conduct stakeholder workshop.
6. Liaise with USAID PHN officer as needed to prepare for the stakeholder workshop and other activities.
7. Liaise with new health bilateral program personnel to share and discuss findings.
8. Provide input as part of the pilot test with regard to approach/methodology, indicators, timeline, level of effort, and format.
9. Travel to one rural area, to be determined, may be required. It is expected to be a brief trip.
10. Work will be conducted in [language], and will be assisted by translators as needed.

The team will work under the overall direction of the Team Leader. All team members will contribute to day-to-day problem solving, solutions to issues of data availability, technical questions, etc. This may require daily team meetings and other updates while in [country].

Post in-country visit (LOE: expected 5 days)

1. Review any final comments received from the Mission and local counterparts.
2. Make corrections and adjustments to report for finalization.

Outputs

1. Stakeholder workshop report
2. Country Health Systems Assessment Report (draft outline will be provided)

The deliverables will be prepared in English but may be translated into relevant local language if requested.

Annex 1. Outline of the Health Systems Assessment Approach

Introduction

This chapter provides the motivation for and the purpose of the approach. It also describes the layout of the product (the manual and the CD). This section will draw from the framework paper previously presented to USAID (“Health systems assessment approach: draft framework”).

Table of Contents

Chapter 1: Health Systems Strengthening: An Introduction

This is a background chapter explaining health systems and discussing their key functions. This chapter serves as an informational piece for those less familiar with health systems. The chapter builds on the paper written for the Child Survival Technical Resource Materials (TRM) on Health Systems Strengthening. The chapter also provides a reference list for additional papers on health systems.

Chapter 2: Overview of the Approach

This chapter describes the framework for the approach, listing and explaining the structure of the technical modules and their components. The approach draws from the framework paper previously presented to USAID (“Health systems assessment approach: draft framework”). An annex provides a list of all the indicators and qualitative questions in each module, grouped by topical area.

Chapter 3: Planning the Assessment

This chapter provides guidelines for planning the assessment process, including—

- Identifying needs and priorities of the USAID Mission—this is so that the assessment can appropriately focus on the right issues and help provide recommendations to the Mission.
- Time frame/schedule for the planning process and the in-country assessment
- Budgeting for the assessment
- Guidelines on how to select the assessment team (e.g., types of consultants to be recruited, how many)
- Terms of reference (TOR) for staff and consultants for assessment team
- Agenda for assessment team planning meetings
- Types of documents to be reviewed before beginning the assessment and during the assessment phase
- Types of stakeholder interviews to schedule
- Identifying districts/provinces to visit outside the central capital area
- Organizing the stakeholder workshop, including purpose of the workshop, suggested agenda for the workshop, and a template for presenting findings
- Logistics checklist for planning the assessment, including the stakeholder workshop
- Overview of the assessment report that should be prepared using this approach; annexes provide a suggested outline and outlines from two completed reports from prior assessments as samples

Chapter 4: Synthesizing Findings and Developing Recommendations

This chapter includes guidelines on how to process, analyze, and interpret the findings from each module, with particular attention to synthesizing these findings across all modules. Focus is on how to identify key strengths and weaknesses of the health system, and how to identify root causes of problems to be addressed. Guidelines are also provided for how to develop recommendations for the Mission and how to link the recommendations to the USAID Mission's overall goals and priorities, including (to the extent possible) those of its bilateral projects. It will address strategic objective (SO)-specific goals as well those related to the fragile state framework.

Chapter 5: Core Module

This is the background/foundation module and will be required to be completed by all users. In particular, if any users are planning to work through only a subset of the technical modules (Chapters 6–11), they would need to complete this core module to understand the basic background information about the country and its health systems.

Component 1: This includes basic demographic, health, and socioeconomic indicators for the country. Data for the indicators is provided in an electronic format on the CD provided with this manual (data file titled “Component 1 data”). Data for regional and income peer country comparisons are also provided in the data file.

Component 2: This will not be solely based on indicators as in the case of the other technical modules (see below for Chapters 6–11). This section focuses on developing some basic understanding and profiles of a country's health system. Topics covered include:

- Political and macroeconomic environment: Provides guidance on how to describe the political structure of the country.
- Business environment and investment climate: Provides sources of information and guidance on how to analyze the factors that affect private investment and enterprise growth and to identify the barriers to sustaining and expanding the private sector.
- Top causes of mortality and morbidity: These data are to be collected in-country and could help guide any disease-specific recommendations to the USAID Mission. In addition to the top causes of morbidity and mortality, prevalence rates for HIV/AIDS and malaria will be collected, if important in the country context. Note that the health systems assessment approach does not have a disease specific focus, but a user may have to address this in developing recommendations for the USAID Mission.
- Structure of the main government and private organizations involved in the health care system: This includes a template for developing a Ministry of Health (MOH) organizational chart to help support the assessment process.
- Decentralization: This includes indicators to understand the level of decentralization in the country—this will be important for determining the type of assessment that should be conducted.
- Service delivery organization: This section provides an overview of the structure of service delivery, including types of health facilities in the country, and of the engagement of the private sector, including proportion of services and facilities in the private sector and involvement of NGOs and the commercial sector.
- Donor mapping: This includes a template for mapping donor activities in the health sector—this will be important for understanding the level of activities in the country, as well as to identify gaps.
- Donor coordination: This includes indicators for assessing the level of donor coordination and the related strengths and weaknesses.

Chapters 6–11: Topical Chapters—the Technical Modules

Chapter 6: Governance module addresses the information assessment capacity of the health system, policy formulation and planning, social participation and health system responsiveness, accountability, and regulation.

Chapter 7: Health financing module covers sources of financial resources; the pooling and allocation of health funds, including government budget allocation and health insurance; and the process of purchasing and proving payments.

Chapter 8: Service delivery module examines service delivery outputs and outcomes; the availability, access, utilization, and organization of service delivery; quality assurance of healthcare; and community participation in service delivery.

Chapter 9: Human resources module covers systematic workforce planning, HR policies and regulation, performance management, training/education and incentives.

Chapter 10: Pharmaceuticals management module evaluates the health system's pharmaceutical policy, laws, regulations; selection of pharmaceuticals; procurement, storage, and distribution; appropriate use and availability of pharmaceuticals; access to quality pharmaceutical products and services; and financing mechanisms for pharmaceuticals.

Chapter 11: Health information systems (HIS) module reviews the current operational HIS components; the resources, policies and regulations supporting the HIS; data availability, collection, and quality; and, analysis and use of health information for health systems management and policy-making.

These chapters include technical modules, each with a set of indicators for conducting a health system assessment. The key elements of each module are—

- System profile: This section provides guidelines for developing a basic profile of the health system aspect assessed in each module. It includes templates for doing this, such as mapping tools, flowcharts, etc.
- Component 1: This component includes indicators for which data are easily available from international datasets. Data for Component 1 indicators is provided in an electronic format on the CD provided with this manual. Specific attention will be given to including regional or other peer country comparisons wherever feasible. Charts indicating possible ways of presenting the data will also be included in an annex.
- Component 2: This component presents the indicators grouped by subtopic within each module. Each indicator will be linked to one of five performance criteria: equity, efficiency, access, quality, and sustainability. Users will have to conduct a combination of desk review of documents and stakeholder interviews to collect data for these indicators. Detailed descriptions of each indicator will be included (a template and guidelines have been provided to chapter authors).
- Assessment process: Each chapter provides module-specific guidelines on the process for working through each module, synthesizing findings and preparing recommendations for interventions. These guidelines are meant to complement Chapter 4.

Annex 3B. Sample Assessment Budget Templates

Note: Additional lines and items can be added to this template as needed. This template is available in MS Excel format on the accompanying CD.

Line Item		Rate	Unit	Quantity	Total (Rate x Quantity)
Labor (add lines for as many people as needed)					
Name	Title	\$	/day	# days	\$
Name	Title	\$	/day	# days	\$
Name	Title	\$	/day	# days	\$
Name	Title	\$	/day	# days	\$
Name	Title	\$	/day	# days	\$
Subtotal US labor					\$ Subtotal
Travel					
Travel – airfare	Destination	\$	/trip	# fares at that rate	\$
Travel – airfare	Destination	\$	/trip	# fares at that rate	\$
Travel – airfare	Destination	\$	/trip	# fares at that rate	\$
Per diem	Destination	\$	/days	# days	\$
Per diem	Destination	\$	/days	# days	\$
Per diem	Destination	\$	/days	# days	\$
Other costs—local travel	Destination	\$	/trip	#	\$
Other costs—visa		\$	/trip	#	\$
Other costs—misc.		\$	/trip	#	\$
Subtotal travel					\$ Subtotal
Subcontracts/Outside services					
Conference room	Stakeholder workshop	\$	/day	# days	\$
Coffee service	Stakeholder workshop	\$	/person	# people	\$
Audiovisual equipment	Stakeholder workshop	\$	/day	# days	\$
Driver and car		\$	/day	# days	\$
Translators		\$	/day	# days	\$
Subtotal Subcontracts					\$ Subtotal
Other costs					
Postage		\$			\$
Communications		\$			\$
Other		\$			\$
Subtotal Other					\$ Subtotal
Total Assessment Budget					\$ (Sum of Subtotals)

Annex 3C. Sample Local Consultant Scope of Work

SCOPE OF WORK
Local Short Term Consultant
Health Systems Assessment Approach [Country]
Draft Month, Day, Year

Background

USAID's Office of Health, Infectious Diseases and Nutrition (HIDN) seeks to develop a Health Systems Assessment Approach as part of its global Mainstreaming Health Systems Strengthening Initiative. The approach is meant to serve the following purpose:

- Allow Population, Health and Nutrition (PHN) officers from USAID to conduct an assessment of a country's health system, possibly during early phases of program development (with the assistance of experts/consultants if necessary). This includes diagnosing the relative strengths and weaknesses of the health system, prioritizing key weakness areas, and identifying potential solutions.
- Inform PHN officers about the basic elements and functions of health systems.
- Help improve the capacity of bilateral projects to achieve USAID's health impact objectives through increased use of health systems interventions.
- Help health systems officials at USAID to conceptualize key issues, increase the use of health systems interventions in technical program interventions, and to improve the role of the Health Systems Division.

The assessment tool covers the following components of the health system: stewardship/governance; health financing; human resources and health facilities; pharmaceuticals; private sector engagement; and health information systems. More detail is on the assessment methodology is in Annexes 1 and 2.

The technical team will be comprised of:

1. Team Leader (organization)
2. Technical specialist (organization)
3. Technical specialist (organization)
4. Local short-term consultant (contracted through [organization])

The team will be assisted by the USAID PHN officer in [country]. As part of the pilot test the assessment team will review documents and conduct interviews to gather specific information on the health system in [country]. The visit will conclude with a brief workshop with USAID representatives and other key participants.

Objective of the Technical Assistance (Local consultant)

The local, short-term consultant will work with the technical team to identify relevant sources of data for the assessment, obtain data and documents, and assist in document review. Further, the consultant will assist the team with coordinating the program of visits, facilitating access to key

informants (setting up interviews and meetings), participating in the data collection activities, providing translation, and assuring that local technical and logistic needs are met in a timely and effective way. The local consultant will be expected to help the team members who will speak English and [language] to interact with counterparts in [language].

Expected Specific Tasks **[insert dates]**

Prior to team arrival (LOE: minimum 5 days)

1. Work with technical team to obtain reports and other data sources required in advance and extract specified information. This will assist the team with collecting data for Level 2 and 3 of the assessment (see Annex 1). Lists of the types of documents needed will be provided closer to the team visit.
2. Manage logistical preparations:
 - a. Interface with USAID regarding logistics for the team.
 - b. Obtain quotes for mobile phone rental for team.
 - c. Assist with invitations and arrangements for a workshop to be held on the last day of the visit.
 - d. In consultation with [organization], prepare the schedule of work for the team members (each team member will have independent meetings and team or group meetings), including scheduling and confirming appointments. Provide guidance on appropriate informants in the health sector.
 - e. Provide other logistical support as needed.
3. Coordinate with and/or hire local translator(s) to work with the team to translate from [language] to English. The number of translators will depend on team requirements
Translators would
 - f. Accompany team members on interviews to provide interpretation services
 - g. Review and translate documents are required
4. Provide guidance on general work protocols for the team, including regular daily working hours (start, lunch, end), holidays, introductions, language, etc.
5. Hire car and driver to provide transportation for the team during the two-week visit, including pick-up and drop-off at the airport.

During team visit (LOE: expected 15 days)

1. Meet with team upon arrival and participate in team planning meeting.
2. Assist team as needed during initial briefing meeting with USAID.
3. Assist team to collect Level 2 and Level 3 data (see description of the tool in Annex 1)
4. Interpret/translate as needed in [language]. Work with other translators as needed.
5. Contribute to preparations, and participate in the stakeholder workshop. Confirm conference room arrangements (including availability of overhead digital projector, flip chart paper, markers, notepads and pens, among others). Arrange for photocopies as requested by the team.
6. Provide input on the pilot test process.
7. Draft relevant sections for the Country Health Systems Assessment Report, including recommended solutions.

8. Travel to one rural area, to be determined, may be required. It is expected to be a brief trip.

A more specific list of tasks with dates will be provided when the dates of the visit are confirmed. The Team will work under the overall direction of the Team Leader. All team members will contribute to day-to-day problem solving, solutions to issues of data availability, technical questions, etc.

Consultant Profile

The following background and experience are required.

- Familiarity with the health sector as a health professional in medicine, public health, health financing/economics, or health services administration
- Experience in evaluation and/or health systems research, preferably at national level
- Excellent quantitative and qualitative skills
- Experience working in health sector in [country]
- Advanced command of [language] and advanced reading, writing, and speaking skills in English
- Ability to work in teams
- Helpful to have familiarity and contacts in the ministry of health, private sector, and/or donor community

Outputs

The reports will be prepared in English. Reporting deadlines will be specified when the assessment schedule is finalized.

Contact Information

<Insert Contact Information>

Attachments:

- Annex 1: Brief description of the assessment tool

Annex 1. Outline of the Health Systems Assessment Approach

Introduction

This chapter provides the motivation for and the purpose of the approach. It also describes the layout of the product (the manual and the CD). This section will draw from the framework paper previously presented to USAID (“Health systems assessment approach: draft framework”).

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This is a background chapter explaining health systems and discussing their key functions. This chapter serves as an informational piece for those less familiar with health systems. The chapter builds on the paper written for the Child Survival Technical Resource Materials (TRM) on Health Systems Strengthening. The chapter also provides a reference list for additional papers on health systems.

Chapter 2: Overview of the Approach

This chapter describes the framework for the approach, listing and explaining the structure of the technical modules and their components. The approach draws from the framework paper previously presented to USAID (“Health systems assessment approach: draft framework”). An annex provides a list of all the indicators and qualitative questions in each module, grouped by topical area.

Chapter 3: Planning the Assessment

This chapter provides guidelines for planning the assessment process, including—

- Identifying needs and priorities of the USAID Mission so that the assessment can focus appropriately on the right issues and help provide recommendations to the Mission
- Time frame/schedule for the planning process and the in-country assessment
- Budgeting for the assessment
- Guidelines on how to select the assessment team (e.g., types of consultants to be recruited, how many)
- TOR for staff and consultants for assessment team
- Agenda for assessment team planning meetings
- Types of documents to be reviewed before beginning the assessment and during the assessment phase
- Types of stakeholder interviews to schedule
- Identifying districts/provinces to visit outside the central capital area

- Organizing the stakeholder workshop, including purpose of the workshop, suggested agenda for the workshop, and a template for presenting findings
- Logistics checklist for planning the assessment, including the stakeholder workshop
- Overview of the assessment report that should be prepared using this approach; annexes provide a suggested outline as well as outlines from two completed reports from prior assessments as samples.

Chapter 4: Synthesizing Findings and Developing Recommendations

This chapter includes guidelines on how to process, analyze, and interpret the findings from each module, with particular attention to synthesizing these findings across all modules. Focus is on how to identify key strengths and weaknesses of the health system, and how to identify root causes of problems to be addressed. Guidelines are also provided for how to develop recommendations for the mission and how to link the recommendations to the USAID mission's overall goals and priorities, including (to the extent possible) those of its bilateral projects. It will address SO-specific goals as well those related to the fragile state framework.

Chapter 5: Core Module

This is the background/foundational module and will be required to be completed by all users. In particular, if any users are planning to work through only a subset of the technical modules (Chapters 6–11), they would need to complete this core module to understand the basic background information about the country and its health systems.

Component 1: This includes basic demographic, health, and socio-economic indicators for the country. Data for the indicators is provided in an electronic format on the CD provided with this manual (data file titled “Component 1 data”). Data for regional and income peer country comparisons are also provided in the data file.

Component 2: This will not be solely based on indicators as in the case of the other technical modules (see below for Chapters 6–11). This section focuses on developing some basic understanding and profiles of a country's health system. Topics covered include:

- Political and macroeconomic environment: Provides guidance on how to describe the political structure of the country.
- Business environment and investment climate: Provides sources of information and guidance on how to analyze the factors that affect private investment and enterprise growth, and to identify the barriers to sustaining and expanding the private sector.
- Top causes of mortality and morbidity: These data are to be collected in-country and could help guide any disease-specific recommendations to the USAID Mission. In addition to the top causes of morbidity and mortality, prevalence rates for HIV/AIDS and malaria will be collected, if important in the country context. Note that the health systems assessment approach does not have a disease specific focus, but a user may have to address this in developing recommendations for the USAID Mission.
- Structure of the main government and private organizations involved in the health care system: This includes a template for developing a MOH organizational chart to help support the assessment process.

- Decentralization: This includes indicators to understand the level of decentralization in the country—this will be important for determining the type of assessment that should be conducted.
- Service delivery organization: This section provides an overview of the structure of service delivery, including types of health facilities in the country, and of the engagement of the private sector, including proportion of services and facilities in the private sector and involvement of NGOs and the commercial sector.
- Donor mapping: This includes a template for mapping donor activities in the health sector -this will be important for understanding the level of activities in the country, as well as to identify gaps.
- Donor coordination: This includes indicators for assessing the level of donor coordination and the related strengths and weaknesses.

Chapters 6–11: Topical Chapters – the Technical Modules

Chapter 6: Governance module addresses the information assessment capacity of the health system, policy formulation and planning, social participation and health system responsiveness, accountability, and regulation.

Chapter 7: Health financing module covers sources of financial resources; the pooling and allocation of health funds including government budget allocation and health insurance; and the process of purchasing and proving payments.

Chapter 8: Service delivery module examines service delivery outputs and outcomes; the availability, access, utilization, and organization of service delivery; quality assurance of healthcare; and community participation in service delivery.

Chapter 9: Human resources module covers systematic workforce planning, HR policies and regulation, performance management, training/education, and incentives.

Chapter 10: Pharmaceuticals management module evaluates the health system’s pharmaceutical policy, laws, regulations; selection of pharmaceuticals; procurement, storage, and distribution; appropriate use and availability of pharmaceuticals; access to quality pharmaceutical products and services; and financing mechanisms for pharmaceuticals.

Chapter 11: Health information systems module reviews the current operational HIS components; the resources, policies and regulations supporting the HIS; data availability, collection, and quality; and, analysis and use of health information for health systems management and policy-making.

These chapters include technical modules, each with a set of indicators for conducting a health system assessment. The key elements of each module are—

- System profile: This section provides guidelines for developing a basic profile of the health system aspect assessed in each module. It includes templates for doing this, such as mapping tools, flowcharts.
- Component 1: This component includes indicators for which data are easily available from international datasets. Data for component 1 indicators is provided in an electronic format on the CD provided with this manual (data file titled “Component 1 data”). Specific attention will be given to including regional or other peer country comparisons wherever feasible. Charts indicating possible ways of presenting the data will also be included in an Annex.
- Component 2: This component presents the indicators grouped by subtopic within each module. Each indicator will be linked to one of five performance criteria: equity, efficiency, access, quality and sustainability. Users will have to conduct a combination of desk review of documents and stakeholder interviews to collect data for these indicators. Detailed descriptions of each indicator will be included (a template and guidelines have been provided to chapter authors).
- Assessment process: Each chapter provides module-specific guidelines on the process for working through each module, synthesizing findings and preparing recommendations for interventions. These guidelines are meant to complement Chapter 4.

Annex 3D. Sample Logistical and Task Checklist

Indicate who will be responsible for completing the task, the expected due date, and when it was completed

	USAID/DC	USAID/ Mission	Coor- dinator	Local Consultant	Team Lead	Team Members	Date Due	Date Completed
Preparatory Work								
General coordination								
Identify scope of assessment and how many modules will be completed								
Identify team composition								
Set dates for the assessment—consider relevant holidays and events								
Schedule meeting with USAID Mission regarding intent and timing of assessment								
Prepare scopes of work (team and local consultant, as needed)								
Schedule and participate in team planning meeting(s) and discussions								
Determine if in-country travel will be required								
Module prep work								
Prepare briefing binder for first team meeting with country information, background materials, and other assessment information								
Assign modules to team members								

Indicate who will be responsible for completing the task, the expected due date, and when it was completed	USAID/DC	USAID/Mission	Coordinator	Local Consultant	Team Lead	Team Members	Date Due	Date Completed
Team members review assigned module(s) and prepare lists of documents needed and potential interviewees								
The assessment coordinator compiles needed documents and facilitate translation as needed								
Compile Component 1 data (provide on CD)								
Complete Core Module								
Review background document and initiate Component 2 (desk study)								
Request organizational charts for central level MOH and relevant departments; each team member should identify departments relevant to their module and provide the information to the assessment coordinator								
Logistics/other preparations								
Contract local consultant, if needed; assign responsibilities								
Prepare contact list								
Prepare interview schedule								
Make travel arrangements								

<i>Indicate who will be responsible for completing the task, the expected due date, and when it was completed</i>	USAID/DC	USAID/Mission	Coordinator	Local Consultant	Team Lead	Team Members	Date Due	Date Completed
Identify local travel options—select location and date								
Identify participants for stakeholder workshop; set time and date and send invitations; reserve room; work with Mission to coordinate and set agenda								
Hire translators								
Hire drivers								
Materials for travel: memory sticks, flip charts, markers, name tags, paper, portable printer								
Field work								
Week 1								
Meet with team and participate in team planning meeting								
Confirm or re-schedule interviews								
Daily: Team members review data collected and identify gaps; identify additional interviews required, if any, and schedule with consultant; document names/titles of all people interviewed.								
Collect additional information needed to complete Component 2 through document review and interviews								

Indicate who will be responsible for completing the task, the expected due date, and when it was completed	USAID/DC	USAID/ Mission	Coor- dinator	Local Consultant	Team Lead	Team Members	Date Due	Date Completed
Using SWOT analysis and root cause methodologies (in Chapter 4), map possible interventions/reforms to address weaknesses identified in assessment.								
Prepare preliminary analyses and draft relevant sections for the Country Health Systems Assessment Report, including recommended potential activity areas and interventions								
Week 2								
Daily: Team members review data collected and identify gaps								
Work on draft report								
Schedule and conduct follow-up interviews as needed								
Liaise with USAID PHN officer as needed to prepare for the stakeholder workshop and other activities								
Prepare and conduct stakeholder workshop								
Request feedback from a designated reviewer on draft report								
Ongoing								

<i>Indicate who will be responsible for completing the task, the expected due date, and when it was completed</i>	USAID/DC	USAID/Mission	Coordinator	Local Consultant	Team Lead	Team Members	Date Due	Date Completed
Liaise with any in-country program personnel to share and discuss findings								
Travel to one provincial area may be required								
Post-field work								
Finalize relevant sections for the Country Health Systems Assessment Report, including recommendations, based on input from the stakeholder workshop and mission staff								
Schedule/conduct any requested debriefing meetings								
Distribute report in some form--print /CD version								

Annex 3E. Sample Team Planning Meeting Agenda

Angola Team Planning Meeting July 18, 2005

Objectives

- Clarify roles/responsibilities, including assignment of modules
- Agree on schedule/SOW while in Angola
- Agree on role of team leader
- Discuss how to work together

Opening, introductions, overview of day; guidelines for working together

What are you looking forward to in-country:

- Completed a good job
- The team has identified strengths and weaknesses for the Mission
- Testing the new tool in the country

Expectations:

- Help team feel more comfortable with the process and workload
- Have a plan for next two weeks before Angola trip
- Get clarity about specific—report, workshop, day-to-day schedule
- Sorting out R&R, making it useful—who, how, methods
- Define my role, know what to include in report
- How people in PHRplus/HQ can help team

Guidelines for working together:

- Stay focused on topic
- Keep time—assign time checker
- Seek closure today; while in-country be comfortable with not having definitive answers to all questions
- Develop action points/to-do list

Update on current status of activity

Roles and responsibilities for preparation of report

Draft Report Writing Assignments:

Chapter	Author(s)	Page Length	Due Date
1. Executive summary			
2. Background			
3. Overview of country's health system			
4. Methodology			
5. Strengths and weaknesses of the health system			
5.1. Stewardship			
5.2. Health financing			
5.3. Human resources and health facilities			
5.4. Private sector engagement			
5.5. Pharmaceuticals and supplies			
5.6. Health information systems			
6. Summary			
7. Options for USAID			
8. Conclusions/executive summary/next steps			

Annex 3F. Sample List of Background Documents—Desktop Review for Azerbaijan Assessment

AZERBAIJAN DOCUMENT LINKS (2000-2005)

USAID/U.S. Government

USAID Country Profile: Azerbaijan

http://www.usaid.gov/locations/europe_eurasia/countries/az/azerbaijan.pdf

USAID/Caucacus/Azerbaijan PHC Assessment (2005)

http://pdf.dec.org/pdf_docs/PNADC991.pdf

USAID Azerbaijan Annual Report (2005)

http://pdf.dec.org/pdf_docs/PDACD919.pdf

USAID Azerbaijan Health Statistical Report (2004)

http://pdf.dec.org/pdf_docs/PNADC004.pdf

State Department Background Notes, Azerbaijan (October 2005)

<http://www.state.gov/r/pa/ei/bgn/2909.htm>

World Bank

World Bank (WB) Health Sector Assessment (2005)

http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?type=AllWords&all=31468&ptype=sSrch&pcont=results&sortby=D&sortcat=D&x=10&y=5

International Monetary Fund (IMF)/WB Azerbaijan Country Report on Millenium Development Goals (2003)

<http://www1.worldbank.org/prem/poverty/strategies/cpapers/cr04322.pdf>

IMF/WB Assessment of Poverty Reduction Strategies (2004)

<http://www.imf.org/external/pubs/ft/scr/2004/cr04323.pdf>

WB Country Procurement Assessment Report (2003)

http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2003/09/30/000112742_20030930122244/Rendered/PDF/267780AZ.pdf

WHO/UN System

EURO/WHO report: Health Care Systems in Transition Azerbaijan (2004) by John Holley

<http://www.euro.who.int/Document/E84991.pdf>

UNICEF Multiple Indicator Cluster Survey Azerbaijan Assessment report and data tables (2000)

<http://www.childinfo.org/MICS2/newreports/azerbaijan/azerbaijan.htm>

UN Economic Commission for Europe Azerbaijan Environmental Performance Review (2003)
<http://www.unece.org/env/epr/studies/azerbaijan/welcome.htm>

UNICEF Micronutrient Deficiency briefing paper (no date)
<http://www.micronutrient.org/VMD/CountryFiles/AzerbaijanDAR.pdf>

UNICEF Child Protection Systems in Azerbaijan Report (2005)
http://www.unicef.org/azerbaijan/AZ_ChildProtection_map_report.doc

Azerbaijan Government/NGO/Background

Azerbaijan Development Gateway (no date)
<http://www.gateway.az/eng/webdir/health.shtml>

Azerbaijan MOH portal (information on programs, donors, health statistics, etc.—no date)
<http://www.mednet.az/>

State Statistical Committee of the Azerbaijan Republic
<http://www.azstat.org/indexen.php>

Other

DevTech Gender Assessment (2004)
http://www.usaid.gov/our_work/cross-cutting_programs/wid/pubs/ga_azerbaijan.pdf

AIHA/Virginia Commonwealth University Azerbaijan Project Summary (2004)
<http://www.aiha.com/index.jsp?sid=1&id=966&pid=10>

Asian Development Bank National Immunization Program Financing Assessment (2002)
http://www.adb.org/Documents/Books/Natl_Immunization/AZE/azerbaijan.pdf

Asian Development Bank Azerbaijan Country Strategy and Program Update 2004-2006 (2003)
http://www.adb.org/Documents/CSPs/AZE/2003/CSP_AZE_2003.pdf

UMCOR Azerbaijan health program webpage (no date)
<http://gbgm-umc.org/umcor/ngo/azerbaijan/>

Transparency International Country Corruption Assessment: Public Opinion Survey (2004)
<http://www.transparency-az.org/files/25.pdf>

Organization for Security and Co-operation in Europe Assessment on Freedom in the Media (2005)
http://www1.osce.org/documents/rfm/2005/07/15783_en.pdf

Country Analytic Work website—Search for Azerbaijan documents
[http://www.countryanalyticwork.net/Caw/CawDocLib.nsf/vewAsiaPacific?SearchView&Query=FIELD%20Country%20CONTAINS%20%20"Azerbaijan"&Country=Azerbaijan&DocType=NULL&SearchOrder=4&SearchMax=5000&Start=1&Count=20](http://www.countryanalyticwork.net/Caw/CawDocLib.nsf/vewAsiaPacific?SearchView&Query=FIELD%20Country%20CONTAINS%20%20)

Annex 3G. Sample In-Country Interview Schedule

Health Systems Assessment team: Preliminary TDY schedule in Angola, August 2005

Sat	Sun	Mon	Tues	Wed	Thurs	Fri
<p>6</p> <ul style="list-style-type: none"> Team meeting with local consultant— 1:00 pm–5:00 pm To review— Interview schedule, documents collected, USAID meeting, getting information from local consultant, guidance for team as visitors 	<p>7</p> <p>Team meeting with Write-ups</p> <ul style="list-style-type: none"> — lunch 1:00 – 5:00 To review— Technical discussion on health systems strengthening (presentation) 	<p>8</p> <ul style="list-style-type: none"> Meeting with USAID: planning <p>Interviews Team check-in Write-ups</p>	<p>9</p> <ul style="list-style-type: none"> Send invitations for stakeholders workshop <p>Interviews Team check-in Write-ups</p>	<p>10</p> <p>Interviews Team check-in Write-ups</p>	<p>11</p> <p>Interviews Team check-in Write-ups</p>	<p>12</p> <ul style="list-style-type: none"> Meeting with USAID— Unanswered questions, guidance <i>Potential province visit</i> <p>Interviews Team check-in Write-ups</p>
<p>13</p> <ul style="list-style-type: none"> Final drafts of Ch. 4 by 1:00 1-5:00 Team meeting: analysis options for Mission 	<p>14</p> <ul style="list-style-type: none"> Optional team meeting Write up options: send to PHRplus to review (Sun pm or Mon am) 	<p>15</p> <ul style="list-style-type: none"> <i>Potential province visit</i> <i>Finish interviews</i> Reflect on how tool has worked (Mon or Tues) Afternoon free 	<p>16</p> <ul style="list-style-type: none"> AM: PHRplus feedback on report to team Design stakeholder workshop 6:00 pm conference call with PHRplus 	<p>17</p> <ul style="list-style-type: none"> Briefing for USAID on options/stakeholder workshop, review of draft report 	<p>18</p> <ul style="list-style-type: none"> Prepare for stakeholder meeting 	<p>19</p> <ul style="list-style-type: none"> Stakeholder meeting
<p>20</p> <ul style="list-style-type: none"> Write-up results of workshop Reflect on how tool has worked Send latest draft of report to Mission before departure 						

Annex 3I. Sample Stakeholder Workshop Agenda

Stakeholder Workshop Agenda Health Systems Assessment: Angola Stakeholder Workshop

Date: Friday, August 19, 2005 8:30 – 13:00

Venue: Hotel Tropico, Luanda

Purpose: gather stakeholders that seem critical to the success of the options on the table / impacted by the results; get their buy-in; get their feedback and reactions on findings and recommendations.

Objectives:

By the end of the day participants will have:

- Reviewed and discussed team’s major findings
- Provided input on their priorities, based on strengths and weaknesses discussed
- Provided input into recommendations and identify how they will/can be involved in implementing concrete options; how to move forward OR provided feedback and recommendations on major options presented by team

Participants: (maximum 30 people)

- USAID, MOH, Donors, private sector, NGOs

Preliminary Workshop Agenda

Time	Topic	Responsible	Materials
8:30	Coffee/registration		Registration sheet
9:00	Welcome	USAID/MOH	
9:30	Introductions and expectations, overview of objectives and agenda, guidelines for working together		Handout of agenda and objectives Guidelines (pre-prepared)
10:00	Overview of methodology, results and recommendations <ul style="list-style-type: none"> • Highlight key findings • Present suggested recommendations • Q&A/discussion 		Presentation(s) Handouts of slides, write-up of options
10:45	Coffee break		
11:00	Small group discussion: go over recommendations and discuss applicability and feasibility in Angola		Questions for discussion
11:45	Reports from small groups – 10 min each per group		
12:30	Summarize	Team	
12:45	Closing comments	USAID	
1:00	Workshop evaluation. Adjourn for Lunch		Evaluation form

Small Group Discussion Questions

Looking at the strategies listed on the four last slides:

1. Which would be the three principal strategies that you would recommend?

2. How could your organization collaborate with USAID in these areas?
3. What would be your advice to USAID as it begins to work on strengthening the health system?

Workshop Handouts:

- Sign-in registration
- List of participants and contact information
- PowerPoint presentation handouts
- Write-up of options or strategies – 1 page in Portuguese
- Arrange for LCD projector and flipcharts
- Evaluation form
- Guidelines for small group discussions
- Objectives and agenda
- Paper/pens, workshop name and dates

Annex 3J. Suggested Outline for Final Assessment Report

Executive Summary

1. Background (2-3 pages)

Context—why was the assessment carried out and with what purpose?

2. Overview of health system (3-5 pages)

Core module should be used to prepare this chapter.

Basic description of the nature of the health system, focusing on—

- 2.1 Macroeconomic and political context
- 2.2 Epidemiological profile including key health indicators and causes of top mortality and morbidity
- 2.3 Bureaucratic structures in-country (including decentralization)
- 2.4 Structure of health service delivery system
- 2.5 Health financing – profile and structure
- 2.6 Donor activities and gaps
- 2.7 Key stakeholders in the health system (including some discussion of the role of the private sector, whether there is any social health insurance, etc.)
- 2.8 Business environment and investment climate, particularly as it affects for private health care

No more than a couple of paragraphs on each of the subjects above (5 pages total)—to be drafted in advance of trip. Where possible, differences across provinces/regions should be highlighted.

3. Methodology (2 pages)

- 3.1 Framework for the health systems assessment approach
- 3.2 Description of tool and how it was used

4. Strengths and weaknesses of the health system (5-10 pages for each module)

- 4.1 Governance
- 4.2 Health financing
- 4.3 Service delivery
- 4.4 Human resources
- 4.5 Pharmaceutical management
- 4.6 Health information systems
- 4.7 Summary of findings (5–10 pages)

See Chapter 4

Recommendations

4.8 Priority interventions based on the assessment

Drawing upon Chapter 4 this subsection should propose interventions that USAID might consider supporting to address health system weaknesses. For each recommendation, should discuss the relative time and cost involved.

4.9 Stakeholder views on the priority intervention areas

This should be based upon the workshop discussions and interviews with donors, government, and other stakeholders, and should give some broad view of (1) what is already being done by other stakeholders and how USAID might complement or supplement their activities, and (2) what type of interventions there is political support for. Also, what can local stakeholders take responsibility for or assist with? What are next steps or potential action plan?

5. Conclusions

This section should identify key issues that were identified as part of the assessment, responses to them by USAID and counterparts. It should also summarize the next steps that can be expected as discussed by the various stakeholders.

Annex A

Contact list

Annex B

List of documents consulted

Annex C

Stakeholder workshop agenda

Annex D

Stakeholder workshop presentation

Annex 3K. Outline of Assessment Report from Pilot Test in Angola

Angola Health System Assessment (full report included electronically on CD that accompanies this manual or available for download at www.healthsystems2020.org)

ACRONYMS

ACKNOWLEDGMENTS

1. BACKGROUND

2. COUNTRY OVERVIEW

2.1 General

2.2 Health

2.2.1 Health Status

2.2.2 Health System

3. METHODOLOGY

3.1 Framework for the Health Systems Assessment Approach

3.2 Description of Assessment Tools

3.3 Pre-assessment Desk Research

3.4 In-country Key Interviews

4. STRENGTHS AND WEAKNESSES OF THE ANGOLAN HEALTH SYSTEM

4.1 Governance

4.1.1 Background

4.1.2 Health Information Capacity

4.1.3 Regulation

4.1.4 Policy Formation and Planning

4.1.5 External Participation and Partnerships

4.1.6 Accountability

4.2 Health Financing

4.2.1 Overview

4.2.2 Resource Flows

4.2.3 The Budgetary Process

4.2.4 Out-of-pocket Expenditures

4.3 Human Resources and Health Facilities

4.3.1 Policies, Plans, and Regulations

4.3.2 Number and Distribution of Health Facilities and Human Resources

4.3.3 Other Aspects of Health Service Delivery

4.4 The Role of the Private Sector

4.4.1 General Environment

4.4.2 Legal Framework and Regulation

4.4.3 Private Health Providers

4.4.4 Public–Private Partnerships

4.5 Pharmaceutical Sector

4.5.1 Overview

4.5.2 Drug Procurement at the PHC Level: The National Essential Drug Program

4.5.3 Drug Procurement at the Hospital Level

4.6 Health Information Systems

4.6.1 Health Information Resources, Policies, and Regulations

4.6.2 Data Availability and Quality

4.6.3 Data Analysis

4.6.4 Use of Information for Management

4.7 Summary of Findings

4.7.1 Strengths

4.7.2 Weaknesses

4.7.3 Opportunities

4.7.4 Threats

5. RECOMMENDATIONS

5.1 Health Financing

5.2 Essential Drugs

5.3 Service Delivery

5.4 Public–Private Partnerships

5.5 Health Information

ANNEX A: DOCUMENTS CONSULTED

ANNEX B: CONTACT LIST

ANNEX C: GROUP DISCUSSION WITH NGOS

ANNEX D. STAKEHOLDER WORKSHOP AGENDA

ANNEX E. HANDOUTS FOR OVERVIEW OF HEALTH SYSTEMS STRENGTHENING

ANNEX F. DONOR HEALTH PROGRAMS IN ANGOLA

ANNEX G. MAP OF MOH STRATEGY AND DONOR INPUTS (OTHER THAN USAID)
FOR HEALTH SYSTEM STRENGTHENING

ANNEX H. COMPARATIVE INDICATORS FOR ANGOLA AND SSA

ANNEX I. 2005 CONTENTS OF THE THREE TYPES OF DRUG KITS PROVIDED UNDER
THE NATIONAL ESSENTIAL DRUG PROGRAM (NEDP)

ANNEX J. STAKEHOLDER WORKSHOP PRESENTATION

Annex 3L. Outline of Assessment Report from Pilot Test in Benin

Benin Health System Assessment—*Rapid Assessment of the Health System in Benin, April 2006*
(full report included electronically on CD that accompanies this manual or available for
download at www.healthsystems2020.org)

ACRONYMS

ACKNOWLEDGMENTS

SECTION 1: INTRODUCTION

- Methodology: The Health Systems Assessment Approach
- Preassessment Activities
- In-Country Assessment
- Challenges

SECTION 2: BACKGROUND

- Overview
- Political and Macroeconomic Environment
- Major Causes of Morbidity and Mortality

SECTION 3: OVERVIEW OF THE HEALTH SYSTEM IN BENIN

- Structure of Health Care System
- Decentralization and Organization of Service Delivery

SECTION 4: SUMMARY OF THE ASSESSMENT FINDINGS

- Stewardship
- Health Financing
- Health Service Delivery
- Human Resources
- Pharmaceutical Management
- Health Information Systems
- Private Sector Engagement
- Summary of Strengths and Weaknesses of Benin's Health System

SECTION 5: PRIORITY INTERVENTIONS FOR CONSIDERATION AND ACTION

- Possible Options for Strengthening Health System Governance
- Possible Options for Improving Incentives for Health System Performance and Management of Human Resources for Health
- Possible Options for Improving Health Financing

SECTION 6: OPTIONS FOR USAID

- Improving Financial Protection in Health
- Improving Information
- Fostering Greater Public-Private Integration

ANNEX 1. SUMMARY OF PROPOSED INTERVENTIONS BY ASSESSMENT MODULE

Stewardship
Health Financing
Health Service Delivery
Human Resources Management
Pharmaceutical Management
Health Information Systems
Private Sector Engagement

ANNEX 2. IN-COUNTRY ASSESSMENT SCHEDULE

ANNEX 3. CONTACTS

Central Level
Department of Mono/Couffo
Department of Zou/Collines

ANNEX 4. SOURCES

Background
Overview of Health System
Stewardship
Health Financing
Health Service Delivery
Human Resources
Pharmaceutical Management
Private Sector Engagement
Health Information Systems

CHAPTER 4

SYNTHESIZING FINDINGS AND DEVELOPING RECOMMENDATIONS

4.1 Introduction

The strength of this approach in assessing the health system is that it offers the possibility to look at many different facets of the system at the same time. The various technical areas assessed by using this manual interact with each other and affect one another's ability to function well (as shown in Figure 2.1 in Chapter 2). Thus, the process of synthesizing across modules is key for identifying pivotal opportunities and challenges, and making effective and appropriate recommendations.

Most certainly the health system assessment will reveal a list of problems and needs that far exceeds U.S. Agency for International Development (USAID) resources available for health. Early in the assessment process, either before the country visit or as part of the initial meeting with the USAID mission, the team should explicitly discuss criteria for prioritizing assessment findings and recommendations with the mission and key stakeholders such as the Ministry of Health (MOH). The criteria will likely come from the mission's country and health sector strategies, and the government's poverty reduction and health sector strategies. Other possibilities for criteria include data on burden of disease; links with particular initiatives (e.g., President's Malaria Initiative and U.S. President's Emergency Plan for AIDS Relief); gaps or synergies with other donor programs;¹ or non-health criteria linked to governance or economic growth, historical, economic, sociocultural, and political factors.² Given that priorities for USAID and the government will usually not be framed in terms of systems improvements, throughout the assessment and development of recommendations the team will need to demonstrate how health systems interventions might address specific disease or population (e.g., malaria, children) objectives.

This chapter describes the process of developing conclusions and recommendations at the level of each module and the process of synthesizing these findings and prioritizing recommendations across modules. The process proposed includes four phases, each building on the previous stage—

1. Distilling initial findings and strengths and weaknesses related to each module area (by individual assessors)
2. Synthesizing conclusions across modules as a team (overall strengths and weaknesses of the health system, root causes, opportunities, threats), and developing initial recommendations for intervention and action
3. Validating conclusions and recommendations with stakeholders

¹ Use the donor mapping exercise in the core module (Chapter 5) to identify gaps and opportunities.

² If the assessment is being conducted with the MOH as the primary audience, most of these same criteria can be applied (government's poverty reduction and health sector strategies; burden of disease; links with particular global initiatives; or criteria linked to governance, economic growth, or political factors) but the priorities may vary.

4. Finalizing conclusions and recommendations for the final report

These four stages, presented in Box 4.1, reflect an iterative process of individual efforts and team discussion and reflection. The results from such a synthesis will only be as good as the clarity and quality of each module's assessment and the ability of the team to integrate its findings and recommendations.

Box 4.1
Proposed Strategy for Synthesizing Findings and Recommendations of Health System Assessment

Phase 1: Synthesizing findings and preliminary conclusions for each module
(during first week in-country)

Step 1.1: Analyze findings and initial recommendations for each module.
Step 1.2: Identify strengths and weaknesses by technical area.

Phase 2: Synthesizing findings and recommendations across modules assessed
(team session about halfway through time in-country)

Step 2.1: Share initial findings across modules.
Step 2.2: Summarize health system strengths and weaknesses.
Step 2.3: Review underlying causes of identified health system problem areas.
Step 2.4: Prepare an initial formulation of strategies and recommendations.
Step 2.5: Identify needs for verification or additional information.

Phase 3: Preparation and implementation of validation sessions
(near the end of time in-country)

Step 3.1: Prepare conclusions and recommendations for the stakeholder workshop.
Step 3.2: Conduct sessions with stakeholders (e.g., workshop, debriefings).

Phase 4: Finalizing findings and recommendations for the assessment report
(final session before leaving country and after)

Step 4.1: Refine findings and recommendations based on stakeholder feedback.
Step 4.2: Refine and finalize individual modules and conclusions.

4.2 Phase 1: Synthesizing Findings and Preliminary Conclusions for Each Module

Although this process is specified within each module, the following subsections propose some generic methods for synthesizing findings and developing potential interventions for each technical area. Over the course of the assessment, each module assessor should be able to present his or her findings and conclusions, first to other members of the team, and eventually at a stakeholder workshop and in the assessment report. This process is iterative, and in it, findings and conclusions from other modules will contribute to sharpening and prioritizing overall findings and recommendations.

4.2.1 Step 1.1. Analyze findings and initial recommendations for each module

It may be easiest to summarize findings in a tabular format, using the topic areas and specific indicators presented in each module as a grouping. Table 4.1 presents a suggested format. The "Comments" column can be used to highlight links to other modules and possible impact on

health system performance criteria: equity, access, quality, efficiency, and sustainability. See Annex 4A for examples of summarized findings and impacts on performance criteria based on the assessments conducted in Benin and Angola. This table, and others in the following sections, can also be used to develop the report’s chapter on the module’s technical area (see Annex 3J in Chapter 3 for a proposed report outline).

Table 4.1 Summarizing Findings per Module

Indicator or Topic Area	Findings	Source(s) ^a	Comments ^b

^a List specific documents and interviews.

^b Include effects on equity, access, quality, efficiency, and sustainability as well as links to other modules.

4.2.2 Step 1.2 Identify strengths and weaknesses by technical area

The next step would be to analyze the findings and identify strengths and weaknesses related to each module or technical area that was assessed. Identifying strengths and weaknesses is the first step of doing a SWOT (strengths, weaknesses, opportunities, and threats) analysis, which will continue through group discussion and synthesis across modules. Box 4.2 presents a definition of a SWOT analysis.

**Box 4.2
SWOT Analysis**

SWOT stands for strengths, weaknesses, opportunities and threats.

Strengths are elements of the system that work well, thereby contributing to the achievement of system objectives. In identifying strengths, look for factors that contribute to good system performance. Examples include training programs in place for improving human resource capacity or cultural and public acceptance of health objectives. Recommendations should build on the strengths of the existing system.

Weaknesses are attributes of the system that constrain achievement of health systems objectives. In identifying weaknesses, look for factors that hinder improved system performance. Examples include lack of partnerships with the private sector or staff dissatisfaction with salaries or extensive staff turnover.

Opportunities are conditions external to the health system that can facilitate the achievement of health systems objectives. In identifying opportunities, look for factors that you can take advantage of when planning interventions. Examples include increased donor funding or the existence of a vibrant private sector to form partnerships with.

Threats are external conditions that can derail achievement of health system objectives. In identifying threats, look for factors outside the health system that have a negative effect on it. Examples include low budget allocation to health or upcoming elections that will change MOH leadership or a currency devaluation that will depress health worker income.

Although still early in the process, the individual module assessor should begin thinking about key problem areas, contributors to the problem (causes), and potential interventions, in preparation for Phase 2.

4.3 Phase 2: Synthesizing Findings and Recommendations across Modules Assessed

Phase 2 is primarily a team exercise to pull together the information obtained from the individual modules and synthesize the results in a way that can be communicated clearly to others and to pull out priority recommendations for action or intervention.

This second phase should begin after all team members have collected enough data to arrive at some preliminary conclusions for their modules, about halfway through the team's in-country trip.³ This timeline will allow sufficient time afterward to complete the assessment, fill any information gaps, validate conclusions and recommendations with stakeholders, and review feedback before leaving country. The steps below present a team meeting format of a half to a full day for conducting Phase 2 activities. The length of the meeting will depend on how many modules are being completed. Supplies needed for the meeting include large index cards, flipcharts, markers, and tape.

Tip!

Teams testing this approach found that the intense focus on completing individual modules can make it a challenge to move quickly to integrating and synthesizing across modules. What can be done?

- Hold daily debriefings among team members
- Proactively identify links and cross-cutting issues
- Share draft chapters early
- Hold several team sessions to discuss issues and problems

Assessors should also ask key informants for their perspectives on strengths, weaknesses, opportunities, and threats.

4.3.1 Step 2.1: Share initial findings across modules.

Each team member should prepare a 10–15-minute presentation to the team on findings for each of his or her modules. This presentation should include—

- The main findings regarding the current status of his or her technical area, including strengths and weaknesses, and its impact on health system functioning overall
- Thoughts on recommendations and the rationale for them
- Discussion at the performance criteria level: how do topics or indicators contribute or detract from achieving better performance for each of the performance criteria? (A useful approach would be to group issues around each performance criteria)

Each team member should have each of these conclusions and recommendations summarized on a large index card (one conclusion or recommendation per card). After they have been presented

³ This timeline assumes that the assessment is conducted by an international team who makes one in-country trip of about two weeks. If the assessment is conducted by a local team, the same sequence holds but can be stretched over a longer period.

to the team, these index cards should be posted on the wall. At the end of the exercise, the number of index cards with the conclusions and recommendations listed will likely be large.

4.3.2 Step 2.2: Summarize health system strengths and weaknesses

Consolidate the index cards on the wall where possible by moving cards around and grouping them as strengths, weaknesses, opportunities, or threats (see Box 4.2) for the overall health system. Using the criteria established with the USAID Mission, decide which cards are most important, leaving only those and removing others. If available, consult the Mission’s Strategic Objectives (SOs) for the health sector, including intermediate results, for guidance and priorities on USAID’s strategy in the health sector. Take a critical look at the data and evidence to support each conclusion. Flag findings (i.e., index cards) that warrant additional evidence or validation.

4.3.3 Step 2.3: Review underlying causes of health system problem areas identified

Once the problem areas are grouped into the SWOT framework, the list of weaknesses and threats will most likely look daunting. The team needs to analyze how these problems are connected and how they affect health systems performance. A root cause analysis generates and sorts hypotheses about the underlying causes of problems and how they relate to one another and helps one broaden one’s thinking and look beyond a single “cause.” This analysis should help define higher level problems and facilitate formulation of integrated strategies and recommendations. Root causes are best defined as manageable problems that can be addressed through specific interventions. For example, insufficient supervision may be a root cause, whereas poverty is not.

There are many techniques for doing root cause analysis, including a “cause and effect” or “fishbone” diagram (as demonstrated in several of the modules).⁴ At a minimum, you can do a root cause analysis by asking yourself for any specific problem, “Why it exists,” and then for each reason given, ask “Why does that situation exist?” and so forth.

Discuss and analyze potential implications of the final list of high-level problems. In particular, note any political sensitivities and think about how best to address these in the stakeholder workshop or other debriefings. The local consultant in the team should actively advise the team and guide in this regard.

Tip!

If team members need more structure to their examination of root causes, they can start by examining the situation at the service delivery level.

- Are standards of care defined?
- Are medicines, equipment, and other materials available?
- Are staff available and motivated at the service delivery level to provide care?
- Is care accessible?

The next set of questions look for deeper causes of problems identified here.

- To what extent are human resources issues affecting quality and quantity of care?
- To what extent is financing affecting these areas?
- To what extent are stewardship (governance) issues and information availability affecting these areas?
- To what extent is the private sector overall contributing to service delivery?

⁴ Many resources have detailed information about root cause analysis. One source is Massoud and others. (2001).

4.3.4 Step 2.4: Prepare an initial formulation of strategies and recommendations

The next step is to begin to formulate overall strategies and recommendations based on the SWOT and root cause analyses. Keep the primary audience’s needs in mind: for example, USAID Mission investments or actions.⁵ It will be important at this stage to reflect on USAID’s competitive advantages compared to that of other donors and the gaps in current donor programming, as well as opportunities for consistent, coordinated donor focus.⁶ The donor mapping exercise (part of the Core Module in Chapter 5) should also help in identifying gaps and opportunities. An attempt should be made to develop integrated strategies that address multiple problems and reinforce each other. In deriving the strategies, make sure to continually ask these four questions.

How can we—

- Use the strengths?
- Address or bypass the weaknesses?
- Exploit the opportunities?
- Defend against the threats? (WHO 2002)

Each potential intervention should be assessed for its expected results (what will change because of this intervention?), potential impact on health system performance (in terms of equity, access, quality, efficiency, and sustainability), its feasibility (could it actually be implemented?), the speed with which it can be implemented (is this something that can be implemented within a year, or would it take several years?), and some rough assessment of cost implications (low, medium, high). Table 4.2 provides a framework for analyzing potential interventions.

Table 4.2: Analyzing Potential Interventions per Module

Proposed Intervention	Expected Result	Impact on Health Systems Performance^a	Feasibility	Implementation Speed	Cost

^a Effects on equity, access, quality, efficiency and sustainability, as defined in Annex 1A.

Linking strategies and recommendations to health outcomes or results as well as to USAID

⁵ If this assessment is being done with the MOH as the primary audience, prioritization of problem areas and recommendations will need to focus on a broader range because the MOH is responsible for addressing all health systems issues. Prioritization can be done based on criteria such as urgency, government priorities, and funding possibilities.

⁶ For example, other donors may participate in a sector-wide approach while USAID leads with technical assistance, or other donors may be focusing on the public sector while USAID has focused on the private sector.

objectives and country's sector strategy is also important. Each strategy should be directly linked to a result and USAID objective.⁷ As necessary, tie proposed recommendations to the Mission's SOs for the health sector, and how the recommended interventions might help achieve intermediate results, SOs, and desired health outcomes.

4.3.5 Step 2.5: Identify needs for verification or additional information

Review conclusions, strengths and weaknesses, opportunities and threats, root causes, and potential strategies and interventions—where is additional information, validation, or discussion needed? Make a list and assign team members to address these information gaps before the stakeholder workshop.

Note: In the interim between Phase 2 and Phase 3, the team should collect additional evidence and seek comments and consensus from stakeholders to refine preliminary findings and recommendations. Given that the assessment report is being prepared for the USAID mission, test ideas for conclusions and recommendations with key mission staff, if possible. The local consultant may also have a good perspective on political and operational feasibility of potential recommendations.

4.4 Phase 3: Preparation and Implementation of Validation Sessions

Phase 3 focuses on validating findings, conclusions, and recommendations with key stakeholders. In addition, the team will work with stakeholders to prioritize interventions for health system strengthening.

4.4.1 Step 3.1: Prepare conclusions and recommendations for stakeholder workshop or other debriefings

After having collected additional information and potentially having received some feedback, the team should meet again. Each team member should update the team on his or her conclusions and recommendations for each module. Then the team should review overall health system conclusions and recommendations in light of new information and feedback received since the first meeting. It will be important to summarize health system performance in terms of the five performance criteria: equity, efficiency, access, quality, and sustainability. Teams should determine the levels of analyses necessary for performance criteria, based on available data and quantifiable information. See Annex 4A for examples from Angola and Benin assessment reports on how to summarize findings with respect to these measures.

It is usually prudent to informally vet conclusions and recommendations with key stakeholders before any formal meetings or presentations. To avoid arousing political sensitivities, conclusions and recommendations should be presented to stakeholders as preliminary, with the understanding that stakeholder concurrence is a prerequisite to finalizing conclusions and recommendations. Team members should decide if they feel they can prioritize

⁷ If the assessment is being done for the MOH as the primary audience, recommendations should be linked to objectives and strategies outline in MOH policy documents.

recommendations or if it would be more appropriate to present a range of recommendations and rationales and use the stakeholder workshop to prioritize. This decision will depend on whether the potential recommendations are broad, specific, politically sensitive, or politically neutral.

If the team is ready to present firm recommendations, it can use the simple schematic presented in Figure 4.1 to present findings, recommended strategies, and expected results. Figure 4.2 presents an example from the Angola assessment report (Connor and others 2005). The team can decide to develop one of these for each module or only for some high-priority issues, depending on what is most appropriate for the findings and conclusions for the country.

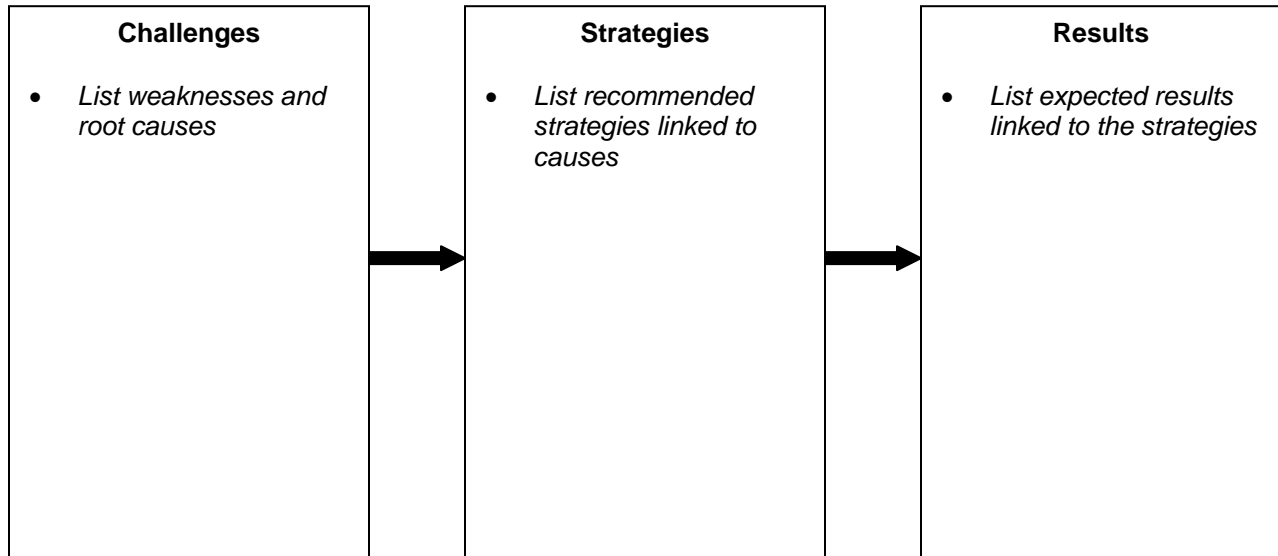
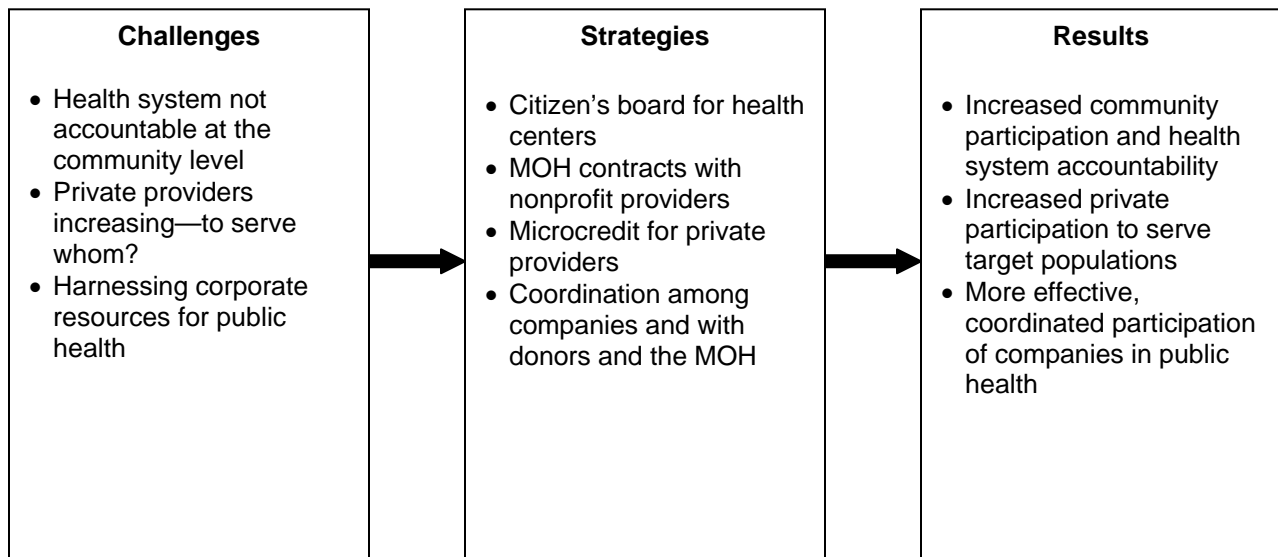


Figure 4.1 Sample Schematic for Presenting Findings and Recommendations



Source: Connor and others (2005)

Figure 4.2 Public-Private Partnerships in Angola: Findings and Recommendations

4.4.2 Step 3.2: Conduct sessions with stakeholders

The purpose of a session with stakeholders, be it an individual debriefing or a stakeholder workshop, is to validate the findings and discuss the feasibility and effectiveness of recommendations. Chapter 3 lays out the process for organizing a stakeholder workshop. Before this workshop, if time is available or the situation warrants, it may be useful to debrief and discuss the findings and preliminary recommendations with key individuals, either in the USAID Mission or in the MOH, or other key partners, such as professional medical associations.

Stakeholders should be engaged in selecting among and prioritizing interventions. Prioritization is ultimately a political decision. It is the assessment team's role to maintain their technical objectivity. The assessors need to report their findings about the health system, their recommendations for next steps, and the data and rationale to support their conclusions. The team can help facilitate consensus on priorities but should not be viewed as compromising its technical perspective.

4.5 Phase 4: Finalizing Findings and Recommendations for the Assessment Report

Using the feedback and discussions from the stakeholder session, the team must now complete its findings and recommendations for the final assessment report.

4.5.1 Step 4.1: Refine findings and recommendations based on feedback from stakeholder discussion

After the stakeholder workshop and any debriefings, the team should hold a final team session to incorporate discussions and feedback from stakeholders into final conclusions and recommendations for the assessment. Because the team is responsible for the content of the report, team members must use their judgment about what feedback to incorporate. This decision should be made based on comparing and weighing the feedback against (1) Mission priorities, (2) knowledge of historical information, and (3) other evidence.

4.5.2 Step 4.2: Refine and finalize individual modules and conclusions

Chapter 3 discusses report preparation and provides a sample outline (see Annex 3J). Depending on the findings, the priorities, and the primary audience, the final report may only include major recommendations, or it may also include recommendations at the level of each module as well.

References

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Annex 4A. Examples of Application of Health System Performance Criteria

Benin Health Sector Assessment

Systems Elements	Health Systems Performance Criteria				
	Equity	Access	Efficiency	Quality	Sustainability
Stewardship/ Governance	Currently, stewardship (governance) structures on paper should ensure engagement of key stakeholders. System is decentralized (both government and health system) and structures exist for local input; so it should be able to ensure equity and access to care.		Disrespect of rules and inappropriate behavior of health systems actors reduce efficiency in use of resources and the quality of care provided to the population.		
Financing	Government allocations appear adjusted to equalize resources; user fee system is regressive.	User fees appear to inhibit access.	Delays in payments from treasury probably increase costs. Large amounts of funding go into malaria and AIDS but not strengthening health systems and are often not well coordinated.	Lack of resources affects ability to have equipment, maintenance, and human resources.	Many sources of financing depend on donors who come and go, or on community resources that are already stretched.
Service delivery	Physical distribution of facilities is fairly equitable.	Barriers to access exist: financial, geographic access to needed MCH and other services.		Low quality caused by noncompliance with standards, inadequate equipment and lab capacity; referral system not operational; and poor patient-provider interaction.	Institutional capacity for quality assurance is needed.

Systems Elements	Health Systems Performance Criteria				
	Equity	Access	Efficiency	Quality	Sustainability
Human resources management	Distribution of human resources is very inequitable.	Access to care is inhibited by lack of competent personnel in rural and distant facilities.	Often inefficient use of personnel caused by lack of human resources planning and coordination.	Quality of care affected by lack of access to qualified personnel and provider behavior.	Weak capacity to sustain personnel through community financing system and social measure financing.
Pharmaceutical management	Regressive system for distant facilities for pharmaceutical distribution; access to private pharmacies uneven; otherwise access to essential medicines fairly equitable.	Use of essential medicines allows financial access; physical access depends on stock-outs. Selling medicines illegally reduces access.	High expenditures on medicines suggest inefficiencies.	The system as designed should generally be able to ensure the medicines and supplies needed for quality care; however, lack of capacity at the NDQCL affects the quality of medicines available.	The pharmaceutical system, particularly within the public sector, is self-sustaining for the most part, though the institutional capacity at lower levels needs strengthening.
Health information systems	Current system measures geographic equity but not other measures of equity to aid in decision making.	Current system measures only infrastructure access (and not access to qualified personnel for the various types of services).	Some parallel systems exist. HIS is not fully exploited at lower levels.	No routine measures of the quality of care are included in HIS.	Institutional capacity exists, but additional financial resources are needed.
Private sector	Distribution of private sector is very inequitable.	Access to private sector is very limited for a large portion of the population. Private sector financing mechanisms sometimes allow greater financial access (credit).	In some areas, overlap exists between public and private, or private and private. Private sector could play a bigger role in public health programs if MoH took greater advantage.		The large amount of resources currently spent in the private sector relative to the resources available creates a challenge for the long-term growth and sustainability of this sector.

Source: Adeya and others (2007 pp. 85-86).

Summary of Angola Health System Assessment Findings

Health Subsectors	Health System Performance Indicators				
	Equity	Access	Efficiency	Quality	Sustainability
Governance	Power is concentrated in the executive branch and is very top-down, despite decentralization. The legal framework governing the health sector is relatively detailed and clear. Regulations are in place, but enforcement is weak. The MOH articulates sector plans that would address priority services and improve health system performance across all five indicators, but implementation is incomplete. Decisions about resource allocation and implementation are inconsistent with stated plans and priorities. There is little experience or mechanisms for accountability. Some provinces and municipalities working closely with private nonprofit organizations on health issues.				
Financing	Pattern of regressive allocation of public assets and resources to an elite minority, at the expense of larger population	Due to inadequate funding of primary health care (PHC), health centers and posts charge user fees that are a financial barrier to access.	40% of public health financing allocated to tertiary care; only 27% to primary and secondary care Misallocation of resources (funds, drugs, human resources, facilities) away from highest burdens of disease	Norms, protocols, and training efforts are in progress. However, lack of supplies, drugs, and supervision at PHC level severely weakens quality of service delivery.	External health financing is lower (8%) than other sub-Saharan African countries (20%). Due to mineral wealth, Angola theoretically has the resources to sustain its health system, and even increase health financing.
Human Resources/ Facilities	Staff, facilities, and drugs concentrated in hospital care, not PHC that would most benefit the 60% of the population below the poverty line	Estimated 60% of population is without physical access to any public facilities.	Leakage of essential drugs into informal market		Essential drug procurement dependent on donors.
Drugs		Severe stockouts of essential drugs			
HIS	Health information is incorporated into MOH plans but since the plans are not fully funded and implemented, the HIS does not effectively promote equity and access		Parallel information flows Information not used at lower levels	HIS not yet used for quality assurance Data quality is unknown. Lack of forms, calculators, supervision at lower levels	HIS that are not used by the staff who collect and aggregate the data are usually not sustainable
Private Sector	Large employers, nongovernmental organizations, and religious groups are filling an important gap in service delivery contributing to equity, access and efficiency.			No data	Very likely sustainable with continued economic growth

Source: Connor and others (2005, p. 53).

CHAPTER 5 CORE MODULE

5.1 Overview

This chapter is the background or foundational module. Whether you are planning to work through all the technical modules (Chapters 6–11) or only a subset, you should complete this core module to understand the basic background information about the country and its health system. Ideally, you would complete the core module before the in-country assessment and finalize it with additional information in-country.

The core module is divided into two components. Component 1 provides a basic overview of a country’s economic and health status performance, through the analysis of data provided on the CD that accompanies this manual. Component 2 requires the use of the assessment tool to conduct analyses of different topics (such as background information on a country’s political and economic environment, its health sector, donor involvement in health activities, and the general business environment) that are essential to understand before analyzing the technical modules (chapters 6–11). You will need to conduct document review, Internet research, and stakeholder interviews to complete Component 2.

Table 5.1 groups the indicators in this module by topic.

Table 5.1 Indicator Map—Core Module

Component	Topical Area	Indicator Numbers
Component 1	Population dynamics	1–3
	Reproductive health	4–7
	Mortality	8–11
	Income and inequity	12–17
Component 2	Political and macroeconomic environment	Not applicable— not an indicator- based assessment in this section
	Business environment and investment climate	
	Top causes of mortality and morbidity	
	Structure of the main ministries and private organizations involved in the health care system	
	Decentralization	
	Service delivery organization	
	Donor mapping	
	Donor coordination	

5.2 Component 1

Component 1 provides a rapid overview of a country's performance with regard to four economic and health indicators, which are presented and described below. The data for these indicators are mainly drawn from existing and publicly available databases from the World Bank and the World Health Organization (WHO), as well as from National Health Accounts (NHA). Data for all Component 1 indicators are provided in electronic format in the CD version of this manual (filename: Component 1 data). This file also contains the Component 1 data for the other technical modules.

Tip!

For each module, complete compilation of Component 1 indicators first, using data provided on the accompanying CD (see 5.2 for instructions).

You should first review and analyze the Component 1 data for this and the other modules before starting on Component 2. (See Box 5.1 for instructions on how to compile the data for the assessment country). Reviewing and analyzing component 1 data for all modules is particularly important if you are assessing only one or few of the modules, because the data will provide background information relevant to all areas of the health care system. (See annex 5A for an example of the summary table containing Component 1 data.)

In addition to analyzing Component 1 data for the country being assessed, you should compare these data to a peer group of countries to allow a comparison of the performance and health status of the country to that of another group of similar countries. You may want to compare the performance of the focal country against peer groups, selected according to the following criteria:¹

- *Region:* East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa (MENA), South Asia, Sub-Saharan Africa

Box 5.1

Steps for Component 1 Assessment

1. **On the CD provided with this manual, open the data file titled "Component 1 data."**
2. **Review the instructions on the first sheet titled "Introduction."**
3. **Go to the second spreadsheet titled "Summary table."**
 - In the column "Country level data" (column C), select the assessment country from the drop-down menu in the highlighted yellow cell.
 - Once you have selected the country, all the Component 1 data (and year of the data) for every module automatically will be included in the table. The data for the regional and income comparators also will be automatically computed. (See Annex 5A for an example of the summary table.)
4. **Review and analyze the data for a rapid assessment of the country's health system.** Note that each module (chapters 5–11) provides definitions for the Component 1 indicators and descriptions for how to interpret the indicators for an assessment.

Note: Data were compiled in August 2006. For the latest data (or if you are missing the CD), you may need to access the original sources listed for each Component 1 indicator in each chapter.

¹ These are the criteria used by the World Bank; in addition to the Component 1 data on the CD, a classification of countries by each criteria can be found at <<http://www.worldbank.org/data/countryclass/classgroups.htm>>.

- *Income*: Low-income economies, lower-middle-income economies, upper-middle-income economies, high-income economies, high-income Organisation for Economic Cooperation and Development (OECD) members

Sections 5.2.1 through 5.2.4 list and describe Component 1 indicators for this core module, organized by the following topics—

- Section 5.2.1 Population Dynamics
- Section 5.2.2 Reproductive Health
- Section 5.2.3 Mortality
- Section 5.2.4 Income and Inequality

Section 5.2.1 Population Dynamics

1. Population, total	
Definition and rationale	<p>Total population of a country including all residents regardless of their legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin</p> <p>This indicator is indicative of the magnitude of general health care needs of a country.</p>
Suggested data source	<p>World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.</p>
2. Population growth (annual %)	
Definition and rationale	<p>The increase in a country’s population over a year, expressed as a percentage of the population at the beginning of that period; this indicator reflects the number of births and deaths during the period and the number of people migrating into and out of a country</p> <p>Rapid population growth can inhibit a country’s ability to raise the standard of living when the need for food, health care, education, houses, land, jobs, and energy increases, especially if government revenues do not increase at the same rate.</p>
Suggested data source	<p>World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.</p>

**3. Rural population (% of total)
Urban population (% of total)**

Definition and rationale The percentage of the total population living in urban and rural areas; the urban population is the midyear population of areas defined as urban in each country and reported to the United Nations (UN)

 The distribution of the population in rural and urban areas gives an indication of the level of urbanization of a country. Urbanization can improve access to public services such as education, health care, and cultural facilities, but it can also lead to adverse environmental effects that require policy responses.

Suggested data source World Bank (2006b). *World Development Indicators* <www.worldbank.org> or most recent.

5.2.2 Reproductive Health

4. Contraceptive prevalence (% of women aged 15–49)

Definition and rationale The percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception

 The measure indicates the extent of people’s conscious efforts to control their fertility. Increased contraceptive prevalence is, in general, the single most important proximate determinant of intercountry differences in fertility and of ongoing fertility declines in developing countries. Contraceptive prevalence can also be regarded as an indirect indicator of progress in providing access to reproductive health services including family planning (one of the eight elements of primary health care) (UNICEF 2001).

Suggested data source World Bank (2006b). *World Development Indicators* <www.worldbank.org> or most recent.

5. Fertility rate, total (births per woman)

Definition and rationale The number of children who would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with prevailing age-specific fertility rates

 If the fertility rate is high, the contraceptive prevalence will likely be low. If data show inconsistencies (e.g., a high fertility rate coupled with a high contraceptive rate), investigate the sources of these inconsistencies.

Suggested data source WHO (2006). *The World Health Report 2006* <www.who.int> or most recent.

6. Pregnant women who received 1+ antenatal care visits (%)
Pregnant women who received 4+ antenatal care visits (%)

Definition and rationale	<p>The proportion of women who had one or more antenatal care contacts during their last pregnancy in the five years before the most recent survey was conducted in that country, as well as the proportion of women who had four or more visits</p> <p>This indicator shows the utilization of reproductive health services for women; availability and accessibility are key components. If these rates are low, then access might be constrained because such services are not available, not promoted, or associated with high out-of-pocket expenditures (limiting the access to low-income households). Low utilization levels may also reflect weak demand for antenatal care.</p>
Suggested data source	WHO (2006). <i>The World Health Report 2006</i> <www.who.int> or most recent.

7. Prevalence of HIV, total (% of population aged 15–49)

Definition and rationale	<p>Percentage of adults who are infected with HIV</p> <p>A high prevalence of HIV/AIDS indicates a high burden on the health care system (in terms of infrastructure, staff, financing needs, and other factors.)</p>
Suggested data source	World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.

5.2.3 Mortality

8. Life expectancy at birth, total (years)

Definition and rationale	<p>The number of years a newborn would live if prevailing patterns of mortality at the time of birth were to stay the same throughout his or her lifetime</p> <p>Life expectancy at birth is also a measure of overall health status of the population and the quality of life in a country.</p>
Suggested data source	World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.

9. Mortality rate, infant (per 1,000 live births)

Definition and rationale	<p>The number of infants who die before reaching one year of age, expressed per 1,000 live births in a given year</p> <p>Infant mortality rate is a measure of overall quality of life in a country. It can also show the accessibility and availability of antenatal and postnatal care.</p>
Suggested data source	<p>World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.</p>

10. Mortality rate, under age 5 (per 1,000)

Definition and rationale	<p>The probability that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates, expressed as a rate per 1,000</p> <p>Child mortality, like infant mortality, is closely linked to poverty. Improvements in public health services are key, including safe water and better sanitation. Education, especially for girls and mothers, will save children's lives.</p>
Suggested data source	<p>World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.</p>

11. Maternal mortality ratio (per 100,000 live births)

Definition and rationale	<p>The number of maternal deaths that occur during pregnancy and childbirth per 100,000 live births</p> <p>This indicator is a measure of the likelihood that a pregnant woman will die from maternal causes and of the availability and accessibility of reproductive health services, particularly of the extent of use of modern delivery care.</p>
Suggested data source	<p>WHO (2006). <i>The World Health Report 2006</i> <www.who.int> or most recent.</p>

5.2.4 Income and Inequality

12. GDP per capita (constant 2,000 USD)

Definition and rationale	<p>Gross domestic product (GDP) divided by midyear population, in constant U.S. dollars (USD)</p> <p>This indicator is a measure of the overall economic wealth of a country (but not indicative of individual well-being because the degree of income inequality affects the association of overall and individual wealth). In general (but not always), higher GDP per capita is associated with better availability and quality of health care and better population health.</p>
Suggested data source	World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.

13. GDP growth (annual %)

Definition and rationale	<p>Annual percentage growth rate of GDP at market prices based on constant local currency</p> <p>GDP growth compared to population growth provides a rough indication of whether the resources potentially available for health are increasing or decreasing.</p>
Suggested data source	World Bank (2006b). <i>World Development Indicators</i> <www.worldbank.org> or most recent.

14. Per capita total expenditure on health at international dollar rate

Definition and rationale	<p>Total health expenditure is the sum of public and private health expenditure, including donors</p> <p>This total is derived by dividing per capita total health expenditure (THE) in local currency units by an estimate of the purchasing power parity (PPP) of the local currency compared to USD, that is, a rate or measure that minimizes the consequences of differences in price levels existing between countries.</p> <p>Higher THE per capita is generally (but not always) associated with better availability and quality of health care.</p>
Suggested data source	WHO (2006). <i>The World Health Report 2006</i> <www.who.int> or most recent.

15. Private expenditure on health as % of total expenditure on health

Definition and rationale Private expenditure on health comprises household out-of-pocket spending plus the outlays of insurers and third-party payers (other than social security), mandated employer health services and other enterprises providing health services, nonprofit institutions and nongovernmental organizations (NGOs) financing health care, private investments in medical care facilities

This figure will indicate the involvement of the private sector in the delivery of health care because it represents the portion of health care services that is managed by the private sector.

Suggested data source WHO (2006). *The World Health Report 2006* <www.who.int> or most recent.

16. Out-of-pocket expenditure as % of private expenditure on health

Definition and rationale The direct outlay by households including gratuities and payments-in-kind made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or to the enhancement of the health status of individuals or population groups; includes household payments to public services, nonprofit institutions, or NGOs, and excludes payments made by enterprises that deliver medical and paramedical benefits, mandated by law or not, to their employees

This indicator provides information on the burden of health care financing on households.

In most developing countries, out-of-pocket spending is the largest share of private health expenditures. High out-of-pocket spending at the point of service has negative implications for equity and access.

Suggested data source WHO (2006). *The World Health Report 2006* <www.who.int> or most recent.

17. GINI index

Definition and rationale

A measure of income and wealth inequalities among a population and the extent to which the distribution of income (or consumption) among individuals or households within a country deviates from a perfectly equal distribution

A Lorenz curve plots the cumulative percentages of total income received against the cumulative percent of recipients, starting with the poorest individual or household. The GINI index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the total area under the line. A value of 0 represents perfect income equality, a value of 100 represents perfect inequality.

This indicator is particularly relevant to the equity component of development. Income or resource distribution has direct consequences on the poverty rate of a country or region.

Suggested data source

World Bank (2006b). *World Development Indicators*
<www.worldbank.org> or most recent.

5.3 Component 2

This section focuses on developing basic understanding and a profile of a country's health system and related country background characteristics. The topics covered include the following—

- Section 5.3.1 Political and Macroeconomic Environment
- Section 5.3.2 Business Environment and Investment Climate
- Section 5.3.3 Top Causes of Mortality and Morbidity
- Section 5.3.4 Structure of the Main Government and Private Organizations Involved in the Health Care System
- Section 5.3.5 Decentralization
- Section 5.3.6 Service Delivery Organization
- Section 5.3.7 Donor Mapping
- Section 5.3.8 Donor Coordination

5.3.1 Political and Macroeconomic Environment

In this section, you will describe the political structure of the country, focusing on key questions such as whether the head of government is regularly elected (versus a dictatorship regime), whether the government has separation of powers, with the legislative and executive branches independent of each other, and whether the country is stable politically (e.g., war, revolution, civil violence are absent).

The rationale for the political questions is to understand the decision-making processes for policy and programs and the respective roles of different branches of government (levels of government will be addressed in section 5.3.5). This information indicates which institutions and actors the donors and technical assistance providers should work with and which systems ensure (or might be strengthened to ensure) financial and programmatic accountability.

Tip!

Updated information on macroeconomic, financial, and regulatory policy indicators for most countries is available in International Monetary Fund and World Bank publications and can be found on the following websites:

<http://www.imf.org>

<http://www.doingbusiness.org/>

Furthermore, you will need to develop an overview of the macroeconomic environment answering the following questions—

- Does the country have a market economy? If so, is it a transition economy (e.g., from a socialist to market economy)?
- Is the economy generally open and competitive, or is economic power highly concentrated?
- What is the level of economic development?
- What is the standard of living and poverty level?
- Is the country stable economically (e.g., low inflation, low unemployment, positive GDP growth)?
- What is the role of the private sector in the country? Does the government support private sector activity?
- Can you find any estimates of the size of the informal economic sector (usually as a percentage of GDP)? In most developing countries, the informal sector is a significant part of the overall economy, representing up to 50 percent of the total labor market.²

In addition, you will describe the country's general infrastructure—roads, transportation, electricity, and telecommunications.

The rationale for the economic questions is to understand the overall level of resources available in a country and who controls them. It also indicates the opportunities for private sector strengthening and expansion and for innovative financing mechanisms.

5.3.2 Business Environment and Investment Climate

Because the business environment and investment climate in a country can affect the provision of health services in the private sector and the development of the private sector, your objective here is to analyze the factors that affect private investment and enterprise growth and to identify the barriers to sustaining and expanding the private sector.

The rationale behind the expansion of the private sector is that its vitality may affect health systems in different ways. In many countries, private health providers are an effective alternative to public sector facilities that are lacking trained health personnel, essential medicines, or other necessary equipment and supplies. Private businesses can also contribute to health services. Businesses may provide health services for employees directly or by contributing to health insurance or other financing mechanisms. In recent years, many multinational companies and

² Informal sector workers are individuals earning income any way they can to avoid poverty, are entrepreneurs seeking to avoid government regulation and taxes, or are engaged in underground illegal activity. This population, though working, does not pay any payroll or income taxes, and that presents an obstacle to establishing social health insurance.

even larger national firms are investing in corporate social responsibility initiatives. Corporate social responsibility activities contribute to health when companies provide health services to surrounding communities, sponsor health information and education campaigns, or help market products that improve health. In summary, an environment that is conducive to private sector development can facilitate the expansion of private health services.

For a rapid glance at the business environment, consult the “Enterprise Surveys” website (World Bank 2006a) summary reports, which contain data on the investment climate in 58 countries based on surveys of more than 28,000 firms. The surveys address the difficulties enterprises encounter in starting, running, and exiting a business and provide indicators of firm productivity and performance and for each of the following topics: bureaucracy, corruption, courts, crime, finance, informality, infrastructure, innovation, jobs, tax, and trade.

The three types of analyses that are available from this website and that should be consulted are the following—

- *Investment climate snapshot of one country in the Enterprise Surveys database.* To access this, select a country in the section called “Generate economy snapshot.”
- *Investment climate assessments.* Go to the “Investment Climate Assessments” page (link on the right column of the screen) and select the country of interest to obtain a more comprehensive report that draws upon the results of enterprise surveys, doing business, and other available data.
- *Doing business snapshot.* Go to the “Doing Business” page (link on the right column of the screen), which provides a snapshot of each economy’s aggregate ranking on the ease of doing business and on each of the following topics: starting a business, dealing with licenses, employing workers, registering properties, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and closing a business.

From these three resources, identify the major constraints and barriers to doing business in the country—factors that could limit the expansion of the private sector or the delivery of services by private sector providers. You can subsequently confirm these findings by interviewing private health sector actors such as private companies and providers, chambers of commerce or business associations, International Finance Corporation representative, U.S. Agency for International Development (USAID) Mission staff in the Economic Growth Division, bank managers (especially a bank that specializes in small and medium enterprises), NGOs, and faith-based organizations regarding informal sector and community organizations. In addition, each of the technical modules contains specific indicators, suggestions, or both for considering private sector participation or partnerships in the health sector.

5.3.3 Top Causes of Mortality and Morbidity

To understand the general health status in the country of interest, identify the following—

- Major causes of mortality and morbidity
- Diseases that have the highest disability adjusted life years (DALY)³

For this section, list the 5 to 10 main causes of mortality and morbidity for the country being assessed, and the 5 to 10 diseases that have the highest DALY rates. If you want to compare the DALY rates with other countries, use the age-standardized DALY rates (see Box 5.2).

Box 5.2 Age-Standardized DALY Rates

Note: The *Revised GBD 2002 Estimates* (WHO 2002a) for countries provides age-standardized (Table 6) and non-aged-standardized (Table 5) DALY rates.

What are age-standardized DALY rates?

An age-standardized rate is a weighted average of the age-specific rates, where the weights are the proportions of a standard population in the corresponding age groups. This means that the DALY rates for each country in Table 6 (WHO 2002a) are based on a similar population age structure.

What standard population was chosen?

The approach proposed by WHO is to base the standard on the average age-structure across all countries for the period 2000–2025. The average is based on a comprehensive assessment of population age structure carried out by the United Nations Population Division.

What is the advantage of age-standardized DALY rate?

It removes the effect of variation in age structure and allows for cross-country comparisons.

Source: Ahmad and others (n.d.)

The principal sources of information follow—

- **Revised GBD 2002 Estimates** (for countries): information on life expectancy and child and adult mortality risks, healthy life expectancy (HALE), death, and DALY estimates by cause for WHO member states, mortality and burden estimates for heart disease and stroke (WHO 2002a). This source provides age-standardized (Table 6) and non-aged-standardized (Table 5) DALY rates. For a discussion on the difference between the two, see Box 5.2.

<www3.who.int/whosis/menu> From the list on the page, choose “Burden of Disease Statistics,” then choose “Latest Global Burden of Disease Estimates.”

³ DALYs for a disease are the sum of the years of life lost due to premature mortality in the population and the years lost due to disability for incident cases of the health condition. The DALY combines in one measure the time lived with disability and the time lost due to premature mortality. One DALY can be thought of as one lost year of “healthy” life and the burden of disease as a measurement of the gap between current health status and an ideal situation where everyone lives into old age free of disease and disability.

- **Revised GBD 2002 Estimates** (by WHO region, WHO subregion, level of development, income level, World Bank region): information on incidence, prevalence, mortality, years of life lost (YLL), years lost due to disability (YLD) and DALYs by sex, cause and regions (WHO 2002b).

<www3.who.int/whosis/menu> From the list on the page, choose “Burden of Disease Statistics,” then choose “Latest Global Burden of Disease Estimates.”

- **World Health Report 2003 Statistical Annex** (Annex Table 3 “Burden of Disease by DALYs by Cause, Sex, and Mortality Stratum in WHO Regions, estimates from 2002”): information on burden of disease by DALY but only by major regions of the world (Africa, the Americas, Eastern Mediterranean, Europe, South-East Asia, Western Pacific).

<www.who.int/whr/2003/annex/en/index.html> See Annex Table 3.

- **Demographic and Health Surveys (DHS)**: DHS surveys provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition.

<www.measuredhs.com>

- **In-country surveys and studies**

An example extracted from an assessment undertaken in Benin is provided in Box 5.3.

You can also investigate patterns in the burden of disease to identify priorities and affected populations, especially for HIV/AIDS and malaria and for reproductive health and child health. It also could be helpful to extend the data analysis by sex and age groups, and by comparing rural and urban areas. This information will help guide any disease-specific recommendations to the USAID Mission. Note that the assessment does not have a disease-specific focus, but you may need to address disease-specific issues in developing recommendations for the mission, based on their priorities.

Box 5.3 Main Causes of Morbidity and Mortality in Benin

The epidemiological profile of Benin is characterized by a high rate of infectious diseases followed by nutritional issues. Table 2 presents the main causes of outpatient consultations and inpatient admissions in public facilities and in some private facilities in 2004.

Table 2: Main causes of outpatient consultations and inpatient admissions in Benin, 2004*

Outpatient consultations		Inpatient admissions	
Under 5	Total	Under 5	Total
Malaria	Malaria	Malaria	Malaria
ARI	ARI	Anemia	Anemia
Diarrhea	Gastro-Intestinal	ARI	Diarrhea
Anemia	Injuries	Diarrhea	ARI
Gastro-Intestinal	Diarrhea	Malnutrition	Injuries

* Source: Système National d'Information et de Gestion Sanitaire (SNIGS) des établissements du secteur public et de certains établissements privés en 2004.

Note: ARI = Acute Respiratory Infections

The prevalence of HIV/AIDS in 2004 was estimated at 2.0% (2.4% in urban areas and 1.6% in rural areas). Also, the rate of non-communicable diseases such as cardiac diseases and cancer is increasing in Benin. WHO data on mortality and disability adjusted life years (DALY) for Benin, based on the year 2002, are presented in Table 3. Age-standardized rates allow comparing with other countries having different age structures. But non-standardized rates, which reflect the absolute figures, present a more precise profile of the morbidity and mortality in Benin and show that acute respiratory infections (ARI) and malaria are the main causes of mortality and morbidity. Figures also show the impact of non-communicable diseases, injuries and other health problems (Perinatal conditions).

Table 3: Diseases that have the highest DALY and main causes of death according to the WHO Global Burden of Disease (2002)

Diseases that have the highest DALY (age-standardized)	Main causes of death (age-standardized)	Diseases that have the highest DALY (non-standardized)	Main causes of death (non-standardized)
ARI	Cardiovascular diseases	ARI	ARI
Malaria	ARI	Malaria	Malaria
Injuries	Cancer	Injuries	Cardiovascular diseases
HIV/AIDS	Malaria	Diarrhea	Diarrhea
Cardiovascular diseases	Injuries	Perinatal conditions	Injuries
Neuropsychiatric conditions	HIV/AIDS	HIV/AIDS	HIV/AIDS
Diarrhea	Diarrhea	Neuropsychiatric conditions	Cancer

Source: Translated from Adeya and others (2006)

5.3.4 Structure of the Main Government and Private Organizations Involved in the Health Care System

As part of the assessment, one key to understanding the functioning of a health care system is to understand the structure of the main ministries and private organizations involved in the health care system. These are, for example, the Ministry of Health (MOH), the Ministry of Finance, Social Security, health maintenance organizations, private insurers, and private provider associations. This analysis will help you identify appropriate stakeholders to consult with for this assessment.

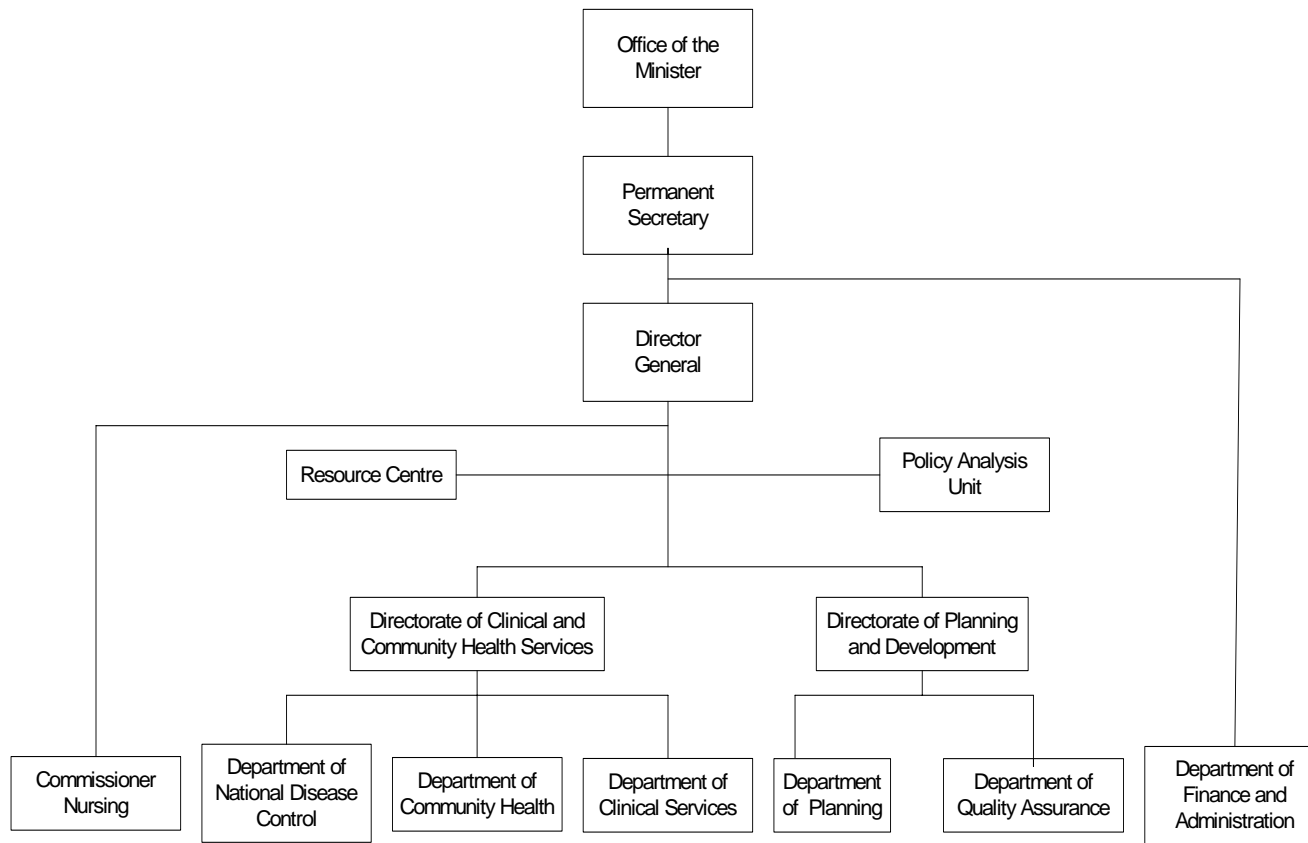
The elements to identify, link, and map are the following—

- Which agencies and organizations have mandates that affect the health sector?
- What are the functions of the following bodies: financing, planning, human resource management, service delivery, project implementation, insurance, governance, information and statistics management, and regulation? Once you determine the functions, you can further break down each one.
- What departments or divisions are responsible for each of these functions? Who heads of each of these divisions?
- Who are the executive teams or individuals?

Figure 5.1 presents an organigram from Uganda, which illustrates the structure within the MOH.

Proposed sources of information for this topic are the following—

- Ministries' or private organizations' offices. Also consult their websites and publications, if any.
- WHO's *International Digest of Health Legislation* (WHO 2000). This publication provides, for some countries, the organization of the MOH. It also gives access to national and international texts of legislation for the health care system. Where possible, links are provided to other websites that contain full texts of the legislation in question.



Source: Ministry of Health, Republic of Uganda (n.d.)

Figure 5.1 Organigram of the Ministry of Health of the Republic of Uganda

5.3.5 Decentralization

Decentralization is the distribution of power, authority, and responsibility for political, economic, fiscal, and administrative systems between the center and the regional or local levels. It is a critical element to understand before any type of assessment be initiated, because it will provide you with information on how the health system is organized and where to collect the information you need for the modules but, more specifically, at which levels of government to collect it. The tip box below explains the different forms of decentralization.

Your objective regarding this topic will be to identify the responsibilities of the different levels of government with regard to the functions of the health care system. The functions of the government in the health care system are (but are not restricted to) the following—

- Financing the health system
- Managing human resources in the health sector
- Organizing health service delivery
- Implementing programs and projects related to health
- Procuring and distributing pharmaceuticals
- Managing health information systems and data
- Performing maintenance
- Handling capital investments in health infrastructures

According to the level and depth of decentralization, these responsibilities are assigned differently. In centrally governed countries, the responsibilities are placed at the central or national level, so the information will be available at that level. In more decentralized settings, some responsibilities are devolved to provinces, districts, or other agencies. In these cases, the assessor should focus on obtaining information at those levels of government or from these agencies.

Tip!

Forms of Decentralization

- **Deconcentration** (or *administrative decentralization*): Transfer of authority and responsibility from central agencies in a country's capital city to field offices of those agencies at a variety of levels (regional, provincial, state, local).
- **Delegation**: Transfer of authority and responsibility from central agencies to organizations not directly under the control of those agencies or organizations outside of the government, for example, semiautonomous entities, NGOs, and regional or local governments.
- **Devolution** (or *democratic decentralization*): Transfer of authority and responsibility from central government agencies to lower level autonomous units of government through statutory or constitutional provisions that allocate formal powers and functions.
- **Divestment** (sometimes called *privatization*): Transfer of planning and administrative responsibility or other public functions from government to voluntary, private, or nongovernment institutions. In some cases, governments may transfer to "parallel organizations"—such as national industrial and trade associations, professional or ecclesiastical organizations, political parties, or cooperatives—the right to license, regulate, or supervise their members in performing functions that were previously controlled by the government.

One of the methods that can be used to evaluate the level of decentralization is to identify for each function the level of responsibility each level of government has for it, which range between extensive, some, limited, or no responsibilities.

Table 5.2 can be used as a template to present the results of the analysis of decentralization. For each line in the table, write whether each level of government has extensive, some, limited, or no responsibilities related to that function. Note that you can modify the template by excluding or adding lines and categories, to meet the needs of the assessment or the context of the country. Completing Table 5.2 will then provide an indication of where information on a specific issue or topic can be obtained. An example of a completed table is presented in Table 5.3, detailing the results of assessing responsibilities in Zambia districts. It shows that in Zambia, the districts have no power to determine salaries, but have full responsibility for contracting nonpermanent staff. This observation also means that any information related to the contracting of health personnel in Zambia would probably need to be obtained at the district level, whereas information on how the salaries and benefits are determined would be obtained at the national, or central, level.

Table 5.2 can be tentatively completed before the in-country assessment by reviewing secondary sources on the country's health care system organization and reforms, and then verifying them with in-country stakeholders. Note that each module provides specific guidance on decentralization.

Table 5.2 Template for Organizing Information Regarding the Level of Decentralization of a Government

Health System Functions	Level of Government		
	National	Subnational (Provincial, Regional)	Local Level (Municipality, District)
Financing			
Revenue generation and sources			
Budgeting, revenue allocation			
Expenditure management and accounting			
Financial audit			
Human resources			
Staffing (planning, hiring, firing, evaluation)			
Contracts			
Salaries and benefits			
Training			
Service delivery and program or project implementation			
Hospital and facility management			
Defining service packages (primary, tertiary care)			
Targeting service delivery to specific populations			
Setting norms, standards, regulation			
Monitoring and oversight of service providers			
User participation			
Managing insurance schemes			
Contracting			
Payment mechanisms			
Operation maintenance			
Medicines and supplies (ordering, payment, inventory)			
Vehicles and equipment			
Facilities and infrastructure			
Information management			
Health information systems design			
Data collection, processing, and analysis			
Dissemination of information to various stakeholders			

Note: For each level of government, determine whether that level has extensive, some, limited, or no responsibilities related to the function.

To evaluate decentralization in the country you are assessing, you may find documents from the following sources—

- **The World Bank**
 - Decentralization and subnational regional economics:
<www1.worldbank.org/publicsector/decentralization>
 - Decentralization in South Asia:
<www.worldbank.org/sardecentralization>
 - Decentralization in Latin America and the Caribbean:
<<http://wbln0018.worldbank.org/LAC/LAC.nsf/ECADocByUnid/D2FDB2AFDECA2E0585256DBF0079BCC7?Opendocument>>
 - Governance and public sector in MENA:
<<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/EXTMNAREGTOPGOVERNANCE/0,,menuPK:497031~pagePK:34004175~piPK:34004435~theSitePK:497024,00.html>>
- **PHRplus**. Search the bibliographic database of the resource center.
<www.phrplus.org>
- **Center for International Earth Science Information Network (CIESIN)**
<<http://www.ciesin.org/decentralization/Entryway/siteindex.html>>

Table 5.3 Example: Level of Responsibility at the District Level in Zambia

Health System Functions	Local Level (Municipality, District)
Financing	
Revenue generation and sources	No responsibilities: District Health Management Team (DHMT) and District Health Board (DHB) almost totally dependent on central allocations, but currently receiving about 50 percent of the MOH/Central Board of Health (MOH/CBOH) budget
Expenditure management and accounting	Some responsibilities: DHMT and DHB develop and manage budget plans with central review, but face restrictions on the percentage spent on administration, capital, percentage allocated to different levels
Human resources	
Staffing (planning, hiring, firing, evaluation)	Some responsibilities: DHBs have hiring and firing authority only for delinked personnel (which applies to nonprofessional certified staff only after 1997)
Contracts	Extensive responsibilities: Contracting of nonpermanent staff
Salaries and benefits	No responsibilities: Salaries and allowances centrally determined
Service delivery and program or project implementation	
Hospital and facility management	No responsibilities: Major hospitals managed by centrally appointed boards; facility committees composed of health workers and community representatives; facility action plan and budget prepared with technical support from DHMT and approved by DBH and CBOH
Managing insurance schemes	Extensive responsibilities: Prepayment schemes allowed in all districts
Payment mechanisms	Extensive responsibilities: Districts allowed and encouraged to use variety of payment mechanisms including per capita and accepting prepayments and in-kind payments

Source: Adapted from Bona Chitah and Bossert (2001).

5.3.6 Service Delivery Organization

The service delivery function is a health care system's ability to provide quality service and ensure client satisfaction. The information gathered for this section will describe how the delivery of care is organized, how it functions, and who the health actors participating in service delivery are. Note that this dimension of health systems is also discussed in greater detail in the Health Service Delivery module, Chapter 8.

To have a complete picture of the health system’s service delivery system (human resources and facilities), the country would ideally have data or estimates to fill in the Table 5.4 (note that the terminology for facilities and personnel may vary from country to country). For this table, you need to indicate a number for each box. For example, indicate the number of hospitals and clinics that operate in the public sector, the private for-profit sector, and elsewhere. For the human resources, indicate the number of doctors, nurses, and other formal and informal health care staff that work in the public and private sectors.

Sources of information include health facility or health provider surveys, UN agencies in country, the MOH, and associations of private providers.

Table 5.4 Country’s Service Delivery System: Facilities and Human Resources Sample Table

Setting	Public	Private				Total
		For-profit	Not-for-profit or NGO	Religious	Total Private	
Facilities						
Hospitals						
Clinics						
Health posts						
Laboratories						
Pharmacies						
Others (e.g., voluntary counseling and testing centers)						
Human resources						
Doctors						
Nurses						
Midwives						
Traditional healers						
Other						

Data on private health service delivery that describes demand (utilization data) and supply (in terms of the quantity of providers, market share, and composition) is ideal but not common in most developing countries. Many countries, however, do possess data on the split between urban and rural locations of service providers, a breakdown that is critical for analyzing dimensions of access, quality, and equity. NHA data, if available, often includes the percentage of total health financing that goes to private sector providers. Utilization data (outpatient visits and hospital admissions per capita) may be available from a household survey on health service utilization or from the DHS (which presents, for example, the percentage of women of reproductive age who get their contraception from the private sector). Unfortunately, MOH utilization data typically cover only public sector providers.

Otherwise, you can also contact private provider associations to find out if that sector is organized, who its members are, and its role and experiences in partnering with the government or donors.

In many developing countries, the informal private health sector is a significant source of services. The most recent DHS or household health expenditure survey may have data on the informal sector's "share" of the market. The informal health sector includes traditional healers, herbalists, kiosks, and black market for medicines. One of the rationales for this section is that partnering with informal health providers can be an effective way to reach some target populations and to change behaviors.

5.3.7 Donor Mapping

Donor mapping is an essential exercise to identify the different actors and their involvement and responsibilities in the health care systems and is also important for recommending priority interventions at the end of the assessment. In some countries, donors can play a major role in the health care system in terms of financing, advocacy, technical support, or delivery of services and goods. An example of donor mapping analysis is given in Table 5.5.

This task can be very time-consuming, so try to find out if a donor mapping analysis has been done recently and use that information rather than compiling it on your own. You will want to use recent data because donor funding and related information can change significantly from one year to the next.

In developing the donor mapping analysis for your country, follow these steps—

1. List the donors involved in the health sector in the country.
2. For each donor, list the field(s) of intervention, activities, or programs related to health.
3. For each field, list the type of support and commitment provided. Key categories of support are—
 - a. *Research and development*: product discovery and development of new therapies (e.g., vaccines and treatments)
 - b. *Technical assistance*: support for improved service access and technical assistance to public, NGO, or private sector providers
 - c. *Service support*: pharmaceutical donations or financing support for procurements or for support of distribution programs through social marketing efforts
 - d. *Advocacy* (national and international levels): advocating for increased international and national response to specific diseases, fundraising for specific control programs
 - e. *Financing*: funds for specific programs (malaria, HIV/AIDS, TB) or direct budget support

4. Identify the amount of funds allocated and committed to each field of intervention and the timeline (dates and number of years).
5. Understand how the money flows (through sector-wide approaches [SWAps], MOH, local development agencies, or own-implementing agencies).
6. For each intervention, specify the counterpart (if applicable) within the government.
7. List the current and committed activities, and specify the start and end dates.

The following are sources of data you can explore for the donor mapping—

- Annual reports on external assistance and direct foreign investment produced by governments
- Annual reports from donors
- Donor websites (including links to country specific programs and missions' websites)
- The President's Emergency Plan for AIDS Relief (PEPFAR) or the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). Countries that receive support from PEPFAR or the Global Fund are requested, as part of the application process, to undertake and submit a donor mapping analysis. If the country you are assessing received one of these types of support, you might want to obtain their application proposal from the following websites—
 - PEPFAR: www.usaid.gov/our_work/global_health/aids/pepfar.html
 - GFATM: <http://www.theglobalfund.org/en>

Table 5.5 Example of Donor Mapping Analysis

Donor	Field of Intervention and Activities	Timeline and Duration	Amount of Commitment	Project Location	Counterpart
Example 1: Philippines					
USAID	Development of a social insurance marketing plan	1999–2002		Department of Health (DOH) and regional offices	PhilHealth
World Bank	Development of a pro-poor benefits package and conduct actuarial analysis Pilot test zero co-pay benefit package to increase enrollment of poor	2003			DOH, PhilHealth
Example 2: Angola					
Global Fund	Malaria (Round 3)	2006–2007	USD 38 million (requested), USD 28 million (approved)	National level	MOH
	HIV/AIDS (Round 4)	2006–2007	USD 92 million (requested), USD 28 million (approved)	National level	MOH
European Union (EU)	At the national level, strengthening blood bank system	2004–2007		Luanda, Benguela, Huila, Huambo, Bie	
	At the provincial level, support national rehabilitation program	2003–2007	Euro 14 million	Provinces	

Note: These examples are not inclusive for all donors in the countries listed.

The donor mapping analysis will also be useful for comparing donor-to-government interventions, particularly in identifying gaps and overlaps in health care interventions and financing or to determine if donor funding is in line with the MOH’s strategies and interventions. See Table 5.6 for an illustrative example of the Angola case. This example shows donor inputs (in the form of funds or goods provided directly to the MOH or through other projects and organizations) and what the government of Angola is financing through its own budget.

Table 5.6 Comparison of Donor and Government Interventions in the Health Care System in Angola

Interventions	Donors				MOH	
	WHO	UNICEF	EU	GFATM (UNDP)	Strategic Plan for the Accelerated Reduction of MMR and IMR	Sector Development Plan 2002–2005
National health policy and strategy	✓		✓	Angola is the principal recipient of the first round of Global Fund funds, so UNDP will design a program to strengthen the MOH and health system. Program to be implemented over 2006–2007.	✓	✓
Norms and protocols	✓	✓	✓			
Increase integration and coordination between the vertical public health and the provincial health directorates		✓	✓		✓	
Basic or financial management training or both		✓	✓		✓	
Clinical training	✓	✓			✓	
Provincial supervision of municipalities		✓			✓	
Mapping all health facilities in the municipalities		✓	✓		✓	
Health profile of municipal population					✓	

Source: Connor and others (2005).

Notes: UNDP = United Nations Development Programme; MMR = maternal mortality ratio; IMR = infant mortality rate

5.3.8 Donor Coordination

Your objective in this section is to assess the level of coordination among the donors (joint monitoring teams, joint high-level meetings, donor coordination bodies) and between donors and local governments. Because multiple inconsistent policies and practices by donors impose burdens on partners, coordination can enhance the effectiveness of aid, thus enhancing the achievement of sustainable improvements, particularly for countries that receive a lot of donor support.

Coordination is essential to ensure that—

- Development assistance is aligned with country priorities and is adapted to the country context.
- Donor requirements are harmonized when multiple donors finance the same activity (e.g., to avoid having each donor require different reports at different dates).
- Information is shared.

The issues and questions you will need to address to analyze the level of coordination and alignment between the government and the donor are the following—

- Do the donor country programs draw on common (donor and government) analyses and take into account the government's objectives? (Sources: donors and MOH documents and interviews)
- Is aid programmed over a multiyear time frame that is consistent with the financial planning horizon of the government? (Sources: donor publications and interviews)
- Have the donors and the government agreed on a framework for review and monitoring of donor assistance? Ideally, they should seek to incorporate the framework into multi-donor review and monitoring processes.
- Is the government or any other organization engaged in leadership of the consultative institutions, by organizing and chairing consultative groups, meetings, working groups, and by providing secretariat? If the government is leading this process, it requires adequate staffing, resources, and appropriate location within the government structure. Who is financing these structures, if they exist?
- Presence of SWAps, a method of working between government and development partners. SWAp is a mechanism for coordinating support to public expenditure programs, and for improving the efficiency and effectiveness with which resources are used in the sector (Foster, Brown, and Conway 2000). The core elements of a SWAp are the following—
 - All significant funding agencies in support of a shared, sector-wide policy and strategy
 - A medium-term expenditure framework or budget that supports this policy
 - Government leadership in a sustained partnership
 - Shared processes and approaches for implementing and managing the sector strategy and work program, including review of sectoral performance against jointly selected milestones and targets
 - Commitment to move to greater reliance on government financial management and accountability systems

The issues to address to analyze the level of coordination and harmonization among donors are as follows—

- Do donors share information on who is doing what to avoid duplication of efforts?
- Do donors have explicit agreements among themselves (e.g., on roles, salaries, or on who finances what)?

- Have donors implemented standardized systems and procedures? Identify whether donor requirements are harmonized when multiple donors finance the same activity (e.g., do they avoid having each donor require different activity and financial reports at different dates?). Is the government coordinating these efforts?

Review the existing information, and identify gaps and weaknesses in the level of coordination between government and donor, and among donors, with regard to the issues and questions listed above.

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Annex 5A. Component 1 Data Summary Table—Sample Country

Health Systems Data		Country level data	Year of data	Average value for regional comparator ¹	Year of data	Average value for income group comparator ^{2, 3}	Year of data	Source of Data
				Middle East and North Africa		Low-income economies		
		Yemen		MENA		LI		
Chapter 5. Core Module								
Indicator 1	Population, Total	20,329,350	2004	22,512,055	2004	39,904,246	2004	The World Bank. 2006. World Development Indicators.
Indicator 2	Population growth (annual %)	3.13	2004	1.94	2004	2.19	2004	The World Bank. 2006. World Development Indicators.
Indicator 3	Rural population (% of total)	73.98	2004	32.99	2004	67.40	2004	The World Bank. 2006. World Development Indicators.
	Urban population (% of total)	26.02	2004	67.01	2004	32.60	2004	The World Bank. 2006. World Development Indicators.
Indicator 4	Contraceptive prevalence (% of women aged 15-49)	23.00	2003	50.14	-	26.25	-	The World Bank. 2006. World Development Indicators.
Indicator 5	Fertility rate, total (births per woman)	6.00	2004	3.39	2004	4.89	2004	WHO. 2006. The World Health Report.
Indicator 6	Pregnant women who received 1+ antenatal care visits (%)	34.00	1997	64.57	-	74.25	-	WHO. 2006. The World Health Report.
	Pregnant women who received 4+ antenatal care visits (%)	11.00	1997	62.33	-	46.49	-	WHO. 2006. The World Health Report.
Indicator 7	Prevalence of HIV, total (% of population aged 15-49) ⁴	0.10	2003	0.47	2003	4.86	2003	The World Bank. 2006. World Development Indicators.
Indicator 8	Life expectancy at birth, total (years)	61.27	2004	69.92	-	53.27	-	The World Bank. 2006. World Development Indicators.
Indicator 9	Mortality rate, infant (per 1,000 live births)	82	2004	35	2004	84	2004	The World Bank. 2006. World Development Indicators.
Indicator 10	Mortality rate, under age 5 (per 1,000)	111	2004	42	2004	131	2004	The World Bank. 2006. World Development Indicators.
Indicator 11	Maternal mortality ratio (per 100,000 live births) ⁵	570	2000	196	2000	738	2000	WHO. 2006. The World Health Report.
Indicator 12	GDP per capita (constant 2000 USD)	534	2004	3,422	2004	373	2004	The World Bank. 2006. World Development Indicators.
Indicator 13	GDP growth (annual %)	2.70	2004	7.59	-	5.49	-	The World Bank. 2006. World Development Indicators.

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Indicator 14	Per capita total expenditure on health at international dollar rate	89.00	2003	312.93	2003	72.74	2003	WHO. 2006. The World Health Report.
Indicator 15	Private expenditure on health as % of total expenditure on health	59.10	2003	46.17	2003	53.81	2003	WHO. 2006. The World Health Report.
Indicator 16	Out-of-pocket expenditure as % of private expenditure on health	95.50	2003	84.00	2003	84.67	2003	WHO. 2006. The World Health Report.
Indicator 17	GINI Index	NA	NA	37.68	-	38.23	-	The World Bank. 2006. World Development Indicators.
Chapter 6. Governance Module								
Indicator 1	Voice and Accountability							
	<i>Point estimate</i> ⁶	-1.0	2004	-1.1	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004.
	<i>Percentile rank</i> ⁷	22.80	2004	17.82	2004	27.52	2004	The World Bank. Governance Indicators: 1996-2004.
Indicator 2	Political Stability							
	<i>Point estimate</i> ⁶	-1.5	2004	-0.7	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004.
	<i>Percentile rank</i> ⁷	7.30	2004	30.86	2004	25.88	2004	The World Bank. Governance Indicators: 1996-2004.
Indicator 3	Government Effectiveness							
	<i>Point estimate</i> ⁶	-0.8	2004	-0.3	2004	-0.9	2004	The World Bank. Governance Indicators: 1996-2004.
	<i>Percentile rank</i> ⁷	20.70	2004	41.41	2004	21.96	2004	The World Bank. Governance Indicators: 1996-2004.
Indicator 4	Rule of Law							
	<i>Point estimate</i> ⁶	-1.1	2004	-0.4	2004	-0.9	2004	The World Bank. Governance Indicators: 1996-2004.
	<i>Percentile rank</i> ⁷	12.10	2004	41.24	2004	22.57	2004	The World Bank. Governance Indicators: 1996-2004.
Indicator 5	Regulatory Quality							
	<i>Point estimate</i> ⁶	-1.0	2004	-0.7	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004.
	<i>Percentile rank</i> ⁷	14.80	2004	27.72	2004	24.63	2004	The World Bank. Governance Indicators: 1996-2004.
Indicator 6	Control of Corruption							
	<i>Point estimate</i> ⁶	-0.8	2004	-0.4	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004.
	<i>Percentile rank</i> ⁷	22.70	2004	41.36	2004	24.12	2004	The World Bank. Governance Indicators: 1996-2004.

Chapter 5. Core Module

Chapter 7. Health Financing Module								
Indicator 1	Total expenditure on health as % of GDP	5.50	2003	5.49	2003	5.18	2003	WHO. 2006. The World Health Report.
Indicator 2	Per capita total health expenditure, at average exchange rate (USD) ⁵	32	2003	158	2003	26	2003	WHO. 2006. The World Health Report.
Indicator 3	Government expenditure on health as % of total government expenditure	6.00	2003	7.74	2003	8.68	2003	WHO. 2006. The World Health Report.
Indicator 4	Public (government) spending on health as % of total health expenditure	40.90	2003	53.83	2003	46.19	2003	WHO. 2006. The World Health Report.
Indicator 5	Donor spending on health as % of total health spending	8.80	2003	3.64	2003	18.26	2003	WHO. 2006. The World Health Report.
Indicator 6	Out-of-pocket expenditure as % of private expenditure on health	95.50	2003	84.00	2003	84.67	2003	WHO. 2006. The World Health Report.
Chapter 8. Health Service Delivery Module								
Indicator 1	Number of hospital beds (per 10,000 population)	6	NA	19	-	26	-	WHO. 2006. The World Health Report.
Indicator 2	Percentage of births attended by skilled health personnel per year	27.00	2003	76.18	-	47.57	-	The World Bank. 2006. World Development Indicators.
Indicator 3	DTP3 immunization coverage: one-year-olds immunized with three doses of diphtheria, tetanus toxoid, and pertussis (DTP3) (%)	78.00	2004	91.21	2004	73.40	2004	WHO. 2006. The World Health Report.
Indicator 4	Contraceptive prevalence (% of women aged 15-49)	23.00	2003	50.14	-	26.25	-	The World Bank. 2006. World Development Indicators.
Indicator 5	Pregnant women who received 1+ antenatal care visits (%)	34.00	1997	64.57	-	74.25	-	WHO. 2006. The World Health Report.
Indicator 6	Life expectancy at birth, total (years)	61.27	2004	69.92	-	53.27	-	The World Bank. 2006. World Development Indicators.
Indicator 7	Mortality rate, infant (per 1,000 live births)	82	2004	35	2004	84	2004	The World Bank. 2006. World Development Indicators.
Indicator 8	Maternal mortality ratio (per 100,000 live births) ⁵	570	2000	196	2000	738	2000	WHO. 2006. The World Health Report.
Indicator 9	Prevalence of HIV, total (% of population aged 15-49) ⁴	0.10	2003	0.47	2003	4.86	2003	The World Bank. 2006. World Development Indicators.
Chapter 9. Human Resources Module								
Indicator 1	Physicians (density per 1,000 population)	0.33	2004	1.13	-	0.42	-	WHO. 2006. The World Health Report.
Indicator 2	Nurses (density per 1,000 population)	0.65	2004	1.99	-	1.14	-	WHO. 2006. The World Health Report.
Indicator 3	Midwives (density per 1,000 population)	0.01	2004	0.04	-	0.22	-	WHO. 2006. The World Health Report.
Indicator 4	Pharmacists (density per 1,000 population)	0.13	2004	0.52	-	0.08	-	WHO. 2006. The World Health Report.
Indicator 5	Lab technicians (density per 1,000 population)	0.23	2004	0.34	-	0.07	-	WHO. 2006. The World Health Report.
Chapter 10. Pharmaceutical Management Module								

Indicator 1	Total expenditure on pharmaceuticals (% total expenditure on health)	37.80	2000	24.12	2000	27.04	2000	WHO. 2004. The World Medicines Situation.
Indicator 2	Total expenditure on pharmaceuticals (per capita average exchange rate)	8	2000	37	2000	5	2000	WHO. 2004. The World Medicines Situation.
Indicator 3	Government expenditure on pharmaceuticals (per capita average exchange rate)	NA	2000	14	2000	2	2000	WHO. 2004. The World Medicines Situation.
Indicator 4	Private expenditure on pharmaceuticals (per capita average exchange rate)	8	2000	24	2000	4	2000	WHO. 2004. The World Medicines Situation.
Chapter 11. Health Information System Module								
Indicator 1	Maternal mortality ratio reported by national authorities ⁹	370	2001	113	2001	518	2001	UNICEF. 2006. The State of the World's Children 2006.
Indicator 2	Mortality rate, under age 5 (per 1,000)	111	2004	42	2004	131	2004	The World Bank. 2006. World Development Indicators.
Indicator 3	HIV prevalence among pregnant women aged 15-24	NA	NA	NA	-	10	-	UNICEF. 2006. The State of the World's Children 2006.
Indicator 4	Proportion of children under 5 years who are underweight for age	46	1997	13	-	29	-	WHO. 2006. The World Health Report.
Indicator 5	Number of hospital beds (per 10, 000 population)	6	NA	19	-	26	-	WHO. 2006. The World Health Report.
Indicator 6	Contraceptive prevalence (% of women aged 15-49)	23.00	2003	50.14	-	26.25	-	The World Bank. 2006. World Development Indicators.
Indicator 7	Percentage of disease surveillance reports received at the national level from districts compared to number of reports expected	73.58	2005	94.95	2005	92.35	2005	WHO. 2005. Annual WHO/UNICEF Joint Reporting Form.

NOTES:

NC: Not Calculated because the (*) regional comparator includes both high income countries as well as some countries that have a population of less than 30,000, which are not classified by the World Bank.

NA: Data Not Available

-: No specific year is noted here since the average is calculated across different countries, where the data is reported in different years

1- The geographic classifications used by the World Bank are for low-income and middle-income economies only. Low-income and middle-income economies are sometimes referred to as developing economies. The use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. The countries are divided into 6 regions: East Asia and Pacific (EAC), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA), South Asia (SA), Sub-Saharan Africa (SSA). Countries noted with * indicate high-income countries (with the exception of South Africa classified as an Upper-middle income country) which are not part of the World Bank geographic classification.

2- The classification of countries by income group is based on the World Bank classification which classifies member economies, and all other economies with populations of more than 30,000. The countries which are not in a category have population less than 30,000.

3- The groups are: LI (low income), \$825 or less; LMI (lower middle income), \$826 - \$3,255; UMI (upper middle income), \$3,256 - \$10,065; and (HI) high income, \$10,066 or more (the HI countries are further divided between OECD and non-OECD, noted n-OECD). Economies are divided according to 2004 GNI per capita, calculated using the World Bank Atlas method.

4- The following countries report "<0.1" : Azerbaijan, Bosnia and Herzegovina, Brunei Darussalam , Bulgaria, Croatia, Egypt, Iraq, Japan, Jordan, Mongolia, Philippines, Republic of Korea., Romania, Slovakia, Slovenia, Sri Lanka, Syrian Arab Republic, Tajikistan, The former Yugoslav Republic of Macedonia, Tunisia, Turkmenistan

5- Estimates derived by regression and similar estimation methods. Countries include: Afghanistan, Albania, Algeria, Angola, Armenia, Bhutan, Bolivia, Botswana, Burundi, Cape Verde, Comoros, Congo, Cote d'Ivoire, Democratic Republic of Korea, Democratic Republic of Congo, Djibouti, Dominican Republic, El Salvador, Equatorial Guinea, Fiji, Gambia, Georgia, Ghana, Guinea Bissan, Indonesia, Iraq, Kazakhstan, Kyrgyzstan, Lau People's Democratic Republic, Lebanon, Lesotho, Liberia, Libyan Arab Jamahiriya, Maldives, Mozambique, Myanmar, Namibia, Nicaragua, Niger, Nigeria, Oman, Pakistan, Papua New Guinea, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, Sudan, Swaziland, Syrian Arab Republic, Tajikistan, Timor-Leste, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Viet Nam.

6- Ranges from -2.5 to 2.5

7- Percentile rank indicates the percentage of countries worldwide that rate below the selected country (subject to margin of error)

8- Democratic People's Republic of Korea report "<1000" for the Per capita total expenditure on health at average exchange rate (USD) - 2003

9- The regional and global totals in this table are based on the most recent of these assessments and refer to the year 1995. Several countries have data that refer to years or periods other than those specified in the column heading, differ from the standard definition, or refer to only part of a country. These countries include: Dominican Republic, Ghana, Lebanon, Papua New Guinea, Solomon Islands, Syrian Arab Republic, Turkey.

CHAPTER 6 GOVERNANCE MODULE

6.1 Overview

6.1.1 Chapter Outline

This chapter presents the governance module of the health systems assessment tool. Section 6.1 defines *governance* and its key dimensions, particularly as they relate to the health sector. Section 6.2 provides guidelines on assessing governance in the health sector for the country of interest; Section 6.3 presents the indicator-based part of the assessment, including suggested assessment questions; and Section 6.4 guides the assessment team in how to summarize findings and develop recommendations.

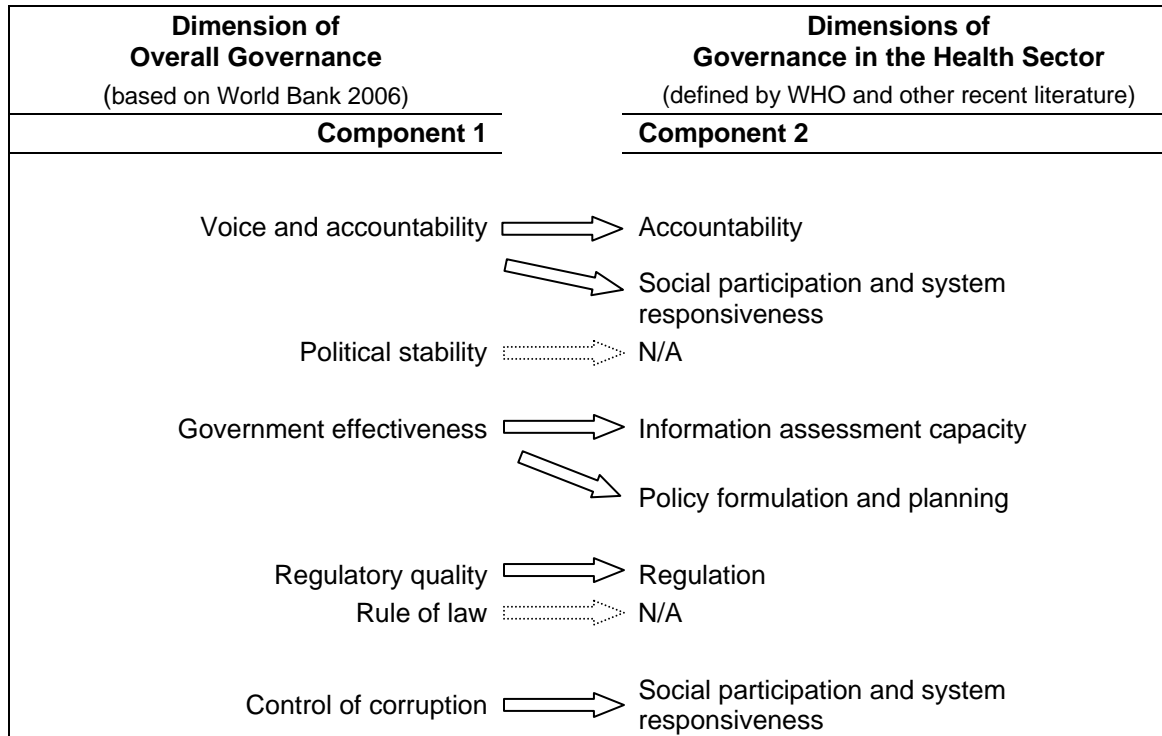
This module differs from the other modules in the nature of the indicators included—they are, for the most part, qualitative and descriptive questions rather than specific measurable indicators.

6.1.2 What is Governance (Stewardship)?

The U.S. Agency for International Development (USAID) has described effective health governance as the process of “competently directing health system resources, performance, and stakeholder participation toward the goal of saving lives and doing so in ways that are open, transparent, accountable, equitable, and responsive to the needs of the people.” For health care interventions to work, countries need effective policy making, transparent rules, open information, and active participation by all stakeholders in the health sector (USAID 2006). The World Health Organization (WHO) defines stewardship in the health sector as “the careful and responsible management of the well-being of the population” (WHO 2000).

The quality of overall governance in a country directly affects the environment in which health systems operate and the ability of government health officials to exercise their responsibilities. Governance can be broadly defined as the set of traditions and institutions by which authority in a country is exercised. This definition encompasses (1) the process by which governments are selected, monitored, and replaced; (2) the capacity of the government to effectively formulate and implement sound policies; and (3) the respect of citizens, private organizations, and the state for the institutions that govern economic and social interactions among them.

The concept of stewardship, or governance, in the health sector is relatively new, and there is little guidance for collection or standardization of information on this aspect of the health system. Measures of overall governance are better developed and include indicators on *voice and accountability*, *political stability*, *government effectiveness*, *regulatory quality*, *rule of law*, and *control of corruption* (Kaufmann, Kraay, and Mastruzzi 2006). Most of these indicators of general governance (to be assessed in Component 1) are linked to a dimension of stewardship in the health sector (to be assessed in Component 2) as illustrated in Figure 6.1. Evidence shows a positive relationship between governance indices and measures of health performance and outcomes (Lewis 2006).



Note: N/A = not applicable. Indicates that there is no corresponding dimension of stewardship in the health sector.

Figure 6.1 Links between Governance and the Health Sector

6.2 Developing a Profile of Governance

This module offers an approach to assessing governance by defining the dimensions of the concept, identifying what information is needed for the assessment, and suggesting methods and sources for collecting this information. Since there are few standardized indicators to measure stewardship in the health sector, much of the information for this module will be qualitative and interview-based data. As the international community continues to focus attention on and emphasize the importance of stewardship, more quantitative survey-based information will become available in time, similar to the data generated for the general governance indicators used in Component 1 of this module (see Section 6.3.2.1 below).

Because of the sensitivity of issues such as corruption, accountability, and system responsiveness, considerable care must be taken in conducting interviews on governance, attributing information to sources, and documenting results from the data collected. The assessment team will need to balance the importance of documenting, sometimes for the first time, problems of favoritism or corruption, and assuring anonymity for information sources and key informants.

The level of decentralization of the health sector will have a direct impact on the exercise of governance at various levels within the health sector. If authority and responsibility are centralized, then subnational and local officials will not function as stewards with policy-making power. They still have a positive role to play, however, in improving governance through better

management of resources, client-responsive services, or collection of quality health data. In countries where the health sector is more decentralized, however, you will need to assess the authority and responsibilities that exist at the subnational or local levels (or both), as well as at the national level, to ascertain whether programmatic resources to support stewardship in health should be directed at both the national and subnational levels.

An assessment of the general level of governance and corruption using the Component 1 indicators and an understanding of the overall political structure in the country and the level of decentralization (as discussed in Chapter 5, Core Module) will provide some context for the examination of stewardship within the health sector in your country.

6.3 Indicator-based Assessment

6.3.1 Topical Areas

Component 1 of this module includes the indicators on general governance. Data for these indicators on your country are available from the World Bank's Worldwide Governance Indicators and the Corruption Perceptions Index from Transparency International and are also provided in the CD database that accompanies this manual. Further information is available on the following websites—

- The World Bank <<http://info.worldbank.org/governance>>
- Transparency International <www.transparency.org>

Component 2 combines desk-based assessment and stakeholder interviews to identify information on indicators related to governance in the health sector. Stakeholder interviews should complement information collected from a review of documents and provide important information that may not be available through document review. As illustrated in Figure 6.1, the dimensions of governance in the health sector are somewhat different from the dimensions of overall governance. The following five dimensions of governance in the health sector will be considered in Component 2.

- Information/Assessment Capacity*—information available to decision makers and a broad range of stakeholders on trends in health and health system performance and on possible policy options. Available information is used for planning and decision making. Chapter 11 (Health Information System) contains extensive analysis on the existence, functioning, resources, and capabilities of a country's health information system.
- Policy Formulation and Planning*—appropriate processes in place to develop, debate, pass, and monitor legislation and regulations on health issues. The government planning process is functioning. There is consistency and coherence between health sector laws or plans and actual implementation.
- Social Participation and System Responsiveness*—involvement of a broad range of stakeholders (nongovernmental and representatives of various public sector actors) in

understanding health issues and in planning, budgeting, and monitoring health sector actions as well as the health system’s responsiveness to the input of these stakeholders. Elements of this dimension are also covered in detail in Chapter 7 (Health Financing) and Chapter 8 (Health Service Delivery).

- D. *Accountability*—existence of rules on publishing information about the health sector (e.g., plans, health data including health statistics, fee schedules); a functioning free popular and scientific press; functioning watchdog organizations; and consumer protection from medical malpractice

- E. *Regulation*—capacity for oversight of safety, efficacy, and quality of health services and pharmaceuticals; enforcement capacity for guidelines and standards and regulations; and perception of the burden imposed by excessive regulation

Governance is linked to each of the five performance criteria (equity, efficiency, access, quality, and sustainability), and it is difficult to disaggregate the influence of each component in terms of the criteria selected. Sound planning and policy formulation, for example, will have a positive impact on all of the performance criteria and, conversely, lack of planning and poor policies will have a negative impact. The same can be said of the other dimensions of governance with the exception of regulation—this dimension of governance is more easily linked to and should be referenced in terms of the quality of health services.

6.3.2 Detailed Descriptions of Governance Indicators

Table 6.1 groups the indicators in this module by topic.

Table 6.1 Indicator Map—Governance

Component	Topical Area	Indicator Numbers
Component 1	Not applicable	1–6
Component 2	Information/assessment capacity	7–11
	Policy formulation and planning	12–18
	Social participation and system responsiveness	19–22
	Accountability	23–33
	Regulation	34–40

6.3.2.1 Component 1

All indicators in this component are measured in the Worldwide Governance Indicators database (developed by the World Bank) and “reflect the statistical compilation of responses on the quality of governance given by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries, as compiled by a number of survey institutes, think tanks, non-governmental organizations, and international organizations” (World Bank 2006). The score for each indicator for a country ranges from –2.5 to 2.5, with higher scores reflecting better outcomes. Countries that score in the negative range on each indicator are much less likely to exercise stewardship that meets the standards established in the definition from the *World Health Report 2000*, cited in the introductory section of this module (WHO 2000).

Tip!

For details on how the indicators in this section are constructed and measured, as well as for a user-friendly tool for preparing regional comparison charts of these indicators, visit the World Bank Governance and Anti-Corruption website:
<http://info.worldbank.org/governance/kkz2005/>

1. Voice and Accountability

Definition, rationale, and interpretation	Measures the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media This indicator is a measure of political, civil, and human rights. The topics included in this indicator are, for example, civil liberties, political rights and representation, and fairness of elections.
Suggested data source	World Bank (2006). <i>Worldwide Governance Indicators</i> . < http://info.worldbank.org/governance/kkz2005/ >

2. Political Stability

Definition, rationale, and interpretation	Measures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism
Suggested data source	World Bank (2006). <i>Worldwide Governance Indicators</i> . < http://info.worldbank.org/governance/kkz2005/ >

3. Government Effectiveness

Definition, rationale, and interpretation Measures the quality of public services, the quality of the civil service and its degree of independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies

Topics included in this indicator are, for example, administrative and technical skills of the civil service, government stability, trust in government, policy consistency.

Suggested data source World Bank (2006). *Worldwide Governance Indicators*.
<<http://info.worldbank.org/governance/kkz2005/>>

4. Rule of Law

Definition, rationale, and interpretation Measures the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence

Suggested data source World Bank (2006). *Worldwide Governance Indicators*.
<<http://info.worldbank.org/governance/kkz2005/>>

5. Regulatory Quality

Definition, rationale, and interpretation Measures the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development

Topics included are, for example, business regulations, taxation, trade and competition policy, government market intervention.

Suggested data source World Bank (2006). *Worldwide Governance Indicators*.
<<http://info.worldbank.org/governance/kkz2005/>>

6. Control of Corruption

Definition, rationale, and interpretation Measures the extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as "capture" of the state by elites and private interests

Suggested data source World Bank (2006). *Worldwide Governance Indicators*.
<<http://info.worldbank.org/governance/kkz2005/>>

The scores for general governance collected for the six indicators in Component 1 reflect overall country governance, whereas the information to be collected in Component 2 (in the following section) focuses on stewardship in the health sector. A high score on a particular Component 1 indicator may not necessarily be matched by positive findings for a corresponding indicator in Component 2. For example, regulatory quality as measured by the Worldwide Governance Indicators looks at whether regulation is market-friendly, whereas regulation in the health sector (as discussed in Component 2) addresses issues of safety and quality of health services and products.

6.3.2.2 Component 2

As discussed in Section 6.2, health sector stewardship is a relatively recent analytical area and standardized indicators to measure its different dimensions are not available for the most part. Therefore, Component 2 of this module is structured differently than in the other modules in this assessment tool: for each of the five key dimensions of governance in the health sector, we give a set of illustrative questions that the assessment team should answer to assess each dimension. These questions are qualitative in nature (rather than defined indicators) and require more analysis on the part of the assessors than would be the case for a standard indicator. The assessment of each dimension is thus difficult because of the lack of a clear means of benchmarking how this country scores relative to other countries. You may find probing with other donor representatives useful to give you a feel for how the country you are assessing compares to others in the region or at a similar level of development.

Assessing and adequately describing each of the dimensions of governance in a rapid health sector assessment may be difficult unless recent in-depth assessments have been done. You should be able to get a generally well-informed impression of the state of governance, however, by reviewing documents and interviewing stakeholders.

Many of the other modules in this assessment also cover issues of governance in the health sector. Refer to these modules for topics that overlap with the Governance Module—

- *Health Financing Module (Chapter 7)*—for informal payments, consistency of public sector resource allocation with stated health strategy, governance of social insurance funds, provider payment systems aimed at increasing accountability
- *Health Service Delivery Module (Chapter 8)*—for enforcement of facility accreditation and quality of care regulations and enforcement processes, particularly in the private sector
- *Human Resources Module (Chapter 9)*—for absenteeism, collateral effects of public sector health workers holding private sector jobs, enforcement of professional certification
- *Pharmaceutical Management Module (Chapter 10)*—for regulation of medicines especially retail pharmacies or black markets, counterfeit and expired medicines, corruption in pharmaceutical procurement
- *Health Information System Module (Chapter 11)*—to complement the “Information/Assessment Capacity” dimension below

Tip!

Some of the research needed to complete the assessment of this dimension of stewardship is also needed for the Health Information System Module (Chapter 11).

A. Information/Assessment Capacity

Definition, rationale, and interpretation	Reliable, timely information on trends in the health status of the population, health services, health care financing, and human resources in the health sector is needed so policymakers can assess health system performance and formulate appropriate policies. Use the list of illustrative questions that follows this table to assess (1) data reliability and quality, (2) timeliness, and (3) extent of data use.
Suggested data source	Information on health information systems can be obtained from the statistics division of the MOH or equivalent organizational entity. Understanding the level of functioning of existing systems and their ability to produce timely, policy-relevant information will require examination of processes and outputs, as well as interviews with stakeholders at various levels of the system.
Stakeholders to interview	Data collectors, compilers, and users should all be interviewed to assess data quality as well as use. Interview— <ul style="list-style-type: none">• Data collectors and users at the facility level in several facilities• Officials of the statistics division at the district, regional, and national levels• Data users, including policymakers in the government and nongovernmental organization (NGO) and advocacy groups in the private sector, and major donors in the health sector, particularly WHO, which typically assists with health data, infectious disease surveillance, and immunization
Issues to explore	Talking to data producers is important, particularly at the facility level, where redundancies occur in requirements for data collection for multiple vertical programs that may affect the quality and timeliness of reporting and reveal a lot about the structure of routine information systems. Likewise, probe policymakers regarding their understanding of what information they should expect or demand and to what extent their expectations are met.

Suggested questions related to Information/Assessment Capacity:

Review the major MOH planning documents for the amount, quality, and age of the data, and how it is used to justify health sector priorities, policies, and resource allocations.

7. Describe the general state of routine systems for collection, reporting, and analyzing data (in terms of efficiency, frequency, and quality) on the following—

- a. Vital registration statistics (births, deaths)
- b. Health status (disease-specific morbidity and mortality)
- c. Health services (out- and inpatient statistics on conditions treated and preventive services delivered, broken down by sex, age, and other basic indicators)
- d. Health financing

Module link: Health Financing, indicators 7–13 on pooling and allocation of financial resources

- e. Human resources

Module link: Human Resources, indicator 3 (HR data)

Module link: Health Information System, indicator 15 (reporting standards), indicator 16 (reporting flows), and indicator 17 (data accuracy)

8. Based on the level of decentralization, is the information available at subnational and local levels adequate to inform health officials at those respective levels?¹ (*Sources:* regional, departmental, provincial, and local health documents and reports sent to central MOH) Probe with the interviewee for one or more examples of how information has been used.

Module link: Health Information System, indicator 16 (data reporting patterns)

9. Is information collected, analyzed, and used at the point of generation or merely reported up to a higher level? (*Sources:* regional, departmental, provincial, and local health analyses available for review) Quality of information is generally better if it is seen to have real value and actually used by those collecting it.

Module link: Health Information System, indicator 16 (data reporting patterns)

10. Describe the technical capacity of the Health Planning Unit (or other appropriate group) to absorb, analyze, and translate findings from the information collected into viable, appropriate health plans and policies. What is the staffing pattern in the unit, and what are the qualifications of the staff? The best information systems still require adequate human resources to absorb, analyze, and use the information for improved health policies. Review reports, policy papers, and studies by the unit to see how data are used.

Module link: Health Information System, indicators 19–22 (data analysis capacity and resources)

¹ This question requires some interpretation on the part of the user because it implies knowledge of the responsibilities and authority of officials at the different levels within the system.

11. How and with what frequency are data from health information systems presented to policy makers? In particular, is reliable information available on the following—

- a. Current and projected trends in health
- b. Distribution of health resources
- c. Health budget allocation and actual expenditures
- d. Health facility distribution
- e. Distribution of human resources

Timely presentation of data² in a user-friendly format is critical to policy makers' ability to actually use this information. The availability of the information to the public also has implications for the dimension of accountability.

Module link: Health Information System, indicators 22 (presentation to policy makers), 24 (timely analysis), and 25 (use of data analysis for health sector performance)

B. Policy Formulation and Planning

Definition, rationale, and interpretation

To be effective stewards in the health sector, governments must have in place appropriate processes to develop, implement, and monitor legislation and guidance on public health and health system issues. Comprehensive health policy and planning processes integrate health system information, public input, analysis of policy options, and recommendations for action based to the greatest degree possible on proven interventions.

Suggested data source

Information on the existence of policies, plans, and legislation may occasionally be available on MOH websites or in compiled form if previous in-depth assessments have been carried out, but these documents are more likely to be available only in dispersed form in various locations, making rapid assessment difficult. Understanding how the policy process works will require examination of processes and outputs related to the formulation, adoption, implementation, and monitoring of health policies, and will more likely require interviews with stakeholders from various points of the system.

Stakeholders to interview

- MOH (Departments of Policy and Planning)
- Parliamentary Health Committee staff or equivalent
- Leadership of professional provider associations
- Selected representatives of NGO and advocacy groups
- Two or more other donor representatives
- Private sector representatives (pharmaceutical wholesalers and distributors, retailers, local pharmaceutical manufacturers, operators or owners of private hospitals and clinics, laboratories)

²In some cases “timely” may refer to monthly reporting and analysis, and in other cases it may refer to yearly compilation, analysis, and presentation. As such, the assessment team must understand the periodicity of data reporting to interpret the adequacy of the system examined.

B. Policy Formulation and Planning

Issues to explore Probe policymakers to learn their true understanding of the processes required to formulate, adopt, implement, and monitor policy changes. Compare policies and plans with actual implementation. In countries where policy processes are not open and transparent (e.g., some monarchies, governments in transition or those under military rule), probe how decrees or other policy proclamations are influenced. That health sector leaders understand their role in influencing policy, however it is formulated and implemented, is most important.

Suggested questions related to Policy Formulation and Planning:

12. Inquire about the existence and implementation of strategic health plans.

- a. Does the country have a strategic health plan at the national level that was developed or revised within the last five years? Is this document consistently implemented and adhered to? In particular, does the document provide for planning new infrastructure and capital investment, and does it include a health workforce strategy? (*Sources:* MOH central level documents or website)
- b. Based on the level of decentralization and policy or planning responsibilities at the subnational and local levels, are strategic health plans in place at the appropriate levels that have been revised within the last three years?³ (*Sources:* regional, departmental, provincial, and local health planning documents sent to central MOH)
- c. What is the gap between sector plans, and what the health statistics indicate health system priorities? What is the gap between sector plans, and what has been actually implemented or accomplished?

If strategic plans are not sufficiently recent, they will not be responsive to newly emerging threats as well as opportunities. Lack of timely revision of the health plan may also indicate that it is an historical rather than working document. Ideally, the strategic plan should be adjusted annually based on updated information on health status, services, and changes in the domestic or donor climate (or both) as well as policy.

13. Does the MOH identify policy changes needed to achieve the objectives in the strategic health plan based on sound technical review of performance? Monitoring performance against stated objectives is a prerequisite for effective health policy.

14. To what extent do health policy makers work effectively with the legislative and executive branches of government to gain approval of sound public health and health care policies? Can someone describe a recent example? Does the national legislature or any subnational council have a committee focused on health issues? Ability to manage the political process is critical for planning and obtaining the budget necessary for implementation.

³ This question requires some interpretation on the part of the user because it implies knowledge of the responsibilities and authority of officials at the different levels within the system.

15. How does the government coordinate or harmonize donor inputs (funding and policy priorities)? Does the country have a sector-wide approach for health or any other sector? The government’s role in managing donor funding to achieve stated health objectives is an important aspect of this dimension of governance.

Module link: Core Module section 5.3.7 and 5.3.8 on donor mapping and donor coordination

16. What proportion of major external sources of funding are coordinated with and complement an agreed upon government health plan?

17. Does the MOH fulfill its public health function by engaging in health policy development and actions (including communication with national, local, and special interest advocacy groups) to raise awareness of policies that affect public health such as legislation on tobacco use, road safety, family planning, and HIV/AIDS prevention? (*Sources:* public documents, declarations, and press releases) Stewardship of the public health function is directly related to supporting the health and well-being of the population.

18. Does the MOH engage national, local, and special interest advocacy groups to develop health policies? (*Sources:* public documents, declarations, and press releases) Such engagement is indicative of a more transparent policy process that involves various stakeholders (see “C. Social Participation and System Responsiveness” below).

C. Social Participation and System Responsiveness

Definition, rationale, and interpretation This topic encompasses the organization and leadership to convene and facilitate collaboration between government and civil society, involving a broad range of stakeholders (including those not typically considered to be health-related) to participate in identification of health priorities and in planning, budgeting, and monitoring health sector actions. This dimension of governance also considers the degree of the health system’s responsiveness to the input of these stakeholders.

Suggested data source Some information may be available in reports on various aspects of social participation and system responsiveness, but in all likelihood interviews will be required with stakeholders of all types, at various levels of the system. Check health sector planning and strategy documents—who participated in their development?

Stakeholders to interview

- Representatives of grass roots organizations, NGOs, and advocacy groups, including representatives of patient groups (such as people living with HIV/AIDS), underserved populations (women’s groups, indigenous organizations), and civil rights leaders
- Leadership of professional associations
- Representatives of the MOH, ministry of local government
- Representatives of private sector: pharmaceutical manufacturers, wholesalers, distributors, health insurers, private hospital or clinic owners or operators

C. Social Participation and System Responsiveness

Issues to explore In countries with little civil society participation in health policy, interviewees may be very passive and have low expectations; in other countries with heightened awareness of civil rights and increased participation experience, however, interviewees may have exaggerated expectations. Assessment team members will have to weigh information from all sides to formulate a balanced assessment of the state of social participation and system responsiveness. Ask about recent elections—was health an issue?

Suggested questions related to Social Participation and System Responsiveness:

19. Who participates (i.e., persons or representatives of stakeholder groups) in setting the health policy agenda or in defining and prioritizing health needs and services at the national level?

What mechanisms are in place to ensure the participation of key stakeholders in the discussion of the health policy agenda? (*Sources:* MOH documents, circulated minutes from MOH meetings, reports on public health forums, reports or minutes from multisector meetings) This information is important in determining whether key stakeholders are, either deliberately or inadvertently, being excluded from discussions on the health policy agenda.

Module link: Health Service Delivery, indicator 29 (participation of civil society and community), 30 (mechanisms to engage community), and 31 (feedback from community)

20. Who participates (i.e., persons or representatives of stakeholder groups) in setting the health policy agenda or the definition and prioritization of health needs and services at the local level? What mechanisms are in place to ensure their participation (e.g., election of municipal or state representatives; a community, village, or municipal group; a facility board)?

(*Sources:* community NGOs, advocacy groups, village leaders; published, disseminated minutes from meetings dealing with health policy agenda) This information is important in determining whether key stakeholders are, either deliberately or inadvertently, being excluded from discussions on the health policy agenda.

21. Does the MOH reach out to the general public with information, education, and communication to raise awareness and change behavior for priority health issues such as tobacco use, road safety, family planning, and HIV/AIDS prevention? Do private corporations contribute to public health goals through social marketing or workplace programs? (*Sources:* public documents, declarations, and press releases)

22. What mechanisms are in place to track the responsiveness of health officials to stakeholder input (such as requests for representation on advisory bodies, requests for a share of funding, and incorporation of public input into health policy)? (*Sources:* citizen advisory group reports at national or subnational level, reports of government watchdog organizations) Social participation in the definition of health needs and services has little meaning if health officials do not incorporate this feedback into their planning and policy formulation.

D. Accountability

Definition, rationale, and interpretation	Accountability of government to its citizens can be defined as the responsibility to answer questions, meet reasonable expectations of system performance and ethics, and address negligent or corrupt actions. It requires the existence of, and adherence to, rules on publishing health sector information (e.g., plans, data, fee schedules) and the existence of a functioning free popular and scientific press, watchdog organizations, and an independent judiciary. The private corporate sector is also accountable to regulatory agencies, its employees, communities living nearby, and other stakeholders.
Suggested data source	Some information may be available in reports on accountability in the health sector, but in all likelihood, interviews will be required with stakeholders of all types at various levels of the system.
Stakeholders to interview	<ul style="list-style-type: none">• Representatives of watchdog organizations, the press, and other civil society groups• Leadership of professional associations• Representatives of the MOH, ministry of local government• Regulatory agencies• Donors in the health sector• Corporate leaders, business associations, private provider associations, industry groups
Issues to explore	Exploring the rules for public disclosure, and the extent to which they are followed, with officials of the MOH and the legislative body is important. If officials are not aware of existing rules, most likely those rules are not being followed. This noncompliance, in and of itself, demonstrates a lack of accountability. Exploring civil society groups' knowledge of the rules for dissemination of health policy and plans to the public is also important, as is their understanding of freedom of information regulations and the degree to which these groups hold public officials accountable for health system performance and ethical behavior.

Suggested questions related to Accountability:

- 23. Are health system goals, objectives, and performance targets clearly articulated and communicated to the public by the MOH?** (*Sources:* MOH strategic plan, planning documents, website) Clear objectives and performance targets are needed to evaluate progress and performance and for the MOH to be held accountable.
- 24. Do health authorities regularly communicate with constituencies and partners at the national, subnational, and local levels on priority health issues?** (*Sources:* public documents, press releases, other dissemination vehicles) Frequent communication with constituencies is an indication of an open and more transparent process in identifying and acting on priority health issues.

25. Does a national health policy or legislation exist to define the role and responsibilities of the public health sector? (*Sources:* MOH governing documents) Such a public statement or policy clarifies the extent to which the government accepts responsibility for improving the health status of the population at large and specific subgroups deemed most vulnerable.

26. Has the government provided and published guidance for prioritizing health expenditures based on available resources and assessed need? (*Sources:* MOH central documents, news releases, reports) Such evidence-based decisions on priorities need to be differentiated from political rhetoric in assessing the stewardship function of the MOH. This question is also important for the dimension of Policy Formulation and Planning.

Module link: Health Financing, indicators 8–14, on MOH budget allocations

27. Is an adequate system in place to monitor and evaluate progress toward stated health objectives as well as changes in performance resulting from changes in policies and priorities? (See the discussion in the “Information/Assessment Capacity” dimension earlier in this section). Without a functioning monitoring and evaluation system, the government cannot evaluate its own performance nor can it be held accountable to its citizenry.

Module link: Health Information Systems, indicator 10 (reporting against health indicators)

28. Are reports on government health sector performance produced and made available to the general public and civil society? (*Sources:* government reports, reports by NGOs or other watchdog organizations, public record. See the discussion in the “Information/Assessment Capacity” dimension earlier in this section). Such reports and their dissemination are necessary for performance accountability.

Module link: Health Information Systems, indicator 10 (reporting against health indicators)

29. Inquire about financial accountability of public authorities.

- a. Is there financial accountability to the public for government spending on health (e.g., regular publication of budgets and spending reports)? (*Sources:* MOH budget and expenditure documents, National Health Accounts)
- b. If officials at the subnational level have responsibility for health spending, how are they held accountable to the national health authority and their constituents at the subnational level?
- c. If officials at the local or municipal level have responsibility for health spending, how are they held accountable to the national or subnational authorities and their constituents at the local level?

Module link: Health Financing, indicators 14 (expenditure reporting by local jurisdictions) and 15–16 (user fees and exemptions)

- 30. Is information from research, media, opinion polls, advocacy, and watchdog groups available to public and private stakeholders?** Full disclosure of such information supports government accountability.
- 31. To what extent does the press cover health policy debates?** Press involvement in such debates provides information to a broader segment of civil society.
- 32. Does any legislation or regulation address medical malpractice?** Which court or judicial, administrative, or regulatory body hears such cases, and do injured persons tend to use it to seek redress? To what extent are penalties or fines imposed in proven cases?
- 33. Is there a functioning consumer defense movement or league, and to what extent does it focus on health related issues?**

Tip!

Some of the issues relevant to this dimension of stewardship are covered in the Health Service Delivery module (Chapter 8), Human Resources module (Chapter 9), and the Pharmaceutical Management module (Chapter 10).

E. Regulation

Definition, rationale, and interpretation

This dimension includes the laws governing the health sector, and their corresponding regulations, and describes the capacity of the government for oversight of safety, efficacy, and quality; capacity for enforcement of guidelines, standards, and regulations; and perception of the burden imposed by excessive regulation. Regulation is directly linked to health system quality and equity (two of the five assessment criteria on which this assessment framework is based).

Suggested data source

Regulations should be available in published form or may occasionally be available in a web-based format. The ease with which these regulations can be obtained is in itself an indicator of the level of development of the health regulatory function. In addition, you will need to discuss with stakeholders the health sector's ability to appropriately regulate various aspects of the health system, including safety and sanitary guidelines; safety and efficacy of pharmaceuticals, medical devices and equipment; quality of health provision (provider licensure and certification, facility accreditation); and dispensing of pharmaceuticals.

Stakeholders to interview

- Representatives of NGOs and advocacy groups
 - Leadership of professional associations
 - Representatives of health industries including private sector providers, pharmacists
 - Representatives of the MOH (regulatory departments)
-

E. Regulation

Issues to explore

What mechanisms are in place to develop and enforce legislation, regulations, standards, and codes that support public health and health care services? Some countries are prone to passing new health laws and regulations frequently and may perceive this action as an accomplishment. The new laws and regulations, however, may be inconsistent and create confusion; furthermore, the government may fail to implement the laws. Is there adherence to “old” laws that prevent providers from exercising their practice? Other countries are extremely slow or reluctant to pass new laws or regulations, and reform must move forward with the existing legal framework.

Suggested questions related to Regulation:

34. What do the health laws mandate? Do they clearly define roles and responsibilities in the health sector? Are there serious contradictions between some laws or serious ambiguities? Such contradictions often happen when laws are passed to decentralize the health system.

35. Describe the government system for the following—

- a. Licensure of health professionals (*Sources:* documents from licensing bodies, MOH documents)
- b. Regulation of the safety, minimum physical infrastructure, and equipment availability for different types of health facilities, including MOH and Social Security facilities, private hospitals and clinics, and laboratories
- c. Adequate regulation to ensure the safety, efficacy, and quality of medicines, as well as the appropriateness and accuracy of product information (*Sources:* See Pharmaceutical Management Module, Chapter 10)
- d. Protection of consumer rights

Tip!

Review the definitions of licensure, accreditation, and certification in the Box 6.1 before addressing the following three questions.

Module link: Pharmaceutical Management, indicators 8 (registration of pharmaceuticals) and 11 (licensing, inspection, and control of pharmacies)

36. Do governmental regulatory agencies have the necessary resources (human, technical, financial) to enforce existing legislation and regulations? Without enforcement authority and capacity, the government cannot provide adequate oversight of the health sector and health services and products.

37. Does a functioning system (public or private) exist for accreditation or certification (or both) for—

- a. Health professionals? (*Source:* professional associations’ publications and websites)
- b. Hospitals and health facilities?

This system is essential if quality of health care services is to be maintained.

Box 6.1

Definitions of Licensure, Accreditation, and Certification

Licensure is a process by which a governmental authority grants permission to an individual practitioner or health care organization to operate or to engage in an occupation or profession. Licensure regulations are generally established to ensure that an organization or individual meets minimum standards to protect public health and safety. Licensure to individuals is usually granted after some form of examination or proof of education and may be renewed periodically through payment of a fee, and/or proof of continuing education or professional competence. Organizational licensure is granted following an on-site inspection to determine if minimum health and safety standards have been met. Maintenance of licensure is an ongoing requirement for the health care organization to continue to operate and care for patients.

Accreditation is a formal process by which a recognized body, usually an NGO, assesses and recognizes that a health care organization meets applicable pre-determined and published standards. Accreditation standards are usually regarded as optimal and achievable, and are designed to encourage continuous improvement efforts within accredited organizations. An accreditation decision about a specific health care organization is made following a periodic on-site evaluation by a team of peer reviewers, typically conducted every two to three years. Accreditation is often a voluntary process in which organizations choose to participate, rather than one required by law and regulation.

Certification is a process by which an authorized body, either a governmental or nongovernmental organization, evaluates and recognizes either an individual or an organization as meeting pre-determined requirements or criteria. Although the terms accreditation and certification are often used interchangeably, accreditation usually applies only to organizations, while certification may apply to individuals, as well as to organizations. When applied to individual practitioners, certification usually implies that the individual has received additional education and training, and demonstrated competence in a specialty area beyond the minimum requirements set for licensure. An example of such a certification process is a physician who receives certification by a professional specialty board in the practice of obstetrics. When applied to an organization, or part of an organization, such as the laboratory, certification usually implies that the organization has additional services, technology, or capacity beyond those found in similar organizations.

Source: Quoted from Rooney and Ostenberg (1999)

- 38. Does the MOH or other government agency review, evaluate, and propose revisions of laws and regulations to assure that they reflect current scientific knowledge and best practices for achieving compliance?** (*Sources:* MOH documents, legislative reports, proposed legislation with dates indicated) If laws and regulations do not reflect current knowledge and best practices, they cannot serve as the basis for sound regulation of health sector actors.
- 39. To what extent does the government enforce regulations in areas of public health concern including (but not limited to)—**
- Protection of drinking water and clean air standards
 - Enforcement of laws governing the sale of alcohol and tobacco to minors
 - Childhood immunizations

(*Sources:* review of charter for regulatory body, legislation, and enforcement power of assigned regulatory body)

40. Has the government attempted to form partnerships with those in the regulated environment to support compliance? Specifically—

- a. To what extent has the government been effective in enforcement of codes of conduct of health workers?
- b. To what extent has the government been effective in enforcement of quality standards for health care services providers, facilities, and producers of pharmaceuticals and medical supplies?
- c. Any experience linking provider payments with performance to increase accountability?

Module link: Health Financing, indicator 18 (provider payments) and Annex 7A on provider payment mechanisms

6.3.3 Summary of Issues to Address in Stakeholder Interviews

This section includes a summary listing of the types of stakeholders to interview in assessing the indicators from Component 2 and the issues to address with each stakeholder. This information will help the assessors in planning the topics to discuss in stakeholder interviews. Table 6.2 provides a summary.

Table 6.2 Summary of Issues to Address in Stakeholder Interviews

Profile of Stakeholders to Interview	Issues to Discuss with Stakeholder
<ul style="list-style-type: none"> • MOH statistics division officials (or equivalent organizational entity) • Health data collectors at the facility level in several facilities^a 	Health information systems: collection, analysis, reporting, and use of health data
Officials from the MOH departments of policy and planning	Health policies, plans, and legislation; process of formulation, adoption, implementation, and monitoring of health policies
MOH regulatory departments	<ul style="list-style-type: none"> • Guidelines on safety and efficacy of pharmaceuticals, medical devices and equipment, and quality of health service provision • Mechanisms to enforce legislation, regulations, standards, and codes for health care services
MOH and Ministry of Local Government (or equivalent) officials	Rules for public disclosure and dissemination of health policy and plans
Parliamentary health committee staff (or equivalent)	Health policies, plans, and legislation; process of formulation, adoption, implementation, and monitoring of health policies
Health data users, including policymakers in the government and NGO and advocacy groups in the private sector	Health information systems: collection, analysis, reporting, and use of health data

Profile of Stakeholders to Interview	Issues to Discuss with Stakeholder
Representatives of grass roots organizations, NGO and advocacy groups, including patient groups (such as people living with HIV/AIDS), underserved populations (women’s groups, indigenous organizations), civil rights leaders	<ul style="list-style-type: none"> • Health policies, plans, and legislation; process of formulation, adoption, implementation, and monitoring of health policies • Organization and leadership to convene and facilitate collaboration between government and civil society; and degree of health system’s responsiveness to stakeholders’ input
Representatives of watchdog organizations, the press, and other civil society groups	Rules for dissemination of health policy and plans to the public, freedom of information regulations, accountability of public officials
Leadership of professional health associations, including private providers	<ul style="list-style-type: none"> • Health policies, plans, and legislation; process of formulation, adoption, implementation, and monitoring of health policies • Rules for dissemination of health policy and plans to the public, freedom of information regulations, accountability of public officials • Regulation of pharmacies and sale of medicines; import taxes; price controls
Corporate representatives, business associations, wholesalers and distributors, retail outlets, NGOs	<ul style="list-style-type: none"> • Health-related corporate social responsibility initiatives • Social marketing of health products • Workplace programs • Social Security payments (for health benefits and provision of services) • Government procurement opportunities • Taxes on imported medicines • Contracting out of service provision
Representatives of health industries	<ul style="list-style-type: none"> • Guidelines on safety and efficacy of pharmaceuticals, medical devices and equipment, and quality of health service provision • Mechanisms to enforce legislation, regulations, standards, and codes for health care services
NGOs and advocacy groups	<ul style="list-style-type: none"> • Guidelines on safety and efficacy of pharmaceuticals, medical devices and equipment, and quality of health service provision. • Mechanisms to enforce legislation, regulations, standards and codes for health care services
Donors in the health sector	All of the above topics

^a We suggest you try to include three or four facilities that represent urban and rural locations, the public and private sectors, and different levels of care (primary, secondary, tertiary).

6.4 Summarizing Findings and Developing Recommendations

Chapter 4 describes the process that the team will use to synthesize and integrate findings and prioritize recommendations across modules. To prepare for this team effort, each team member must analyze the data collected for his or her module(s) to distill findings and propose potential interventions. Each module assessor should be able to present findings and conclusions for his or

her module(s), first to other members of the team and eventually at a stakeholder workshop and in the assessment report (see Chapter 3, Annex 3J for a proposed outline for the report). This process is iterative; findings and conclusions from other modules will contribute to sharpening and prioritizing overall findings and recommendations. Below are some generic methods for summarizing findings and developing potential interventions for this module.

6.4.1 Summarizing Findings

Using a table that is organized by the topic areas of your module (see Table 6.3) may be the easiest way to summarize and group your findings. (This process is Phase 1 for summarizing findings as described in Chapter 4.) Note that additional rows can be added to the table if you need to include other topic areas based on your specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Annex 4A of Chapter 4. In anticipation of working with other team members to put findings in the SWOT framework (strengths, weaknesses, opportunities, and threats), you can label each finding as either an S, W, O, or T (please refer to Chapter 4 for additional explanation on the SWOT framework). The “Comments” column can be used to highlight links to other modules and possible impact on health system performance in terms of equity, access, quality, efficiency, and sustainability.

Table 6.3 Summary of Findings—Governance Module

Indicator or Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments^a

^a List impact with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

6.4.2 Developing Recommendations

After you have summarized findings for your module (as in Section 6.4.1 above), it is now time to synthesize findings across modules and develop recommendations for health systems interventions. Phase 2 of Chapter 4 suggests an approach for doing this with your team. In this section, we discuss a list of common interventions seen in the area of governance that you may find helpful to consider in developing your recommendations.

A. Information/Assessment Capacity

Data quality or reliability may be poor or data reporting may not be timely because of (1) a lack of capacity or incentive for peripheral units to report data, (2) a lack of resources or capacity to process the data at the national level, or both. Interventions may be required at various levels, including building capacity and demonstrating the applicability of data use at the peripheral level, building capacity of data analysts at the national level, improving information system technology, and providing technical assistance to improve the efficiency and user-friendliness of data reporting formats, according to different audiences.

If data are not sought or used by policy makers, capacity building of policy makers through in-country workshops, one-on-one coaching, and visits or study tours to other countries with highly developed processes for data use for decision-making may be indicated.

Remember to coordinate recommendations in this area with those being developed under the Health Information System Module (Chapter 11).

B. Policy Formulation and Planning

If MOH planning capacity is weak, consider structural changes in the MOH (e.g., creation of a new planning entity, elevation of the planning entity in the organization, or creation of new job titles and job descriptions for key planning personnel) and capacity building of key planning personnel.

If coordination or communication between the executive branch and the legislature (e.g., the Parliamentary Health Committee) is weak or nonexistent, consider creating an ad-hoc inter-governmental committee with strong leadership to establish dialogue among branches of government. Consultation with project staff of any general governance project that may be present in-country can be useful in identifying interventions that have been successful in other sectors.

If donor coordination is weak, consider helping establish a donor coordination committee and providing support for setting up and helping the committee to begin to function effectively for an initial period until it is generally recognized as being useful and therefore becomes self-sustainable.

If coordination and dialogue with the private sector is weak or sporadic, consider establishing committees or consultative working groups to bring private sector representatives together for purposes of soliciting inputs on their concerns, such as regulations, taxation, business opportunities, and potential barriers to private participation in the health sector.

C. Social Participation and System Responsiveness

If civil society participation is weak or absent, assistance may be needed to help in the formation or strengthening of professional organizations and advocacy and watchdog groups (including consumer defense bodies) through establishment of organizational development grant programs, which may be either donor funded or funded by a combination of donor, government, and civil society resources.

If stigmatized groups (such as organizations of people living with HIV/AIDS) are excluded from the health policy dialogue or if the government is not responding to citizen input, special provisions may be introduced, such as establishing new bylaws for inclusion of these groups in intergovernmental committees and other organizations. Donor organizations can be helpful in identifying such gaps and writing requirements for inclusiveness for countries to qualify for donor funding (vis-à-vis the Global Fund to Fight AIDS, Tuberculosis and Malaria, and requirement for involvement of civil society groups in the Country Coordinating Mechanism).

Citizen participation in the definition of health needs and services can also be encouraged through citizen participation in referendums that allow civil society to select their priority health issues. Such participation is most productive if health officials have agreed, in advance, to incorporate community health priorities into their planning and budgetary process.

D. Accountability

If public documents are not being published or disseminated, assistance may be needed to bring this problem to the attention of policy makers and to help identify sources of funding to ensure that information regarding patient rights, fee schedules, health entitlements, and other issues is made available to the general public.

If the press is not covering important health policy issues, media training and establishment of media liaisons in key positions should be considered.

E. Regulation

If conflicting legislation exists, technical assistance may be useful in pinpointing inconsistencies and formulating clarification.

If regulatory agencies lack resources to enforce legislation or regulations, help may be needed to identify funding sources, beginning with reallocation of MOH resources, to ensure proper enforcement of safety and quality standards.

If no system exists for accrediting health professionals, technical assistance to develop accreditation bodies, standards, and processes should be considered.

Address regulatory and business constraints that impact private sector participation in health sector delivery, such as accreditation, provider regulations, uneven enforcement of provider regulations, taxes and import duties, formation of group practices, restrictions on advertising or promotion of products, user fees, and contracting out of MOH services.

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CHAPTER 7 HEALTH FINANCING MODULE

7.1 Overview

7.1.1 Chapter Outline

This chapter presents the health financing module of the assessment tool. Section 7.1 defines health financing and its key components and describes the process of resource flows in a health system. Section 7.2 provides guidelines on preparing a profile of health financing for the country of interest, including instructions on how to customize the profile for country-specific aspects of the financing process. Section 7.3 presents the indicator-based part of the assessment. Section 7.4 provides guidance on how to synthesize your findings and presents suggestions for possible solutions to the most common problems in health system financing.

7.1.2 What Is Health Financing?

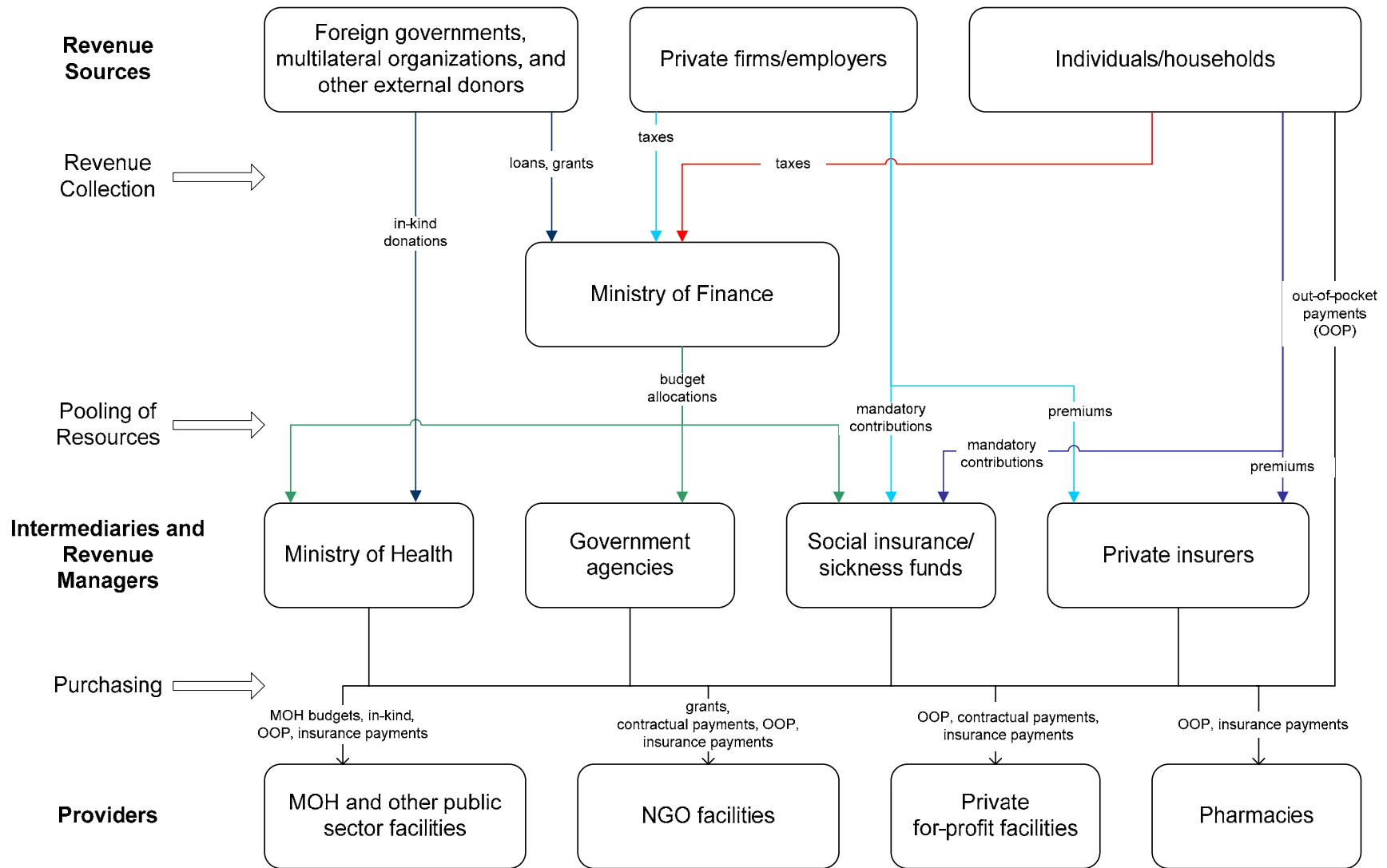
The World Health Organization (WHO) defines *health financing* as the “function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system.” It states that the “purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care” (WHO 2000). The rest of this section draws from PHR (1999) and Mossialos and Dixon (2002). Health financing has three key functions (illustrated in Figure 7.1 and defined below): revenue collection, pooling of resources, and purchasing of services.

Revenue collection is concerned with the sources of revenue for health care, the type of payment (or contribution mechanism), and the agents that collect these revenues. All funds for health care, excluding donor contributions, are collected in one way or another from the general population or certain subgroups. Collection mechanisms include taxation, social insurance contributions, private insurance premiums, and out-of-pocket payments. Collection agents (which in most cases also pool resources and purchase health care services from providers) could be government or independent public agencies (such as a Social Security agency), private insurance funds, or health care providers.

Tip!

Definitions of health financing terms can be found in the following glossaries—

- European Observatory's Health Systems and Policies (2006) Glossary
- World Bank Health Systems Development—Glossary (World Bank 2006)



Notes: Figure 7.1 presents the most common flows of health system resources; some countries may have other options of health system financing. "Other Government Agencies" can include the Ministry of Education and Ministry of Defense.

Figure 7.1 Health Financing Flowchart

Pooling of resources, the second main aspect of health financing, is the accumulation and management of funds from individuals or households (pool members) in a way that insures individual contributors against the risk of having to pay the full cost of care out-of-pocket in the event of illness. Tax-based health financing and health insurance both involve pooling. Note that fee-for-service user payments do not involve the pooling of resources. Some fees, however, may be set to “cross-subsidize” certain services or groups by charging more than the cost of production for a service or a group to allow less than the cost to be charged for another service or to another group.

Purchasing of health services is done by public or private agencies that spend money either to provide services directly or to purchase services for their beneficiaries. In many cases, the purchaser of health services is also the agent that pools the financial resources. Purchasers of health services are typically the Ministry of Health (MOH), Social Security agencies, district health boards, insurance organizations, and individuals or household (who pay out of pocket at time of using care). Purchasing can be either passive or strategic; passive purchasing simply follows predetermined budgets or pays bills when they are presented, whereas strategic purchasing uses a deliberate approach to seeking better quality services and low prices.

For good performance of the health system, the financing agents need to generate an appropriate amount of revenues relative to what is possible in the country; pool risk effectively; create appropriate incentives for providers; and allocate resources to effective, efficient, and equitable interventions and services. These functions should be managed efficiently, minimizing administrative costs.

Resources on health financing, including selected articles and references to specialized literature, are provided in the bibliography for this chapter.

7.2 Developing a Profile of Health Financing

This section presents a basic model of health financing and discusses common country context issues, related to decentralization, that the assessment team needs to consider in developing an understanding of the financing process.

7.2.1 How Does Health Financing Work?

Figure 7.1 shows a general model of the flow of health care resources from sources of funds to health service providers. The assessment team should redraw the flowchart as needed to reflect country-specific characteristics of the health financing process. The payment mechanisms presented by the arrows that connect the various levels of financing assessed are in the last part of the indicators section. The assessment team is encouraged to customize Figure 7.1 for the country of interest after completion of the indicator-based assessment of health financing (Section 7.3). Customizing will facilitate the process of synthesizing the findings from this module (Section 7.4).

The Ministry of Finance is typically the central revenue collector of funds for the public health care system. The Ministry of Finance receives funds from foreign donors (in the form of grants or loans) and from private firms and individuals (in the form of taxes). The pooling of resources, the next step in health financing, is conducted by intermediaries and revenue managers, who could be the MOH and other government agencies such as the Ministry of Education (in charge of medical education institutions) and the Ministry of Defense (in charge of military health facilities); social insurance and sickness funds; community-based insurance schemes; and private insurance entities.

The MOH receives the government budget funds allocated for health from the Ministry of Finance, but the level of government decentralization dictates whether all or only part of the government health budget goes directly to MOH (see Section 7.2.2 in this chapter and the Core Module in Chapter 5 for a more detailed discussion of decentralization issues). The MOH often receives a large share of donor contributions for health as in-kind contributions (e.g., medicines and technical experts). Other ministries or government agencies can also receive central government funds for expenditures on health: for example, the Ministry of Education to fund university teaching hospitals and the Ministry of Defense for medical facilities that are under its umbrella. Social and private health insurers receive contributions in the form of insurance premiums from individuals or households and from private firms that purchase or subsidize insurance premiums for their employees. Social health insurance (SHI) organizations also receive government funds, either as direct subsidies (usually when the SHI scheme is not self-sustaining financially, which is often the case with nascent schemes) or as premium payments for individuals who are eligible for government-subsidized SHI contributions (usually children, the elderly, military recruits, civil servants, or the indigent or unemployed).

All intermediaries and revenue managers and individuals or households are purchasers of health care services. The payment mechanisms used by health care revenue managers for each type of provider vary across countries (and provinces or districts within countries) but the most commonly used methods are the following.

- *Line item budgets* are allocated for each functional budget category, such as salaries, medicines, equipment, and administration.
- *Global budgets* are allocated to health facilities and typically depend on the type of facility, historical facility budget, number of beds (for hospitals), per capita rates, or utilization rates for past years.
- *Capitation* is a payment method that allocates a predetermined amount of funds per year for each person enrolled with a given provider (usually a primary care provider, such as family physician) or resident in a catchment area (in the case of hospitals, for example); usually there is a defined package for services covered by providers under such schemes.
- *Case-based payment* combines the estimated costs associated with all interventions typically prescribed for the treatment of a given condition and involves a set payment to providers for each patient treatment episode by condition, according to a predetermined payment schedule based on estimated total cost.

- *Per diem payment* is a predetermined payment that providers receive for each patient-day of hospital stay; the amount of the payment usually varies by type of hospital department.
- *Fee for service (or user fee)* is the out-of-pocket payment that patients make for each health care service at the point and time of use.

7.2.2 Health Financing in Decentralized Systems

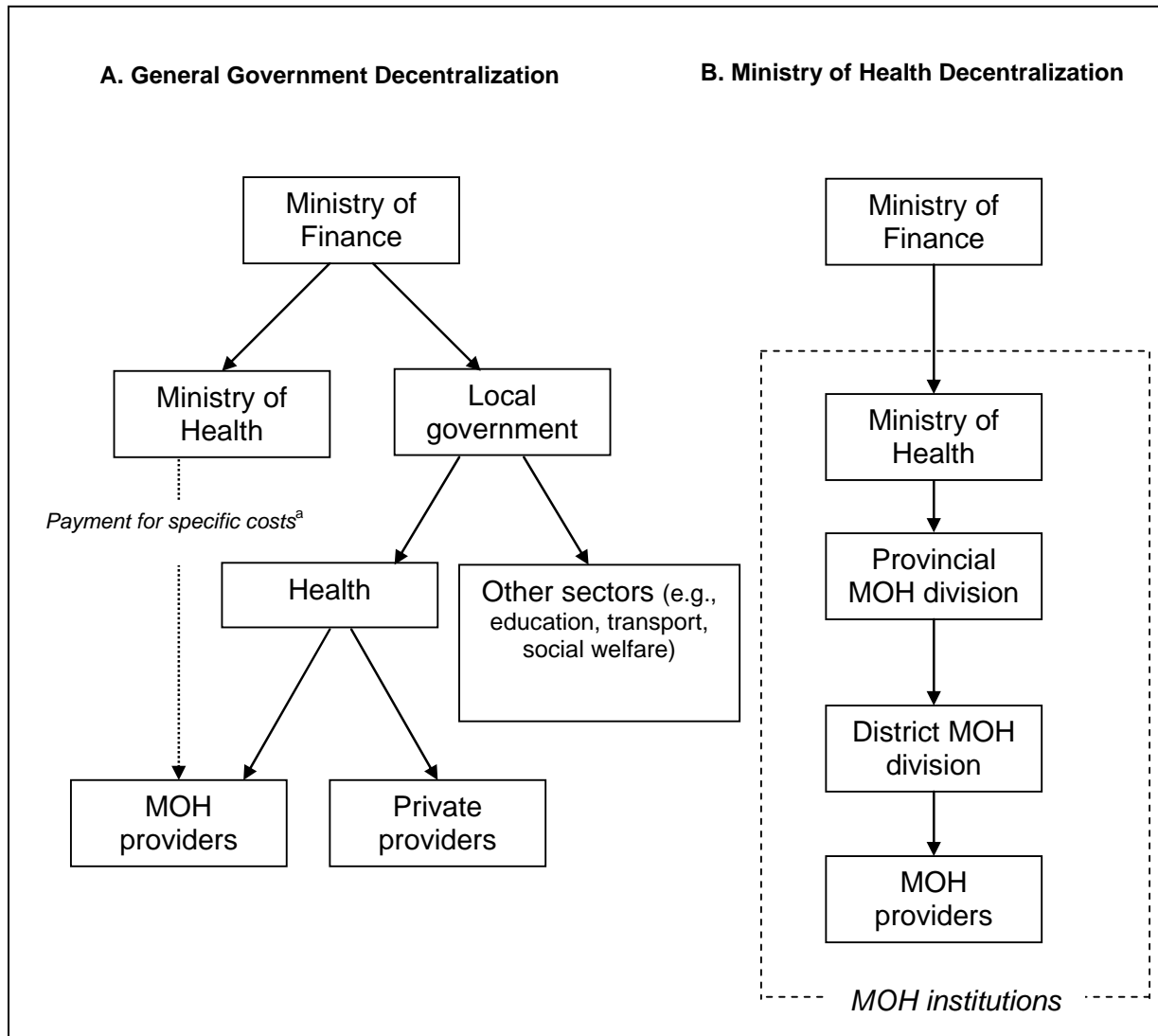
The level of decentralization of the general government or the public health care sector is an important factor that can influence the patterns of resource flows through the health system, as well as key issues related to, for example, service provision (such as the allocation of resources across programs or budget categories) and provider incentives for quality of services.

Part A of Figure 7.2 shows the basic flow of government funds for the public health care sector under general government decentralization. A portion of government funds allocated for the public health care sector are distributed from the Ministry of Finance to the MOH, for general programs administered by the MOH. The Ministry of Finance also allocates “grants” to decentralized political units (such as local government administrations or district councils), who then decide how much of these funds are allocated to health, among other sectors.

The funds from the Ministry of Finance to local government administrations are typically block grants determined by a number of criteria such as share of total population or burden of disease. Block grants may or may not include earmarks for health. If they do not, health competes at the local government level with other sectors for budget resources. Alternatively, the Ministry of Finance might pay certain recurrent costs of public health facilities such as the salaries of public health sector employees, in which funds flow directly from Ministry of Finance to MOH providers, and local governments do not have discretion over this part of health system financing.

Part B of Figure 7.2 illustrates the flow of government funds for the public health care sector under MOH decentralization. In this type of system, funds flow to providers through a hierarchy of MOH administrative units, though salaries can sometimes be paid directly from the Ministry of Finance. When funds are allocated wholly within the health system without regard to local government decisions, the main resource negotiations are first between the central MOH and districts or regions and second between the central MOH and the Ministry of Finance.

Both of these types of decentralization have strengths and weaknesses, and both can be managed well or poorly. Each country’s health funding situation has to be examined on its own merits to identify how well it functions for adequate generation of revenues for health and for effective allocation of health resources to the service delivery level.



^aIn certain decentralized systems, MOH may continue to pay for certain costs at health facilities such as health worker salaries and vaccines.

Figure 7.2 Flow of Government Funds for the Public Health Sector in Decentralized Systems

7.3 Indicator-based Assessment

The indicators assessed in this module are organized in the two components described in Chapter 2. Component 1 has general health financing indicators, data for which can be obtained from the data file titled “Component 1 data” (available on the CD that accompanies this manual and discussed in Chapter 5.2) or from the Internet if you do not have access to the CD. Component 2 combines a desk-based assessment and stakeholder interviews to collect information on additional health financing indicators. Stakeholder interviews should complement the information collected from a review of documents and provide important information that may not be available through document review.

Although the indicators in Component 1 are measurable indicators, the indicators in Component 2 are often descriptive questions about, for example, the process or practices related to a government policy.

Note that this module is longer than the other modules in the assessment. Not all indicators may be relevant in your country, however; look for the screening questions placed throughout this section because they will guide you to skip over indicators that you may not need to assess. If you have limited time and are not able to cover all indicators, refer to Box 7.1 for guidance on how to prioritize your assessment work.

Note that answering a screening question “no” may indicate that an important aspect of health financing is missing; you should consider investigating the reasons why and defining some potential recommendations or interventions to address this problem. For example, if the country has no private health insurance market, a possible recommendation might be that donors assist with the process of developing private insurance in the country.

Box 7.1
Prioritizing Indicators

If you are able to complete only part of this module because of limited time or resources, do the following—

- First, assess indicators 1 through 6, because data for them are readily available in the CD database that accompanies this manual or from Internet sources.
- Second, assess indicators numbered 7, 10, 11, 14, 15, 18, and A1 (in Annex 7A).
- Third, if possible, assess all remaining indicators to get a more comprehensive picture of health system financing in the country.

7.3.1 Topical Areas

The indicators in this module are grouped around the three main functions of health financing that were illustrated in Figure 7.1: (A) revenue collection: amount and sources of financial resources; (B) pooling and allocation of financial resources; and (C) purchasing and provider payments.

A. Revenue Collection: Amount and Sources of Financial Resources

This group of indicators looks at how much is being spent on health care in the country and how much of this spending comes from public, private, and external donor sources. The health system performance criteria addressed by these indicators are access, equity, quality, and sustainability. All indicators in this group are Component 1–type indicators.

B. Pooling and Allocation of Financial Resources

For the purposes of this rapid assessment, the indicators on pooling and allocation of financial resources focus on the government health budget and health insurance.

- **Government budget allocation.** These indicators look at the MOH budget trends, the process of health budget preparation at various levels of health system administration, and the distribution of central and local government funds across different types of spending categories, services, and regions. The health system performance criteria

assessed in this group of indicators are sustainability, equity, efficiency, access, and quality.

- **Health insurance.** These indicators investigate the different types of insurance schemes (if any) operating in the country of interest, such as social, private, or community-based health insurance schemes. The health system performance criteria assessed in this part of the module are efficiency, equity, access, sustainability, and quality.

C. Purchasing and Provider Payments

This set of indicators analyzes the process by which funds are paid by purchasers to providers of health services. The performance criteria assessed in this part of the module are access, efficiency, equity, sustainability, and quality.

7.3.2 Detailed Descriptions of Health Financing Indicators

Table 7.1 groups the indicators in this module by topic.

Table 7.1 Indicator Map—Health Financing

Component	Topical Area	Indicator Numbers
Component 1	Revenue collection: amount and sources of financial resources	1–6
Component 2	Pooling and allocation of financial resources— <i>Government budget allocation</i>	7–14
	Pooling and allocation of financial resources— <i>Health insurance</i>	Not applicable—indicators included in Annex 7A only
	Purchasing and provider payments	15–18
—	Annex 7A. Health Insurance: Coverage, Funding, and Policy Issues	A1–A4

7.3.2.1 Component 1

For all indicators that are part of Component 1, you may want to do regional comparisons, where possible (some regional averages are provided in Annex 5A). Regional comparisons are often used to suggest where a country fits in relation to neighbor countries or countries in the same region with similar economic and population profiles. Regional comparisons, however, may not necessarily offer good benchmarks when a country has important differences in, for example, standards of living, per capita incomes, structure of health system, and extent of donor contributions.

A. Revenue Collection: Amount and Sources of Financial Resources

1. Total expenditure on health as % of GDP

Definition, rationale, and interpretation

The percentage of gross domestic product (GDP) spent on health is a measure of the share of a country's total income that is allocated to health by all public, private, and donor sources.

A standard measure used for international comparisons, this indicator typically ranges between 2 and 15 percent of GDP spent on health. An extremely low percentage of GDP spent on health suggests that not enough resources are mobilized for health, that access to health care is insufficient, and that the quality of services is poor. An extremely high expenditure suggests a widespread use of high technology and likelihood of inefficiencies. There are, however, no commonly accepted benchmarks or targets for an appropriate percentage of GDP that a country should spend on health.

Module link: Core Module, indicators 12 (GDP per capita) and 14 (total health expenditures per capita)

Suggested data source

WHO (2006). *The World Health Report 2006* <www.who.int> or most recent.

2. Per capita total health expenditure, at average exchange rate (USD)

Definition, rationale, and interpretation

This indicator reflects the average amount of resources spent on health per person. It is another standard measure that can indicate whether spending on health is adequate to achieve appropriate access and quality. According to the report of the Commission on Macroeconomics and Health (WHO 2001), providing minimal essential health care services would require expenditure in 2007 of at least 34 U.S. dollars (USD) per capita per year in low-income countries. Countries with relatively low per capita spending (e.g., below USD 30 per capita) are likely to have poor access, a low quality of health care, or both.

Module link: Core Module, indicator 14 (total health expenditures per capita)

Suggested data source

WHO (2006). *The World Health Report 2006* <www.who.int> or most recent.

3. Government expenditure on health as % of total government expenditure

Definition, rationale, and interpretation This indicator illustrates the commitment of government to the health sector relative to other commitments reflected in the total government budget. The allocation of government budget to health is subject to political influences and judgments about the value of health spending relative to other demands for public sector spending. A relatively large commitment of government spending to health (e.g., above 20 percent) suggests a high commitment to the sector.

Suggested data source WHO (2006). *The World Health Report 2006* <www.who.int> or most recent

Notes and caveats Trends over time are a more reliable measure of the reliability of government spending on health, as a share of total government spending, than any single year. (See indicator 7c.) Note as well that if the country has a Social Security scheme, its funding for health is included as government funding, even though a large share of it comes from private sources (individual and employee mandatory contributions).

4. Public (government) spending on health as % of total health expenditure

Definition, rationale, and interpretation This indicator is a measure of the relative contribution of central and local government, relative to total health spending. If the percentage is relatively low (i.e., below 40 percent) it can reflect (1) a low tax capability of the country's government, (2) a philosophy of a limited role for government in health (i.e., that public spending should not play a large role in financing or providing health services for the population), or (3) both. A low value for this indicator also means that the government has limited ability to act to address equity issues.

Suggested data source WHO (2006). *The World Health Report 2006* <www.who.int>

Notes and caveats Trends over time are a more reliable measure of the reliability of government spending on health as a share of total health spending than any single year.

5. Donor spending on health as % of total health spending

Definition, rationale, and interpretation The share of total health spending financed by donors measures the contribution of international agencies and foreign governments to total health spending. A very high donor contribution to a country's total health spending (e.g., above 10 percent) is a concern for financial and possibly institutional sustainability if the donor contributions are withdrawn.

Compare this indicator to government health spending as a percentage of total health spending (indicator 4) to assess the sustainability implications of the share of donor spending. Very high donor health spending suggests that the government would have to increase its health spending by a large proportion to replace donor contributions, should they be withdrawn, to avoid placing the burden on private spending.

5. Donor spending on health as % of total health spending

Suggested data source

WHO (2006). *The World Health Report 2006* <www.who.int>

Notes and caveats

Because donor contributions are in foreign currencies and the country's government spending is in local currency, this percentage can be affected by fluctuations in exchange rates.

Because donor contributions can fluctuate with political situations, they can be subject to frequent changes in amount, target of spending assistance, or both.

Therefore, trends over time are a more reliable measure of the reliability of donor spending on health (and of the country's dependence on donor spending), than any single year.

6. Out-of-pocket spending as % of private expenditure on health

Definition, rationale, and interpretation

This indicator represents the expenditures that households make out of pocket at the time of using health care services and purchasing medicines, relative to total private spending on health. Out-of-pocket expenditures exclude payment of insurance premiums, but include nonreimbursable insurance deductibles, co-payments, and fees for service.

Module link: Core Module, indicator 16 (Out-of-pocket expenditures as percent of private expenditures)

If out-of-pocket spending represents a large share of private health spending (e.g., above 80 percent), pooling of private resources is limited. It means that most of the time households need to produce funds at the time of seeking care, which can be a barrier to accessing care and can threaten the financial status of the household (e.g., push some into poverty).

In lower income countries, out-of-pocket spending usually represents a very high or nearly all of total private spending on health.

Suggested data source

WHO (2006). *The World Health Report 2006* <www.who.int>

7.3.2.2 Component 2

While Component 1 indicators covered revenue collection (topical area A), Component 2 indicators will cover the pooling and allocation of financial resources (topical area B), and purchasing and provider payments (topical area C).

B. Pooling and Allocation of Financial Resources

For the purposes of this rapid assessment, the indicators on pooling and allocation of financial resources focus on the government health budget allocation and health insurance.

Government budget formulation and allocation. In most countries, several government ministries have health services or activities included in their budgets (e.g., Ministry of Defense for military health, Ministry of Education for medical education). For purposes of the rapid assessment, the following section concentrates only on the MOH budget because that is available to the whole population and is usually the major source of recurrent health spending (see Box 7.2 for definitions).

Box 7.2

Definition of Recurrent and Investment Budget

The ***recurrent budget*** includes costs incurred on a regular basis. Examples of recurrent costs in health are personnel salaries, medicines, utilities, in-service training, transportation, and maintenance.

The ***investment budget*** includes costs for purchase of assets that are used over many years. Examples of investment costs in the health sector are construction of new health care facilities, major renovations, or the purchase of medical equipment. The investment budget for health is quite often developed and executed by Ministries of Planning, especially when it is done in coordination with donor investment or capital cost grants.

7. Ministry of Health budget trends

- a. Do MOH expenditures keep pace with inflation and with population growth? Inflation (measured by the consumer price index) and rate of population growth are indicators included in the Core Module.
- b. Does the country have any mandated level of public spending on health as percentage of total public spending? If not, is the MOH share of the total government recurrent budget increasing or decreasing?
- c. What percentage of the total public health budget is for capital investments?
- d. What is the trend in difference between the authorized budget and actual expenditures?

Definition, rationale, and interpretation

These four indicators related to trends in MOH budget spending are common measures to indicate whether the MOH budget is a sustainable source of funding for the health sector.

- a. If annual actual or planned expenditure is not increasing at the same rate as the annual general price level *plus* the rate of population growth, then there is a real decrease (decline in purchasing power) of resources allocated by the MOH. It cannot provide the same level of services to people that it provided in the previous year(s).
- b. If the MOH share of total government budget is decreasing, this trend indicates a decrease over the years in commitment of the government to fund health.
- c. Capital investment includes assets such as physical infrastructure and medical equipment. In low-income countries, capital expenditures can be as high as 40–50 percent of the total public health care budget if, for example, the physical infrastructure is being created or restored after years of conflict. Knowing how much capital investment occurs, in comparison with recurrent costs, is important to ensure that capital is not wasted or is not draining off funds needed for other inputs (e.g., if many new health facilities are built but no funds are available to staff them and supply medicines).
- d. If actual is less than planned or authorized expenditure, then the budget is unreliable and unpredictable as a source of funds for health. In this case, salaries tend to be paid late and medicine allotments tend to be less than needed. Actual expenditures are rarely higher than planned expenditures (if they are, budget controls and financial management are most likely the problem).

Suggested data source

Government budgets

Notes and caveats

In countries with sector-wide approach (SWAp) funding from donors, the funds from donors are often channeled through the MOH budget. In this case, examine changes in SWAp funding amounts when assessing MOH budget increases or decreases.

Table 7.2 MOH Budget Trends: Authorized or Planned and Actual Expenditures

Budget	Year				
	Authorized or Planned		Actual Expenditure		
	Amount	Percentage Change over Prior Year	Amount	Percentage Change over Prior Year	Percentage Difference from Authorized (+ or -)
Total MOH recurrent budget					
Total government recurrent budget					
Total MOH investment budget					

8. Process of MOH budget formulation

- a. Are MOH budgets developed based on last year’s or historical totals, or are budgets developed based on estimates of resources required to meet the population’s health needs?
- b. Is budget planning done centrally or is the budgeting process bottom-up, beginning at the district or local level (i.e., accumulation of district or local budget planning requests)?

Definition, rationale, and interpretation

a. When budgets are historically based, they usually allocate funds based on the number of hospital beds or health workers without regard to the occupancy rate of different hospitals or different utilization rates of the clinics across the country; they simply reflect the amount of funding from the previous year, with a possible adjustment for inflation or changes in overall government spending. “Needs-based” MOH budgets, conversely, are built each year from estimates of the population’s health service delivery needs (along with needs for public health prevention; disease control; information, education, and communication; and other programs) according to epidemiological and health profiles in the various localities in the country.

Over time, historical budgeting does not reflect changing needs, and it becomes out of step with funding requirements. Thus, it tends to lead to inefficiency with more funding allocated to some functions than needed and less to others.

Needs-based budgets are more likely to reflect actual use and funding requirements for population and inflation changes and, subsequently, are more likely to lead to allocation of funds to facilities, districts, and regions where the funds are needed. Similarly, needs-based budgeting can point to underused hospitals and other facilities that can be closed or consolidated.

b. Historical or needs-based budgets can be developed centrally, with little input from local levels and facilities, or they can be developed from the bottom up, with budget requests coming from districts to regions, provinces, or states, and then to the central MOH and finally to the Ministry of Finance.

8. Process of MOH budget formulation

- a. Are MOH budgets developed based on last year's or historical totals, or are budgets developed based on estimates of resources required to meet the population's health needs?
- b. Is budget planning done centrally or is the budgeting process bottom-up, beginning at the district or local level (i.e., accumulation of district or local budget planning requests)?

Bottom-up budgets, if based on local resource requirements for the health needs in that area, are more likely to reflect actual health funding needs. If these budgets are done well and eventually approved and executed, funds are more likely to be allocated effectively and specific local services more likely to be sustainable.

Suggested data source

MOH budgets, stakeholder interviews

Stakeholders to interview

MOH and Ministry of Finance officials

Issues to explore

Although bottom-up budget preparation approach may exist as a policy, examining the practice to see if local input actually influences central MOH decision-making is important.

Tip!

Note that the following indicators on MOH and central or local government budget (indicators 9 through 14) refer to recurrent cost budgets, unless indicated otherwise.

9. MOH budget allocation structure

What structure does the MOH use to allocate its budget? Line items? Programs? Other?

Definition, rationale, and interpretation

Line-item budgets allocate funding by object class (e.g., salaries, electricity, fuel, medicines, rent). Program budgets allocate funding by program or service delivery area (e.g., Expanded Program on Immunization, TB, HIV/AIDS prevention and treatment, maternal health care or broadly defined primary health care [PHC], prevention, or curative and inpatient hospital care).

Line-item budgets provide no way to monitor and track the effectiveness or sustainability of spending allocated according to the service delivery and health outcomes that a health budget is funded for. Program budgets do provide a way to track whether spending is achieving the intended results. Program budgets also provide a way to evaluate whether funding is being used efficiently for priority services and health policy initiatives.

Suggested data source

MOH budgets

Stakeholders to interview

MOH officials

9. MOH budget allocation structure

What structure does the MOH use to allocate its budget? Line items? Programs? Other?

Issues to explore

What criteria do Ministry of Finance officials require and rely on for approval of MOH budgets? Does the MOH have any evaluation process to assess whether the budget is allocated appropriately to achieve policy and program goals in the five-year health plan?

Screening question: Do local government authorities have responsibilities for health in systems in which general government is decentralized? Does the central government allocate to local government administrative authorities funds that are specifically earmarked for health? If the answer to both questions is “no,” then proceed to indicator 12.

10. Central and local government budget allocations for health in decentralized systems

- a. How does the central government allocate funds for health to lower level administrative units such as states, regions, provinces, and districts?**
- b. Do local government units have local taxing authority? If so, do they appropriate funds for health? Do they have any other method of local public funding for the health sector?**

Definition, rationale, and interpretation

a. Alternative methods of allocating central funds to local levels have different incentives for the local levels to use those funds for health. Block grants from the central government are the most common forms of allocating funds to local levels in systems where general government administrative authorities are decentralized.

If grants are earmarked for health and if those earmarks are adjusted for the locality’s health needs (e.g., adjusted for population or socioeconomic indicators), the funds are more likely to be spent on health, reflect equity considerations, and maintain (or improve) the local population’s access to health services.

b. If local governments also have taxing authority and can raise and allocate additional funds for health, this capacity increases the possibility of sustainable and adequate health funding.

In general, experience to date suggests that in the early years of decentralization, funding for health and especially for priority PHC services may decline or become unreliable, thus affecting access and sustainability. If wealthier local governments provide additional health funding from their own budgets, inequality across districts or regions can increase.

Suggested data source

Central and local government budget data, stakeholder interviews

Stakeholders to interview

MOH, Ministry of Finance, and Ministry of Local Government
Local government officials, local health administrative units

Issues to explore

Describe the combination of sources of funding for health at the local level (central government grant, local government tax-financed budget, MOH contribution toward salaries and other expenses). Review recent funding trends in central government allocation to local administrations to see if this mechanism promotes reliable funding for health and equity of distribution of central government health funding across the country.

11. Percent of government health budget spent on outpatient/inpatient care

Definition, rationale, and interpretation This is a general indicator for the sustainability of outpatient care funding through the MOH budget. The MOH budget allocated to inpatient care often crowds out funding for outpatient care (and thus PHC services), especially in a tight MOH budget situation.

Although public spending for inpatient care is generally higher than for outpatient care, no standard benchmarks exist to define an appropriate, sustainable, or efficient ratio between these two main categories of services. Trends are likely to be more important for interpreting the implications of the ratio than funding in any one year. If the share allocated in the MOH budget for outpatient services declines over time, or periodically, it means that outpatient care is being cut in favor of inpatient spending. This cutback, in turn, can reflect either a decreasing priority of outpatient care for the government or changes in the disease profile of the population that require more inpatient care.

Suggested data source MOH budgets (you may have to do this estimate manually, with assistance of MOH staff), National Health Accounts (NHA) if available

Module link: Health Service Delivery Module, indicator 17 (primary care or outpatient visits per person per year)

Stakeholders to interview MOH officials, staff involved in NHA if available, representatives of donor agencies who may be taking the lead in outpatient or hospital services

Issues to explore Donor funding is frequently targeted toward PHC and related outpatient care services. Examine whether this targeting is the case and whether the government MOH budget may thus provide less funding for PHC and other outpatient care because it is relying on donors to cover those costs.

Notes and caveats Although a common indicator for spending by level of health services distinguishes between PHC and hospital care, comparing spending on *outpatient* and *inpatient* services instead is preferable to account properly for PHC services that are provided at outpatient departments of hospitals (and to avoid overestimating the expenditures on inpatient hospital care). In addition, the definition of *outpatient care* is more straightforward than the definition of *PHC*, which varies widely across countries, and a standardized NHA measures outpatient and inpatient care expenditures.

If obtaining data on the breakdown between inpatient and outpatient government spending is difficult, consider instead the percentage of the budget allocated to hospital and non-hospital facilities as a proxy for this indicator.

12. Percent of government health budget allocation in rural/urban areas

Definition, rationale, and interpretation	The proportion of the government health budget spent in rural and in urban areas, relative to the proportion of the population living in rural and urban areas (from Core Module) is a common indicator of how equitably public health resources are allocated. Typically, the proportion of public spending on health in urban areas is high relative to the proportion of the urban population. In addition, since the cost per capita of serving dispersed populations in some rural areas may be higher, such patterns of resource allocation further exacerbate inequities of access between rural and urban populations.
Suggested data source	MOH budget You may need to analyze the budget and spending estimates allocated manually, in consultation with MOH budget officials. See if any studies have been done (e.g., sponsored by donor organizations) that provide this information.
Stakeholders to interview	MOH officials Representatives of donor agencies who may be taking the lead in urban–rural health inequities, poverty initiatives, or both
Issues to explore	You can subtract spending on tertiary hospitals before disaggregating spending between rural and urban areas. Tertiary hospitals are in urban areas but expected to provide specialized services to both rural and urban residents.

13. Percentage of the government health budget spent on—

- a. Salaries of health workers?
- b. Medicines and supplies?
- c. Other recurrent costs (e.g., administrative costs at central and district levels, in-service training)?

Definition, rationale, and interpretation	The amount and shares of funding for salaries and medicines are the most relevant categories to assess for purposes of a rapid assessment. Generally, as much as 70–80 percent of MOH budgets is allocated to salaries and benefits, most of it for health worker salaries and benefits. When the budget is not sufficient to cover the costs of medicines, people have to pay for medicines separately at the public health facility or at a local private pharmacy, and health workers do not have the wherewithal to treat patients. This shortfall affects the quality of care, as well as equity.
Suggested data source	MOH recurrent cost budget <i>Module link:</i> Pharmaceutical Management Module, indicators 3, (government expenditures on pharmaceuticals) and 19 (value of government procurements for drugs)
Stakeholders to interview	MOH officials, particularly staff who have been involved in NHA estimates (where available).

13. Percentage of the government health budget spent on—

- a. Salaries of health workers?**
- b. Medicines and supplies?**
- c. Other recurrent costs (e.g., administrative costs at central and district levels, in-service training)?**

Issues to explore Even if a high proportion of the MOH budget is allocated to salaries, it may not be sufficient to provide adequate pay to health workers. Examine also whether salaries are paid on time and regularly. Compare the distribution of spending to that of other countries with similar per capita income level, if possible.

Notes and caveats This group of indicators is most easily measured from a line-item MOH budget or an NHA that included this breakdown. If neither is available, the calculations must be done manually in consultation with MOH budget officials.

See also the Pharmaceutical Management Module (Chapter 10).

14. Local level spending authority

- a. Do MOH health facilities have autonomy in making recurrent cost expenditures such as procurement of supplies, gasoline, and medicines, and hiring of supplemental personnel?**
- b. Does a system exist at the central, district, or facility level for tracking and auditing budget expenditures?**

Definition, rationale, and interpretation

- a. Having authority to make decisions about allocating spending to the service delivery costs at the facility level is important to assure that funds are prioritized and spent for needed items. This authority can be granted in line-item budgets if the facility manager can reallocate among the designated expenditure categories (e.g., from supplies to transportation for outreach). It can also be made available in global budgets, which is generally the most effective method. With a global budget, facility managers have the discretion to allocate the total funds across uses according to their service delivery needs.
- b. Systems to track and audit expenditures against budget authorizations are essential to good financial management and accountability, and can be key to efficient management and allocation of resources.

Suggested data source Key informant interviews
Module link: Pharmaceutical Management Module, indicator 16 (procurement processes)

Stakeholders to interview MOH central and local level administrators and managers

14. Local level spending authority

- a. Do MOH health facilities have autonomy in making recurrent cost expenditures such as procurement of supplies, gasoline, and medicines, and hiring of supplemental personnel?
- b. Does a system exist at the central, district, or facility level for tracking and auditing budget expenditures?

Issues to explore Exploring the different administrative and service delivery levels of the system separately on this issue is important because different levels of facilities (e.g., health post, clinic, secondary, or tertiary hospital) may have different rules for autonomy and expenditure tracking.

Notes and caveats In decentralized systems, different jurisdictions (zones, districts) may have different policies regarding budget flexibility and cost control measures for ensuring proper use of budgeted expenditures.

Health insurance. Three major types of health insurance may be available in the country—

- Social health insurance (SHI): a mandatory government-organized program that provides a (usually) specified benefit package of health services to members. Usually funded by payroll deductions from the employee and the employer and paid into a separate health insurance fund.
- Community-based health insurance (CBHI): a voluntary program that provides (usually) a specified benefit package of health services to members who pay premiums to a community-based and community-managed health fund.
- Private for-profit health insurance: a voluntary program of a specified benefit package of health services offered by private commercial insurance companies. Paid for by premiums (and often co-payments and deductibles) that members pay to the insurance company.

Screening Question: Do SHI, CBHI, or private for-profit health insurance exist in the country? If yes, refer to the set of indicators in Annex 7A; otherwise proceed to Topic C (Purchasing and Provider Payments).

C. Purchasing and Provider Payments

This section investigates user fees and performance contracting for health service providers. Payment from the public sector to MOH health facilities and payments by health insurance entities to providers were already covered in the previous section.

User fees are a form of payment (usually a fixed charge) for services, supplies, and medications provided by health care facilities.

Performance contracts may be made between MOH and public or private providers. They relate health worker pay or facility allocations to performance (measured by, for example, indicators of quality of care, number of patients served, efficiency of resource use).

15. Policies for user fee payments in the public sector

- a. Do patients have to pay fees for outpatient care: visits, medicines, supplies (e.g., bandages), and laboratory and other diagnostic tests?
- b. Do patients have to pay for hospital inpatient care: fees for their stay (e.g., per day or per admission); fees for doctors' or nursing services; charges for medicines, supplies, and laboratory and other diagnostic tests?
- c. Do any policies remove the requirement for user fees for some patients using primary care services?¹ In particular, are fee exemptions or waivers provided for any—
 - Sociodemographic groups, such as children under age 5, students, elderly, military personnel, health care workers, or the poor?
 - Health care services, such as immunizations, services included in a basic benefit package (see Box 7.3), TB-DOTS, other chronic care?

Definition, rationale, and interpretation

The primary purpose of user fees in the public sector is to help facilities with cost recovery to improve quality and sustainability. Another function is to prevent unnecessary use of services because cost-sharing discourages over-utilization of health care or use of services at a higher level than necessary. At the same time, user fees can add financial barriers to the use of services, especially for the poorest, thus producing inequalities.

Fee waivers and exemptions can promote equity of financial access for the poor and can promote use of services by priority population groups or people with conditions requiring follow-up or continual care. Waivers and exemptions must be administered well and accurately, however, and they must not erode the purpose of user fees in the first place (helping to pay for the quality and availability of health services in the public sector, especially when MOH budgets are constrained). For example, many countries establish official user fees and then provide exemptions and waivers that cover 80–90 percent of PHC visits.

Suggested data source

MOH policy documents; key informants

Module link: Health Service Delivery Module, indicator 16 (user fee exemption and waivers); Pharmaceutical Management Module, indicator 38 (cost recovery methods)

Stakeholders to interview

MOH officials at central and local levels, facility managers

Issues to explore in stakeholder interviews

Are fees set nationally or locally? If locally, they may be more in line with the ability of the local population to pay the established level.

Investigate whether formal criteria exist and have been promulgated for identifying patients who are eligible for fee exemptions or waiver—especially whether clear eligibility criteria exist for waivers for the poor (such criteria are often controversial and difficult to establish).

Find out if the country has a mechanism to compensate facilities for the revenue foregone when exemptions are granted. If not, the incentives are for the facilities to give fewer exemptions.

Explore what effect user fees have on utilization of services for which fees are charged, especially on utilization by the poorest. Reviewing evidence-based data and evaluations or studies to assess this impact is especially important.

¹ Although fee exemption and waiver policies may exist for inpatient hospital care, this issue is primarily raised with respect to PHC services, especially priority services. For purposes of the rapid assessment, concentrate on PHC for question 15c.

Box 7.3
Basic Benefit Package

A basic benefit package (BBP) is usually a defined group of essential and cost-effective services provided by government health facilities. BBPs of PHC services usually include the typical and routine services provided at lower level health facilities, such as maternal health services, preventive services for children (e.g., immunizations), services related to integrated management of childhood illness, and essential medicines. A BBP may cover selected hospital services when lower level facilities have made a referral. Typically, BBP services are free of charge for users.

16. Allocation of user fee revenues

- a. Are all or a portion of user fee revenues retained at the facility where they are collected?
- b. If so, are there guidelines for use of fee revenues? Describe the suggested or required uses of fee revenue retained at facilities (e.g., to buy additional medicines, to subsidize the poorest or give them fee waivers, to make infrastructure renovations, to provide staff bonuses). Is there community participation or oversight for the use of fee revenues?
- c. What is the average percentage that user fee revenue constitutes of non-salary operating costs for hospitals and for PHC facilities?

Definition, rationale, and interpretation

If revenues from user fees can be used at the facility where they are collected, this promotes incentives to collect them, and fee revenue can lead directly to improvements in quality and access to care.

User fees are typically established for purposes of increasing resources for non-salary operating costs, especially when MOH budget allocations to facilities for those purposes are low. If, on average, retained user fees constitute a substantial percentage of non-salary operating costs of facilities, then fees are likely to contribute significantly to the quality of services, as long as the MOH (or local government in a decentralized system) is not offsetting its budget allocation to the facility by the amount of user fees. Community participation in the use of fee revenues can increase the probability that they will be used to improve quality.

Suggested data source

Key informant interviews

Module link: Governance Module, indicator 29 (financial accountability of public authorities); Pharmaceutical Management Module, indicator 38 (cost recovery methods)

Stakeholders to interview

MOH officials at central, district, and facility levels

17. Informal user fees in the public sector

- a. Are informal user fees (widely) practiced in the public health sector?
- b. What is the typical form of informal fee payments?
- c. To what extent are informal user fees a financial barrier to use of services?

Definition, rationale, and interpretation

Informal user fees in the public sector are fees that are not officially sanctioned, often called *under-the-table payments*. They can exist in the form of cash, in-kind payments, or gratuities, and are often charged for access to scarce items such as medicines, laboratory tests, and use of medical equipment.

The amount of informal user fees that will be charged is difficult for patients to anticipate and can act as a barrier to care, just as formal fees do. Allocation of the revenue from informal user fees is subject to the discretion of the provider and, as opposed to revenue from official user fees, may not be used to increase the quality or access to public health services.

Suggested data source

Special studies; key informant interviews

Stakeholders to interview

Representatives of donor agencies, nongovernmental organizations (NGOs), and consumer advocacy organizations; users of health services (through focus group discussions)

18. Contracting mechanisms between MOH and public or private service providers

- a. **Within the public sector (either MOH or social health insurance providers—or both), are any contracting mechanisms or performance incentives used? If so, describe them. Distinguish between inpatient hospital care and PHC, if relevant.**
- b. **In the funding arrangements between the MOH and private health care providers, are any contracting or grant mechanisms or performance incentives in place? If so, describe them. Distinguish between inpatient hospital care and PHC and between private not-for-profit (NGO, faith-based organizations) and commercial providers, if relevant.**

Definition, rationale, and interpretation

Different provider payment methods give the providers different incentives for the quality and quantity of services they provide and the number of patients they serve. These incentives affect quality, access, and efficiency. Often the payment method is as important as the amount of payment.

Often, salaries are deemed to provide the least incentive for outstanding health worker performance. Salaries are, however, the most common method that MOHs use for public sector health workers. Sometimes MOH may assign MOH salaried health workers to NGO facilities as a form of in-kind grant to such facilities.

Performance contracts sometimes exist in the public sector that relate health worker pay, or facility recurrent cost budget allocations, to performance (e.g., percentage of children fully immunized, percentage of relevant patients receiving family planning counseling, percentage of cases with correct diagnosis). These performance criteria promote provision of services to attain coverage results the MOH has set.

Performance contracting (sometimes called *pay for performance*) is becoming more common in the arrangements between the public sector and private providers. Traditionally, public payments to NGOs and other not-for-profit providers have been in the form of a grant, without conditions for payment of the public funds. Careful choice of performance criteria can improve the provider incentives for quality, access for priority services or populations, and efficient use of resources.

Suggested data source

Key informant interviews

Module links: Core Module, section 5.3.4 (structure of government and private sector in health care); Governance Module, indicator 40 (partnerships with providers); Health Service Delivery Module, indicator 18 (private sector service delivery)

Stakeholders to interview

MOH officials and medical and nursing professional associations; NGOs and other private providers receiving government (e.g., MOH or Social Security) funds for service delivery

Issues to explore in stakeholder interviews

Assess with key informants whether alternative or revised payment methods or health worker incentives may be needed.

Notes and caveats

Distinguish between inpatient hospital care and PHC and between private not-for-profit (NGO, faith-based organizations) and commercial providers, if relevant.

7.3.3 Summary of Issues to Address in Stakeholder Interviews

This section includes a summary listing of the types of stakeholders to interview in assessing the indicators from Component 2 and the issues to address with each stakeholder. This process will help the assessors in planning the topics to discuss in stakeholder interviews, as summarized in Table 7.3.

Table 7.3 Summary of Issues to Address in Stakeholder Interviews

Profile of Stakeholders to Interview	Issues to Discuss with Stakeholder
MOH officials (including staff involved in NHA preparation)	Process of MOH budget formulation and allocation structure by government health budget spending in rural and urban areas; by levels of service (inpatient and outpatient care); and by categories of recurrent costs, user fee policies in the public sector (including exemptions), informal user fees, and basic benefit package of services
Ministry of Finance officials	Process of MOH budget formulation; ability of MOH to use allocated funds
Social Security officials	Details of SHI scheme: population coverage, funding mechanisms, and provider payment mechanisms
Ministry of Local Government, local government officials, local health administrative units	Relative priority of health in decentralized budget allocations; central and local government recurrent cost budget allocations for health, local taxation powers, local level budget spending authority, user fee policies in the public sector (including exemptions), and informal user fees
Representatives of donor agencies	Sustainability of donor support; changes in donor support (e.g., mix of project and in-kind, SWAp, general budget support); government health budget spending by levels of service (inpatient and outpatient care) and in rural and urban areas; user fees (especially informal user charges)
Private insurers	Details of private insurance schemes: population coverage, funding mechanisms, provider payment mechanisms
CBHI committees	Details of CBHI schemes: population coverage, funding mechanisms, and provider payment mechanisms
Representatives of medical and nursing professional associations, NGOs, and other private providers receiving government funds for service delivery	Provider payment mechanisms by government
Public health facility managers	User fee policies in the public sector (including exemptions), informal user fees
Representatives of PVOs, NGOs, the media	Overall perception of the government financing system, including user fees, fee exemptions, informal charges; rural and urban, outpatient and inpatient balances

7.4 Summarizing Findings and Developing Recommendations

Chapter 4 describes the process that the team will use to synthesize and integrate findings and prioritize recommendations across modules. To prepare for this team effort, each team member

must analyze the data collected for his or her module(s) to distill findings and propose potential interventions. Each module assessor should be able to present findings and conclusions for his or her module(s), first to other members of the team and eventually at a stakeholder workshop and in the assessment report (see Chapter 3, Annex 3J for a proposed outline for the report). This process is iterative; findings and conclusions from other modules will contribute to sharpening and prioritizing overall findings and recommendations. Below are some generic methods for summarizing findings and developing potential interventions for this module.

7.4.1 Summarizing Findings

Using a table that is organized by the topic areas of your module (see Table 7.4) may be the easiest way to summarize and group your findings. (This process is Phase 1 for summarizing findings as described in Chapter 4.) Note that additional rows can be added to the table if you need to include other topic areas based on your specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Annex 4A of Chapter 4. In anticipation of working with other team members to put findings in the SWOT framework (strengths, weaknesses, opportunities, and threats), you can label each finding as either an S, W, O, or T (please refer to Chapter 4 for additional explanation on the SWOT framework). The “Comments” column can be used to highlight links to other modules and possible impact on health system performance in terms of equity, access, quality, efficiency, and sustainability.

Table 7.4 Summary of Findings—Health Financing Module

Indicator or Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments^a

^aList impact with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

7.4.2 Developing Recommendations

After you have summarized findings for your module (as in Section 7.4.1 above), it is now time to synthesize findings across modules and develop recommendations for health systems interventions. Phase 2 of Chapter 4 suggests an approach for doing this with your team. In this section, we discuss a list of common interventions seen in the area of health financing that you may find helpful to consider in developing your recommendations.

A. Revenue Collection: Amount and Sources of Financial Resources

If the country is heavily dependent on donor spending, consider policy initiatives or reforms to develop alternative methods for raising funding for health from domestic public and private resources. In immediate post-conflict or rebuilding state situations, these measures would typically be developed as longer term goals and phased in over a longer period than in other more stable states and economies. For example, initiatives may need to be undertaken to increase the MOH budget or to introduce user fees (with waivers for the poorest) in the public health facilities. SHI and CBHI initiatives may also be appropriate.

If out-of-pocket spending is a large share of health spending in the country and if that appears to be due to inadequate government funding (i.e., not deliberate ideological policy), consider—

- Alternative methods for cost-sharing along with initiatives to increase the MOH or SHI budgets or both (e.g., more evidence-based budget formulation process, stronger budget advocacy skills)
- Whether the use of informal user fees and design strategy for moving from informal to formal user fees is widespread

B. Pooling and Allocation of Financial Resources

Government Budget Allocation. If MOH spending for inpatient and outpatient services appears to be inequitable or out of balance, consider whether—

- Alternative financing methods might be appropriate, such as forms of insurance for select populations or selected inpatient services or higher user fees with appropriate waivers and exemptions for higher levels of service
- Reallocation of existing MOH spending may be appropriate

If a substantially higher portion of the MOH budget is spent in urban areas (relative to the share of urban population in the country), policy initiatives or reforms for alternative financing methods and allocation of the MOH budget may need to be considered.

If government budget allocations for medicines appear to be inadequate, consider adoption of generic pharmaceutical policies and improved prescribing practices if appropriate. The purpose of these options would be to make the best use of available resources for medicines. (This issue is also covered in the Pharmaceutical Management Module, Chapter 10.)

If public sector facility managers do not have any authority for spending user fee revenues or government budget allocations, consider policy initiatives to increase facility management authority, such as fee retention policies or flexible budget allocations.

Health Insurance. If no or negligible public, private, or community-based insurance exists, consider whether the situation warrants greater investment in, or more analysis of, expanded risk pooling.

If substantial social insurance exists that excludes coverage for informal sector workers, consider alternative allocations of MOH budget spending to target excluded workers if their access to health care appears to be substantially lower than covered workers and households.

If a basic benefit package exists that provides selected services free of charge at the time of use, consider risk-pooling mechanisms for high-cost, high-risk services outside of the package.

C. Purchasing and Provider Payments

If government contracting with private providers appears ineffective, inefficient, or hard to achieve despite government support for it, consider whether the form of provider payment or contracting needs to be altered to provide greater incentives.

If formal user fees appear to have a negative impact on utilization of PHC or other priority health care services in the public sector, consider—

- Strengthening the waiver and exemption systems
- Examining the process for setting the level of fees at PHC and hospital facilities
- Evaluating the perceived quality of health care services
- Exploring the willingness and ability to pay for different types and levels of health care services

D. Cross-Cutting Issues

If policy initiatives are already under way to address major health care financing issues, consider whether (additional) evaluation design or implementation would be appropriate and if (additional) technical assistance would be appropriate.

Consider using neighboring countries in the region that perform better on key indicators of interest to policy makers as a site(s) to be analyzed to see if their methods are replicable; if so, consider these sites for study tours.

For any financing intervention proposed, consider—

- Evaluating the incentives it provides to both provider and to consumer
- Incorporating complementary quality; information, education, and communication; and other interventions that may remove the nonfinancial barriers that may be strong barriers to use of services

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Annex 7A. Indicators for Health Insurance Schemes

This annex is to be completed only if health insurance schemes exist in the country.

If the community-based health insurance or private for-profit health insurance (or both) exists but covers very small populations or provides very limited coverage, it is not necessary, for purposes of this rapid assessment to spend much time gathering data about them. Noting that some small schemes exist is sufficient.

Health Insurance: Coverage, Funding, and Policy Issues

Use the guidelines for information and data collection provided in questions A1 through A4 to fill in Table 7A1 and to develop a profile of any of the three major types of health insurance that may be available in the country: social health insurance, private for-profit health insurance, and community-based health insurance. Note that not all three types of health insurance may be present in your country.

All countries face policy and implementation issues with respect to insurance. Elicit comments from key informants about (1) any issues they have faced with respect to services and population covered, the funding, provider payment mechanisms and subsidies used, and (2) any policy or implementation initiatives or reforms they are undertaking. Based on those discussions, identify for further exploration analysis or study issues that would improve the design or implementation of any of the three insurance types. For example, community-based health insurances are typically very small but of increasing interest to governments and international donors.

Table 7A1. Characteristics of Insurance Schemes: Social Health Insurance, Community-Based Health Insurance, and Private Health Insurance

Indicator	Social Health Insurance	Community-Based Health Insurance	Private Health Insurance
A. Population coverage <ul style="list-style-type: none"> • Members: who is covered? • Percentage of total population covered 			
B. Services covered <ul style="list-style-type: none"> • Types of services covered • Key exclusions • Waiting periods 			
C. Funding mechanisms <ul style="list-style-type: none"> • Sources of funding • Government subsidies 			
D. Payment mechanism for providers <ul style="list-style-type: none"> • Types of payment mechanisms used • Quality or accreditation requirements for provider payments 			

A1. Population coverage of health insurance

- a. Who belongs to the scheme?
 - Public employees?
 - Formal sector (non-public) employees?
 - Informal sector—urban and rural workers?
- b. What percentage of the population is covered?
- c. Who is entitled to benefits under the scheme?
 - Only those people who pay premiums?
 - People who pay premiums and all or some of their family members?

Definition, rationale, and interpretation

Generally, social and private health insurances cover primarily urban populations working in the formal sector for wages. Community-based health insurance is often developed by rural and urban informal sector populations who join together to help cover the costs of user fees in the public sector, the private sector, or both.

The percentage of the population covered by insurance indicates the proportion of the population with risk pooling that shares the costs of health care across the healthy and the sick. Membership in risk pooling adds financial protection against high costs of health care at the time of use and over time, compared with paying user fees to a provider at any time that the need for health care arises. It thus improves financial access and reduces the financial barriers to use of the health care services that the insurance covers.

Suggested data source

Key informant interviews

Stakeholders to interview

MOH, Social Security officials, private insurers, community-based health insurance committees

Issues to explore

If either of the two types of voluntary insurance (i.e., commercial private and community-based health insurance) have existed for several years, exploring their evolution over time is useful to see if population coverage has expanded.

A2. Services covered by health insurance

- a. Which services are covered by the insurance (e.g., a basic package of ambulatory PHC, hospital inpatient services)?
- b. Are any priority health services (e.g., child immunizations, family planning, childbirth, voluntary counseling and testing, antiretroviral therapy for HIV-positive patients) excluded from the benefit package?
- c. Is coverage provided for medicines and, if so, at what prices or co-payments?

Definition, rationale, and interpretation

The greater the range of health care services covered by insurance, the more financial protection that members have against high costs of health care. If an insurance plan requires members to pay a significant co-payment at the time of using a service, it will weaken the financial protection of the plan for members.

A2. Services covered by health insurance

- a. Which services are covered by the insurance (e.g., a basic package of ambulatory PHC, hospital inpatient services)?
- b. Are any priority health services (e.g., child immunizations, family planning, childbirth, voluntary counseling and testing, antiretroviral therapy for HIV-positive patients) excluded from the benefit package?
- c. Is coverage provided for medicines and, if so, at what prices or co-payments?

Suggested data source

Key informant interviews

Stakeholders to interview

MOH, Social Security officials, private insurers, community-based health insurance committees

Issues to explore

If co-payments for covered services are very high, exploring how those requirements may have affected utilization of covered services is important. Also important is finding out if the government offers priority services (e.g., immunization, family planning) services free of charge at the time of use (e.g., as part of a basic benefit package). In that case, one would not expect to find those services included in an insurance package.

A3. Funding mechanisms and sustainability of health insurance

- a. Is the insurance adequately funded, or does it consistently have losses?
- b. Does the government or any other entity (such as charities, NGOs) subsidize membership for any groups? (For example, does it pay the premiums for the indigent or elderly or contribute a general subsidy, such as from general tax revenue?)

Definition, rationale, and interpretation

- a. Although many factors affect the financial sustainability of insurance, a key factor is whether a scheme is underfunded (e.g., because of adverse selection of members, failure of members to pay premium installments, financial mismanagement).
- b. The poorest population groups are generally unable to afford either private commercial or CBHI premiums and are typically not covered by SHI because they are in the informal sector. If the government or charitable organization subsidizes or pays the premiums to cover the poorest, however, it extends the financial protection of insurance to them, thus increasing equity of financial access.

Suggested data source

Key informant interviews

Stakeholders to interview

MOH, Social Security officials, private insurers, community-based health insurance committees

Tip!

See Section 7.2.1 for definitions of the most common mechanisms that purchasers of health services use to pay providers.

A4. Provider payment mechanisms under health insurance

What are the mechanisms used by insurance schemes to pay health service providers?

Definition, rationale, and interpretation Different payment mechanisms provide different incentives to providers. For example, fee for service promotes responsiveness and quality but may lead to cost escalation and inefficiency. Capitation and case-based payment promote efficiency and sustainability but may be problematic for quality.

Quality assurance is promoted if only the providers who are accredited or licensed can be paid for services covered by the insurance plan.

Suggested data source Key informant interviews

Stakeholders to interview MOH, Social Security officials, private insurers, community-based health insurance committees

CHAPTER 8 HEALTH SERVICE DELIVERY MODULE

8.1 Overview

This chapter presents the health delivery module of the assessment. Section 8.1 defines health service delivery and its key components. Section 8.2 provides guidelines on preparing a profile of health service delivery for the country of interest, including instructions on how to customize the profile for country-specific aspects of the health delivery process. Section 8.3 presents the indicator-based assessment, including detailed descriptions of the indicators. Section 8.4 discusses how to summarize the findings and develop recommendations.

8.1.1 What Is Health Service Delivery?

The World Health Organization (WHO) defines *service delivery* as the way inputs are combined to allow the delivery of a series of interventions or health actions (WHO 2001b). As noted in the *World Health Report 2000*, “the service provision function [of the health system] is the most familiar; the entire health system is often identified with just service delivery.” The report states that service provision, or service delivery is the chief function the health system needs to perform (WHO 2000). As such, Figure 8.1 (see also Chapter 1, Figure 1.1) shows the relationship between service delivery and the other modules of this health systems assessment and their relationship with health system objectives.

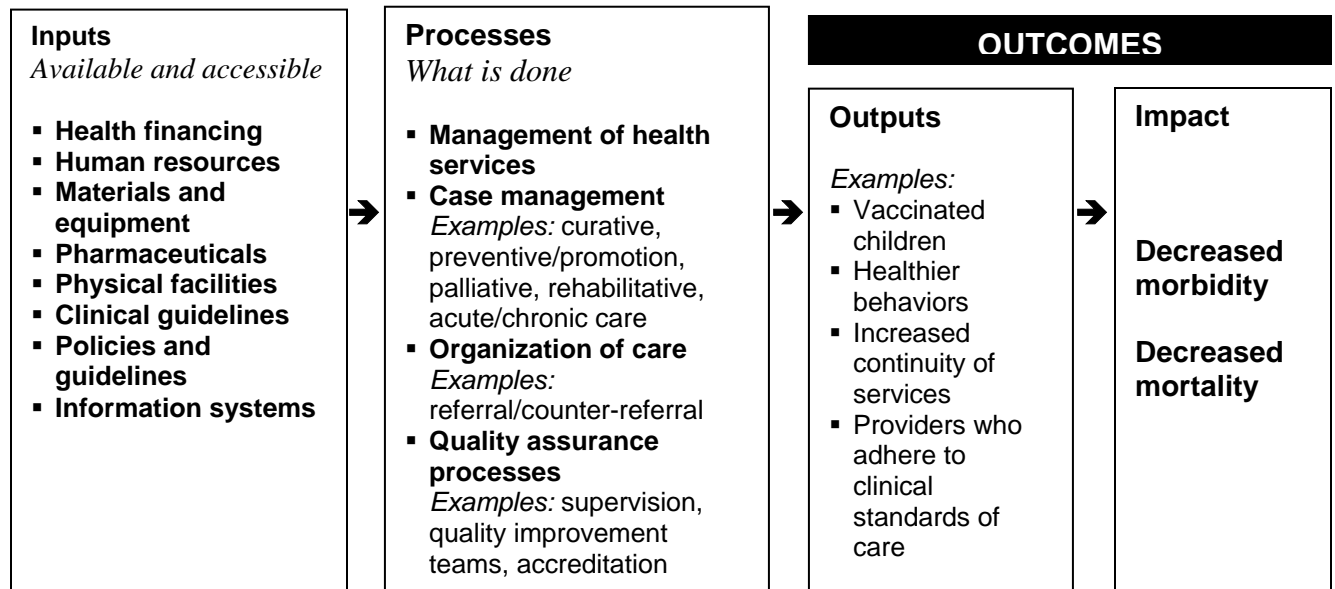
Because of the limited time to conduct this assessment, more emphasis will be placed on personal health (as opposed to public health) services and service delivery functions at the subnational level (i.e., the district, hospital, health center, health post, and dispensary levels). Health sector planning is covered in the Governance module, Chapter 6. For the purposes of this assessment, the private sector role in service delivery will refer to the following—

- For-profit (commercial) and nonprofit (nongovernmental organization [NGO] or U.S. Agency for International Development [USAID] Mission) formal health care providers, including hospitals, health centers, and clinics
- Traditional and informal practitioners, including traditional midwives and healers
- Any membership organizations for such providers such as professional associations or unions
- Private companies who may take actions to protect or promote the health of their employees (such as company clinics or health education programs)

8.1.2 How Do Health Service Delivery Systems Work?

Health service delivery can be represented in a system’s perspective, with inputs, processes, outputs, and outcomes (see Figure 8.1). Some of the core inputs that are deemed necessary for health care delivery are financial resources, competent health care staff, adequate physical

facilities and equipment, essential medicines and supplies, current clinical guidelines, and operational policies. These inputs must be available and accessible to have an impact. They also must be used to properly carry out the system processes to produce desired health outcomes. Note that several of the categories of inputs in Figure 8.1 are covered in separate modules, so a few of the indicators will be used for more than one module. This overlap will be noted in the text, so if both modules are being conducted simultaneously, you should coordinate the collection of data for those indicators.



Source: Adapted from Massoud and others (2001).

Figure 8.1 Systemic View of Service Delivery

8.2 Developing a Profile of Service Delivery

Before identifying the strengths and weaknesses of the service delivery system, you need to understand how it works. You can gain this understanding by constructing a profile of the service delivery system. Because of the short time frame for this assessment, the information gathering for the profile and the rest of the assessment will need to occur simultaneously. Information for the profile can be derived from the Core Module, other reports, or key informant interviews.

A profile can be described in both narrative and graphic forms. The best approach for this assessment will depend on what information is available, including preexisting graphics. Table 8.1 presents some topics that can help to describe the system in narrative form.

Table 8.1 Describing the Health Service Delivery System

Topics	Observations and Examples
Inputs	
Size of the public health delivery system—both infrastructure and human resources	<ul style="list-style-type: none"> • Do public facilities cover all areas of the country? • Do existing facilities have the equipment and medicines to be functional? • Where are the major gaps? • Are human resources sufficient? • How do human resources vary by cadre and region? • Are human resources constrained by limited preservice training slots, low salaries or poor deployment to underserved areas, loss of staff to the private sector or overseas, or insufficient in-service training to enhance skills?
Size of the private health delivery system (not included in Figure 8.2) and its relationship to the system mapped	<ul style="list-style-type: none"> • Are private providers located in many areas of the country or just concentrated in the capital city? • Which are the predominant providers (for-profit, USAID Mission, NGO), and what is the type of facility or cadre (e.g., private clinic, drug shop, traditional birth attendant)?
Structure of service delivery system	Describe the structure of service delivery— <ul style="list-style-type: none"> • In the public and private sectors—including the levels of service delivery, number of health areas, health regions, health districts • In the private sector types of health facilities and any organizing structures
Processes	
Structure and composition of the management and supervisory actors in the health delivery system, their roles and responsibilities	<ul style="list-style-type: none"> • Describe the key central level divisions, midlevel health authority, and integrated management or supervisory team • Which authority is responsible for decision making, technical direction, management, and coordination of area activities? • It may be appropriate to describe decentralization in this section (see the Governance module, Chapter 6)
Inventory of Ministry of Health (MOH) national level programs, with information about geographical/eligibility scope, corresponding service statistics from the core module, policy	What are the MOH vertical programs?
Role of local administrative government and community organizations in service delivery and its relationship with health authority	Describe the role, if any, for local government authorities with respect to health services delivery. For example, in one country, the regional health authority may be simply a division of the social service department and have low capacity in public health or medicine. In another country, the mayor may financially support municipal-wide campaigns (separately from MOH support).
Unusual particularities of the system	Describe any unusual aspects of the health delivery system (e.g., in the Angola systems assessment, the collection of service delivery data was conducted by the local government authority, divorced from the health supervision function).

A service delivery system can be graphically represented in a number of ways. A health sector pyramid can show the central, intermediate, and peripheral levels of care, number of facilities at each level, and management of care. The example from Angola in Figure 8.2 illustrates the number of facilities by level. Mapping can provide an efficient way of understanding the relationship between the major actors within a service delivery system.

Tip!
To identify MOH divisions relevant to service delivery, organizational charts of subdivisions of the MOH that are not represented in the overall organizational MOH chart may be helpful.



Figure 8.2 Sample Health Sector Pyramid from Angola Health System

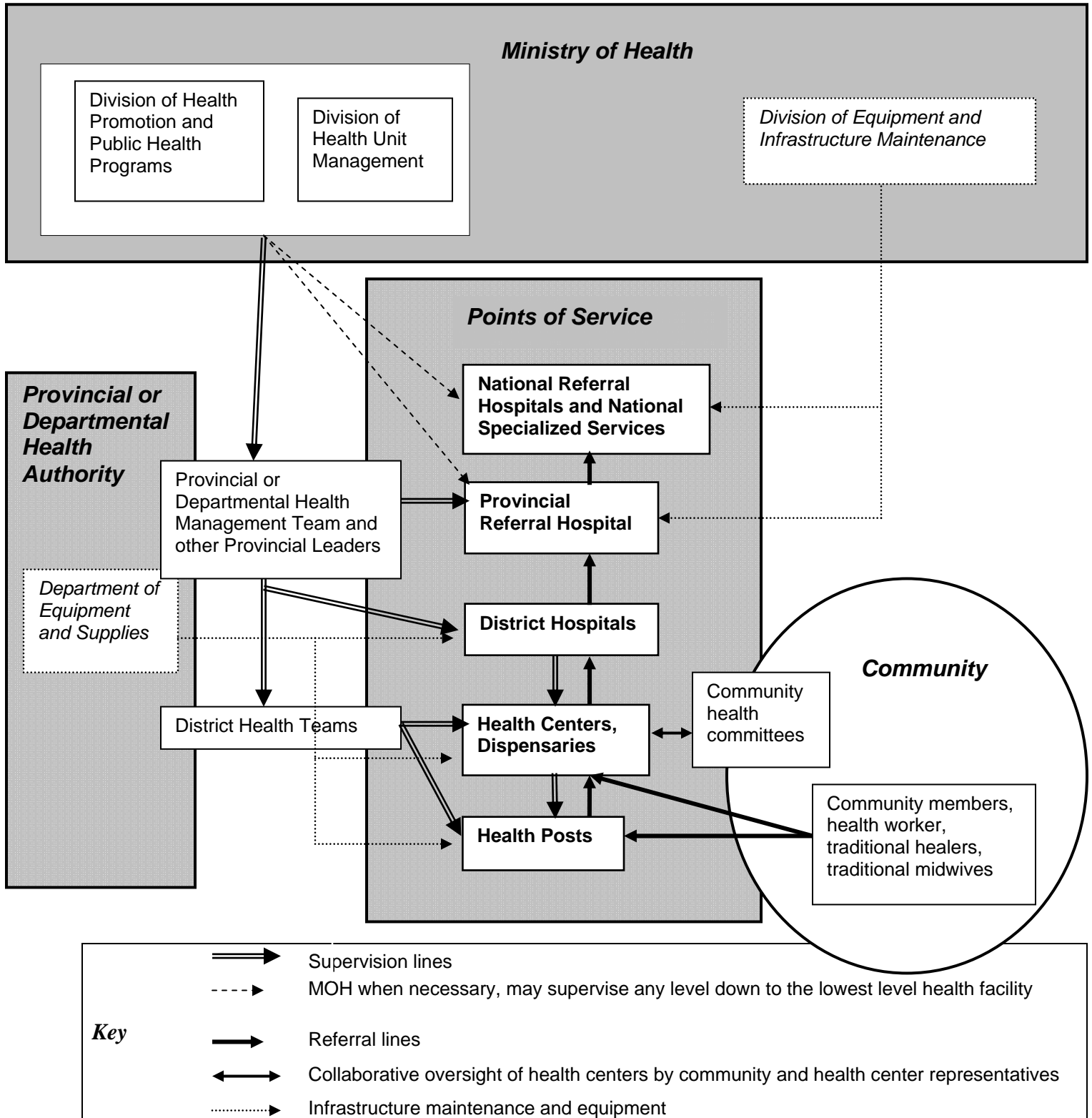
Figure 8.3 is a sample map of a health service delivery system that depicts the following—

- MOH divisions and subdivisions that directly support service delivery by defining national clinical guidelines, training, and supervision. These divisions often receive external support. This support might include both divisions that focus on a clinical or a client-specific area (e.g., infectious diseases, vaccine preventable diseases, reproductive health, nutrition, mental health, child health, maternal health) and divisions that directly focus on service provision (e.g., health services, quality assurance, management of health units, traditional medicine).
- Subnational government divisions (e.g., provincial or district health authorities) that support service delivery through planning, monitoring, resource allocation, supervision, or any combination of those elements.

Tip!
If your assessment needs to focus on certain aspects of the system that cannot be represented in one map (e.g., if the mission is particularly interested in TB, a focus on the laboratory services would be warranted), including a second map may provide more clarity than creating a super-map.

- Health facilities such as hospitals (national, provincial, district, municipal), health centers, health posts, dispensaries, maternity centers, and laboratories. Ideally, the level of care (primary, secondary, tertiary) is also depicted.
- Formally defined community structures (e.g., health committees) or workers that have health responsibilities
- Lines of supervision (MOH divisions; regional, provincial, district health department, or other division)
- Lines of patient referral or counterreferral

Once the service delivery map is completed, we recommend describing in greater detail those important parts of the system not captured by the map. Compare how the service delivery system is supposed to work with how it actually works. Identify where service delivery is falling short of plans and why.



Source: Ministry of Health, State of Eritrea (2005).

Figure 8.3 Example of a Service Delivery System Map of a Hypothetical Country

8.3 Indicator-based Assessment

In this section you will identify strengths and weaknesses of the system as you continue to describe the service delivery system. The *topical area* describes what health delivery issue you will assess; the *indicators* will help to support your findings about a particular aspect of the health system. The indicators were selected based in part on the feasibility of obtaining the information given the scope of the assessment and on what aspects of the assessment are quantifiable. Do not expect to draw conclusions about a topical area from the indicators *alone*. The indicator data should be supplemented with additional information. Ideas for probe questions may be found in the “Issues to explore” section under each indicator, embedded in the definition of a topical area.

Specific indicators were not prescribed for all subtopical areas because a significant portion of this assessment will be based on existing documents. In such cases, this flexibility allows you to simply use whatever available indicators or other evidence of subtopical areas you identify during document review.

Please note that although parts of this section are phrased in the form of questions, they are suggestions of information to find in reports and interviews to help assess the topical area. Thus, they are not intended to be used as a questionnaire.

8.3.1 Topical Areas

This service delivery assessment is organized into the following topical areas—

- A. Availability of Service Delivery (Component 1)
- B. Service Delivery Access, Coverage, and Utilization (Component 1)
- C. Service Delivery Outcomes (Component 1)
- D. Availability of Service Delivery (Component 2)
- E. Service Delivery Access, Coverage, and Utilization (Component 2)
- F. Organization of Service Delivery (Component 2)
- G. Quality Assurance of Care (Component 2)
- H. Community Participation in Service Delivery (Component 2)

Tip!

Data collection

Information gathering. This assessment focuses on deriving conclusions based on information gathered from existing reports, key informant interviews, and one or two facility visits. Since the assessment report will be used as a reference document, keep track of information sources. The scope of this assessment may not allow for conclusions to be drawn for the entire system; in such cases, describe what *is* known about sections of the system you *do* know something about. For instance, if an indicator is available for only certain regions where a household survey was held, note what regions are represented and then try to infer whether those regions might represent a better or worse snapshot compared to the rest of the country.

Preparation. Start by reading and analyzing key country documents about the service delivery system, including—

- MOH legal and policy documents relevant to service delivery (i.e., which focus on subnational level of health system)
- WHO (e.g., *World Health Report 2000* on health system attainment and performance), the World Bank, United Nations Children’s Fund (UNICEF) multiple indicator cluster surveys, and reports written by bilateral donors and other country partners
- USAID and other U.S. government-funded work (see <www.dec.org>)

8.3.2 Health Service Delivery Assessment Indicators

Table 8.2 groups indicators in this module by topical area.

Table 8.2 Indicator Map—Health Service Delivery

Component	Topical Area	Indicator Numbers
Component 1	Availability of Service Delivery	1
	Service Delivery Access, Coverage, and Utilization	2–5
	Service Delivery Outcomes	6–9
Component 2	Availability of Service Delivery	10–13
	Service Delivery Access, Coverage, and Utilization	14–19
	Organization of Service Delivery	20–23
	Quality Assurance of Care	24–28
	Community Participation in Service Delivery	29–31

8.3.2.1 Component 1

The data for the indicators in this section are drawn mainly from existing and publicly available international databases from the World Bank and WHO, as well as from National Health Accounts (NHA). Data for all Component 1 indicators are provided in an electronic format (available on the CD accompanying this manual or downloadable from the data source listed for each indicator). Compile the Component 1 data of this module according to the instructions in Chapter 5 (Box 5.1).

A. Availability of Service Delivery

1. Number of hospital beds (per 10,000 population)

Definition, rationale, and interpretation [(Total number of beds in hospitals of all levels) / (Population of country)] × 10,000

Hospital beds include inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centers. In most cases, beds for both acute and chronic care are included. Inpatient bed density serves as proxy for availability of health service delivery.

A greater number of hospital beds suggests greater availability of inpatient health services. Conversely, some countries (e.g., Organisation for Economic Co-operation and Development) have witnessed a downward trend in hospital beds per 10,000 population as outpatient surgery increases.

Suggested data source WHO (2006b). The World Health Report 2006 <www.who.int> or most recent
Additional sources:
WHO (2006a). *Services Availability Mapping*. <www.who.int> or most recent

Issues to explore If a country defines *useable* hospital beds for this indicator (for instance, beds without mattresses), explain. Compare with regional average. Assess the trend. Is there over- or under-capacity?

Notes and caveats Consider validating these data in-country at the MOH division that inspects and licenses facilities or at the statistical or planning division that compiles and analyzes service delivery data.

B. Service Delivery Access, Coverage, and Utilization

2. Percentage of births attended by skilled health personnel per year

Definition, rationale, and interpretation

[Number of women aged 15–49 attended during childbirth by skilled health personnel]/[Total number of women aged 15–49 surveyed with a birth in previous year]

This indicator measures coverage as well as utilization. A skilled birth attendant is a licensed or certified health professional, such as a midwife, doctor, or nurse, who has been educated and trained to proficiency (1) in the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and (2) in the identification, management, and referral of complications in women and newborns. Traditional birth attendants, trained or not, are excluded from the category of skilled attendant at delivery.

As the point of contact with women, health services statistics are the main and most obvious routine source of information for the numerator. Nevertheless, health service information used on its own constitutes a poor source of statistics on coverage of care because it is often incomplete due to inadequate reporting or exclusion of private sector information. Data from household surveys are also used. Census projections or, in some cases, vital registration data are used to provide the denominator (numbers of live births).

Suggested data source

World Bank. (2006b). World Development Indicators
<www.worldbank.org> or most recent

Additional sources:
Measure DHS (2006). “Demographic and Health Surveys”
<www.measuredhs.com> or most recent

Issues to explore

The indicator may be defined slightly differently, depending on the source. If data are not available, alternative indicators might be (1) the estimated proportion of pregnant women who had at least one prenatal visit, and (2) the proportion of deliveries taking place in health facilities, also available through Measure DHS (2006).

Assess the trend and compare with regional average. Explore with key informants and document review whether supply or demand needs to be improved to increase utilization of skilled attendants.

Notes and caveats

Consider validating these data in-country at the MOH statistical or planning division that compiles and analyzes service delivery data.

3. DPT3 immunization coverage: one-year-olds immunized with three doses of diphtheria, tetanus toxoid, and pertussis (DPT3) (%)

Definition, rationale, and interpretation [Number of 12–23-month-old children receiving DPT3 vaccine before first birthday] / [Total number of children aged 12–23 months surveyed]

DPT coverage is often used as a proxy for health system performance, justified on the grounds that DPT3 requires three visits to a health care facility, thus allowing one to distinguish between contact and effective coverage. Vaccine coverage can also be considered a measure of utilization of health services.

Suggested data source WHO (2006b). *The World Health Report 2006*
<www.who.int> or most recent

Issues to explore Assess the trend and compare it with the regional average. Are trends and levels similar to the percentage of births attended by skilled birth attendant (indicator 2)? If these two indicators suggest very different utilization rates, consider other indicators of utilization, such as the average number of hospital discharges for 1,000 inhabitants, which focuses on inpatient health care services.

Notes and caveats Consider validating these data in-country at the MOH statistical or planning division that compiles and analyzes service delivery data.

4. Contraceptive prevalence (% of women aged 15–49)

Definition, rationale, and interpretation The percentage of women aged 15–49 who are practicing, or whose sexual partners are practicing, any form of contraception

The measure indicates the extent of people’s conscious efforts to control their fertility. Increased contraceptive prevalence is, in general, the single most important proximate determinant of intercountry differences in fertility and of ongoing fertility declines in developing countries. Contraceptive prevalence can also be regarded as an indirect indicator of progress in providing access to reproductive health services including family planning (one of the eight elements of primary health care) (UNICEF 2001).

Module link: Core Module, indicator 4 (contraceptive prevalence rate)

Suggested data source World Bank (2006b). *World Development Indicators*
<www.worldbank.org> or most recent

5. Pregnant women who received 1+ antenatal care visits (%)

Definition, rationale, and interpretation The proportion of women who had one or more antenatal care (ANC) contacts during their last pregnancy in the five years before the most recent survey conducted in that country, as well as the proportion of women who had four or more visits

This indicator shows utilization of reproductive health services for women, of which availability and accessibility are key components. If these rates are low, then access might be constrained because such services are not available, not promoted, or associated with high out-of-pocket expenditures (limiting the access to low-income households). Low utilization may also reflect weak demand for prenatal care.

Module link: Core Module, indicator 6 (pregnant women receiving 1+ and 4+ antenatal visits %)

Suggested data source WHO (2006b). *The World Health Report 2006*
<www.who.int> or most recent

C. Service Delivery Outcomes

6. Life expectancy at birth, total (years)

Definition, rationale, and interpretation The number of years a newborn would live if prevailing patterns of mortality at the time of birth were to stay the same throughout his or her lifetime

Life expectancy at birth is also a measure of overall health status of the population and the quality of life in a country.

Module link: Core Module, indicator 8 (life expectancy at birth, total years)

Suggested data source World Bank (2006b). *World Development Indicators*
<www.worldbank.org> or most recent

7. Mortality rate, infant (per 1,000 live births)

Definition, rationale, and interpretation The number of infants who die before reaching one year of age, per 1,000 live births in a given year

Infant mortality rate is a measure of overall quality of life in a country. It can also show the accessibility and availability of prenatal and postnatal care.

Module link: Core Module, indicator 9 (infant mortality rate, under 5, per 1,000)

Suggested data source The World Bank (2006b). *World Development Indicators*
<www.worldbank.org> or most recent

8. Maternal mortality ratio (per 100,000 live births)

Definition, rationale, and interpretation

The number of maternal deaths that occur during pregnancy and childbirth per 100,000 live births. It is a measure of the likelihood that a pregnant woman will die from maternal causes.

This indicator is a measure of the availability and accessibility of reproductive health services, particularly of the extent of use of modern delivery care.

Module link: Core Module, indicator 11 (maternal mortality ratio, per 100,000 live births)

Suggested data source

WHO (2006b). *The World Health Report 2006*
<www.who.int> or most recent

9. Prevalence of HIV, total (% of population aged 15–49)

Definition, rationale, and interpretation

Percentage of adults who are infected with HIV

A high prevalence of HIV/AIDS indicates a high burden on the health care system (for example, in terms of infrastructure, staff, financing needs).

Module link: Core Module, indicator 7 (HIV prevalence, total, % of population aged 15–49)

Suggested data source

World Bank (2006b). *World Development Indicators*
<www.worldbank.org> or most recent

8.3.2.2 Component 2

D. Availability of Service Delivery

According to the WHO, *availability coverage* refers to the proportion of people for whom sufficient resources have been made available, the ratio of human and material resources to the total population, and the proportion of facilities that offer specific resources, equipment and materials, and other health service delivery necessities (WHO 2001a). In other words, it is the degree to which health facilities that are functional, adequately staffed, equipped, and supplied are available to the population in a country.

10. Number of primary care facilities in health system per 10,000 population

Definition, rationale, and interpretation	<p>[Simple count of primary health centers, health posts, and dispensaries in-country] / [Most recent population estimate × 10,000]</p> <p>Report for both private and public sectors if data are available.</p> <p>Availability coverage is the ratio of resources (defined here as number of primary care facilities) to the total population. Although few benchmarks are available, a comparison with key neighboring countries may be instructive.</p>
Suggested data source	<p>MOH documents (e.g., health services department) and other documents recommended by the USAID Mission local consultant and stakeholders interviewed</p>
Stakeholders to interview	<p>MOH official or department responsible for licensing, maintaining, equipping, and planning the building of facilities</p>
Issues to explore	<p><i>Urban-rural distribution.</i> If available, the distribution of public primary care facilities among rural and urban health districts is a measure of equity in access. Try to obtain population estimates for rural and urban areas to compare the ratio of resources to the total population. If information is unavailable for urban-rural distribution, inquire whether regional differences are available and whether these regions can be generally accepted to be classified as overall urban or rural.</p> <p>If the rural-urban distribution is extremely skewed, you can examine recent budget expenditures and workplans to see if they contain line items or plans for capital investments, particularly for the building of new facilities. If enough detail is available, are new facilities planned in rural areas compared to urban zones? Beyond rural-urban disparities, you may find other regional disparities that are worth noting.</p> <p>If estimates of total numbers of non-hospital facilities in the private and NGO sector are available, they will provide this information because they are part of the health delivery system, even if the information is available only for certain regions of the country.</p> <p><i>Percentage of facilities that are functional.</i> In some cases (e.g., post-conflict), facilities may exist but they may not be functional.</p>

11. Percentage of primary care facilities that are adequately equipped

Definition, rationale, and interpretation	<p>[Number of adequately equipped facilities]/[Total number of facilities]</p> <p>Report for both private and public sectors if data available.</p> <p>This indicator presumes that country standards dictate the minimum equipment that facilities at each level of care should have available and that an MOH division is responsible for monitoring the inventory of physical facilities. The standard should be obtained directly from the MOH division and may include standards or conditions other than presence of certain equipment (e.g., materials, electricity, running water, and laboratory services), in which case this situation should be explained.</p> <p>Adequately equipped facilities ensure that the full range of services is available to clients. The absence of such standards or MOH division in of itself would indicate lack of management capacity of the system.</p>
Suggested data source	<p>MOH facility survey, if one exists</p>
Stakeholders to interview	<p>MOH official or department responsible for licensing, maintaining, equipping, and planning the building of facilities</p> <p>Confirm that MOH information is in line with interviews with facility supervisors during field visit. Supervisors may be most qualified to answer, as they conduct facility visits on a regional basis.</p>
Issues to explore	<p>How does the condition of the facilities affect the availability of service delivery?</p> <ul style="list-style-type: none">• Consult with the pharmaceuticals assessor: what proportion of facilities has adequate supplies of pharmaceuticals?• What proportion of facilities is adequately staffed (see Human Resources module)?• What is the availability of telephones and other means of communication between levels of care? (This information will help to assess continuity of care later in this section.)• What is the availability of ambulances or other forms of transport between levels of care? (Again, this information will help to assess continuity of care later in this section.)• Explore why facilities are not adequately equipped.

12. Availability of updated clinical standards for MOH priority areas, high burden diseases areas, and/or areas responsible for high morbidity and mortality

Definition, rationale, and interpretation

[Number of clinical areas that have national guidelines updated within the last three years among clinical areas identified in denominator]/[Number of clinical areas identified as priority areas by the MOH or which carry high morbidity or mortality in the country] × 1,000 *Note:* If the MOH has assessed the need for updating clinical standards for an area and it has been deemed unnecessary, this effort should count as updated.

Although the existence of national standards does not imply that standards are known or employed by providers, the first step in assuring the quality of clinical services is to define what standards will be used to define the target level of quality.

Suggested data source

Start by identifying the main MOH subdivisions that focus on a disease area or a set of diseases (e.g., child or maternal health). According to available data, which of these represent the highest morbidity and mortality rates? See the Core Module, which also includes some service delivery output measures. What are some of the main challenges to the development or use of clinical standards (or both)?

Next try to determine independently what the MOH considers its priority focus areas, and add these to the list.

Finally, find out how recently standards have been updated for each of the areas in your final list.

Stakeholders to interview

MOH statistics, analysis, and planning divisions; MOH programmatic divisions or subdivisions

WHO and bilateral donors because developing and providing training in clinical standards is often externally funded

Issues to explore

As you meet MOH program directors and facility staff, especially for those areas of particular interest (i.e., those that carry greater burden of disease or which the MOH is interested in), assess whether standards are used in in-service training, whether they are available at private as well as public facilities, and how they are used in supervision. Determine how the availability or lack of standards affects the availability of priority services.

Is a minimum package of services available? What proportion of facilities can offer the minimum package of services if one is defined? A minimum package of services defines what basic health services the health system decrees should be offered at a particular level of care. The absence of this package suggests the health system does not have a way of verifying whether basic health needs are offered at each level of care.

13. The ratio of health care professionals to the population

Indicator 13 is a Component 1 indicator from the Human Resources module (indicator 1). If both modules are being assessed simultaneously, only one person needs to collect the data but that data should be reflected in the conclusions from both modules. In addition, the issue is covered in the Core Module, Chapter 5.3.4 (Structure of government and private sector involved in health care.)

13. The ratio of health care professionals to the population

Definition, rationale, and interpretation The ratio of doctors, nurses, midwives, pharmacists, and laboratory technicians per 10,000 population

A low number means a particular cadre does not have enough service providers. This information should be collected for the private sector too, if available.

Suggested data source

MOH data

WHO, *World Health Report*.

Module link: Human Resources, indicator 1 (ratio of health care professionals to the population, per 10,000)

Stakeholders to interview

MOH central level human resources or planning

Issues to explore

Explore the distribution of clinical providers at the primary care level compared to the hospital level, across regions and by cadre. Is appropriate or minimum staffing by facility level defined by a policy or legal standards? If so, how does actual staffing compare to these standards?

Has a human resource capacity analysis been done, aimed at determining the ability of the country to fill its human resource needs in the future?

Too low a number can mean educational institutions are not producing enough graduates or they may be dying (e.g., due to high prevalence of HIV/AIDS) or leaving the country (the so-called brain drain). “Internal emigration” or a loss of government staff to the private sector can be a problem for the public sector, although it does not necessarily reduce human resources available in country. Compare by regional norms from other countries or WHO standards; look at the Core Module.

The distribution of human resources personnel is important for the availability of health services; when in-country, look more deeply into it if possible. Look at numbers in hospitals vs. other facilities—often doctors are clustered in hospitals. Even with high numbers of providers in urban areas, rural areas may be underserved.

E. Service Delivery Access, Coverage, and Utilization

Service delivery access refers to the ability of a population to reach appropriate health services. (In this assessment, the WHO-defined concepts of accessibility, coverage, and acceptability coverage have been combined.) Various factors can reduce access, including presence of geographical and transportation barriers, lack of financial resources, or lack of cultural appropriateness. *Effective coverage* refers to the proportion of the population in need of an effective intervention that actually received the intervention. The *utilization rate* refers to the number of times per year the population uses health services. The utilization of health services represents effective access to health care, assumed to be the result of the interaction between supply and demand factors (Acuña and others 2001).

There are various indicators of utilization; among the most common are the number of outpatient visits per person per year and the number of hospital admissions per 100 persons per year, coverage of prenatal care, coverage of professional childbirth delivery, and coverage of immunizations (Acuña and others 2001).

14. Percentage of people living within X kms of a health facility

Definition, rationale, and interpretation	<p>[Number of people living within X km radius of health facilities]/[Population estimate]</p> <p>A larger percentage for this indicator suggests increased <i>geographical access</i> of health services for the population. The distance to the facility was not defined for this indicator so that you can make use of whatever data are available.</p>
Suggested data source	Household surveys (e.g., Measure DHS 2006) or baseline studies in areas where health projects are planned, especially reproductive and obstetric care projects that are concerned with pregnant women arriving at facilities on time
Stakeholders to interview	MOH division that inspects and licenses facilities or that is in charge of infrastructure planning
Issues to explore	<p>For the proportion of the population that is not within X kilometers of a facility, how far are they?</p> <p>Inquire at the regional, facility, or program level whether outreach services are available for remote communities. If so, try to determine the frequency of outreach visits and which services are included.</p>
Notes and caveats	Note the date of source information and whether known events have occurred since the survey. Other options include searching for household surveys that assess access to services. For instance, the Demographic and Health Surveys (Measure DHS 2006) measures the percentage of women with specific problems in accessing health care for themselves, and <i>distance to health facility</i> is an option (< http://www.measuredhs.com/ >).

15. Financial access (select an indicator based on available data)

The affordability of health services affects service delivery access from the point of view of the client and overall system equity. The following indicators were selected to provide insight into the question of the degree to which financial access may be a barrier in the service delivery system. If both the Health Financing and Health Service Delivery modules are being assessed simultaneously, only one person needs to collect the data but that should be reflected in the conclusions from both modules.

- a. OOP expenditure as percentage of total health spending. Note that this indicator is not automatically available from the database on the CD accompanying this manual but can be easily computed by multiplying [OOP as percentage of private health spending] by [private health spending as percentage of total health spending]
- b. OOP spending as a percentage of private health spending (Core Module indicator 16)

15. Financial access (select an indicator based on available data)

Definition, rationale, and interpretation

The numerator includes direct outlays of households, including gratuities and in-kind payments made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services, whose primary intent is to contribute to the restoration or the enhancement of the health status of individuals or population groups. These outlays include household payments to public services, nonprofit institutions, or NGOs; and nonreimbursable cost sharing, deductibles, co-payments, and fees for service.

- a. This indicator is a common measure of the share of household spending on health in the country. It represents the expenditures that the population makes out of pocket at the time of using health care services and purchasing medicines.
- b. This indicator shows household spending as a proportion of all private contributions to health spending (e.g., employer-financed health care whether voluntary or mandated by law), in addition to individual's out-of-pocket spending. It represents the relative role of households vs. other private sources for spending on health.

Only one of these indicators may be available for a country.

- a. High out-of-pocket spending as a share of total health spending (e.g., above 60 percent) can indicate that the population faces a financial barrier to accessing health care. It also suggests that the role of government spending to finance health care is relatively limited and that user fees and fees for related medicines and tests exist in the public and private sector. In lower income countries, out-of-pocket spending usually represents a very high percentage, or all, of total private spending on health. High out-of-pocket spending is also likely to represent a more significant barrier for low-income groups, thus affecting (vertical) equity.

15. Financial access (select an indicator based on available data)

- b. If total private spending is largely represented (e.g., above 80 percent) by out-of-pocket spending, it means relatively little other private spending exists and the individuals and households bear the full burden of private spending that fills the gap in government spending.

Notes and caveats See note regarding regional comparisons under indicator 1.

Screening Question: Are user fees for services provided by the MOH? If no, skip to indicator 17.

16. User fee exemptions and waivers

Note: Although fee exemption and waiver policies may exist for inpatient hospital care, this issue is primarily raised with respect to primary health care (PHC) services, especially priority services. For purposes of the rapid assessment, concentrate on PHC.

16. User fee exemptions and waivers

Definition, rationale, and interpretation

User fee protection for vulnerable groups is usually in the form of (1) fee exemptions for all people in a specified sociodemographic category (e.g., children under age 5, students, elderly, military personnel, health care workers) or for specified services (e.g., immunizations, TB-DOTS, other chronic care) regardless of their income; (2) fee waivers for those deemed unable to pay because of low income, regardless of the services they need; or (3) both.

If no appropriate user fee protection mechanisms are in place for vulnerable groups, user fees may create a financial barrier to health care access for the most vulnerable.

Fee waivers and exemptions can promote equity of financial access for the poor and can promote use of services by priority population groups or people with conditions requiring follow-up or continual care. Waivers and exemptions must be administered well and accurately; however, and they must not erode the purpose of user fees in the first place (helping to pay for the quality and availability of health services in the public sector, especially when MOH budgets are constrained). For example, many countries establish official user fees and then provide exemptions and waivers that cover 80–90 percent of PHC visits.

Module link: Health Financing, indicator 15 (User fee policies)

Stakeholders to interview

MOH officials at central and local levels, facility managers

16. User fee exemptions and waivers

Issues to explore in stakeholder interviews

Investigate whether formal criteria exist and have been promulgated for identifying patients who are eligible for fee exemptions or waiver—especially whether clear eligibility criteria exist for waivers for the poor (such criteria are often controversial and difficult to establish).

Explore who actually benefits from exemptions and waivers, and for what services.

17. Number of primary care or outpatient visits per person to health facilities per year

Definition, rationale, and interpretation

[Number of primary care or outpatient visits in a year]/[Total population]

This indicator is a measure of primary care or outpatient utilization of health services. The Pan American Health Organization (PAHO) defines outpatient health care as any professional encounter or contact, as an act of health service, between a nonhospitalized individual and a health worker responsible for the evaluation, diagnosis, treatment, or referral of that person in that encounter (PAHO 2004).

Make clear what health services are included in the indicator data you report—do the data include traditional medicine and the private or NGO sectors? If data are available, please provide for these sectors as well. Do the data include pharmacists? Does the numerator include health posts and health centers as well as hospital outpatient visits? If utilization has been measured for different groups, report on all available information, though primary care utilization would be the most useful indicator in many developing countries.

In most developing countries, a higher utilization rate of public sector health services (compared to the private sector) may be desirable, because it suggests access and a degree of trust in the public system, but to interpret this indicator, you will need to obtain a regional average.

Suggested data source

WHO reports; situational analyses in reports from organizations giving technical assistance in health; MOH statistical division where health facility data are aggregated should have this information; World Bank (2006b), *World Development Indicators* <www.worldbank.org> or most recent

Private sector utilization data may be available from a household survey on health service utilization. In the absence of a specific household health survey, the Measure DHS surveys present the percentage of women of reproductive age who get their contraception from the private sector. Unfortunately, MOH utilization data typically only cover public sector providers.

Stakeholders to interview

Technical person in charge of aggregating MOH routine health information at the national level

17. Number of primary care or outpatient visits per person to health facilities per year

Issues to explore	Obtain the data for previous years—what has been the trend (direction and duration)? If data are available for public and private health facilities separately, what can you infer about demand?
Notes and caveats	If utilization of inpatient care is more relevant to USAID needs, the relevant indicator would be the number of hospital discharges per 1,000 inhabitants.

18. Private sector service delivery

Select one among the following indicators according to what data are available—

- a. Proportion of hospitalizations (or number of hospital days) that take place in the private vs. the public sector
- b. Utilization of private providers for health services in rural vs. urban areas per type of provider
- c. Percentage of women seeking prenatal services from public vs. private providers

18. Private sector service delivery

Definition, rationale, and interpretation	<p>Proportion of hospitalizations (or number of hospital days) that takes place in the <i>private sector</i>: [Number of inpatient stays or hospital days in private facilities]/[Total number of inpatient stays or total number of hospital days across all facilities]</p> <p>Proportion of hospitalizations (or number of hospital days) that takes place in the <i>public sector</i>: [Number of inpatient stays or hospital days in public facilities]/[Total number of inpatient stays or total number of hospital days]</p> <p>Utilization of health services per type of private provider in rural vs. urban areas. For each type of private provider identified (e.g., hospitals, clinics, traditional healers), use the following formulas—</p> <ul style="list-style-type: none">• Utilization in urban areas = [Outpatient and inpatient visits in “type of private facilities” that are located in urban areas]/[Total number of outpatient and inpatient visits that take place in “type of private facilities”]• Utilization in rural areas = 1 – Utilization in urban areas <p>Percentage of women seeking prenatal services from public vs. private providers = [Total number of women whose first prenatal care visit took place in a private facility]/[Total number of women who consulted for prenatal care services] × 100</p>
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18. Private sector service delivery

These indicators provide an estimation of the use of private sector care.

Interpretation: High private sector use can indicate an unmet demand for health services in the public sector, perhaps due to poor quality issues or access constraints. In systems with high private sector use, systems to regulate quality of care (e.g., licensing and accreditation of facilities) are particularly important.

Addressing the distribution of private providers across rural and urban areas is important to see if it reflects population distribution or if it is skewed, by comparing it with the distribution of the population in urban vs. rural areas (available in the Core Module, indicator 3). Distribution of private providers is virtually always skewed toward urban areas.

Suggested data source

MOH, Measure DHS, Living Standards Measurement Survey (LSMS), Household health expenditure survey, or NHA.

Percentage of women seeking prenatal services from public vs. private providers: Measure DHS

Stakeholders to interview

Professional provider associations or associations of private facilities may have capacity and utilization data. MOH may have utilization data for private providers. Other donors or health project directors, NGOs, or faith-based organizations will have qualitative data.

Issues to explore

Explore as possible the penetration of private providers into periurban and rural areas, paying special attention to the type of provider. The ones who work in the more remote areas are typically providers with little or no formal training—traditional healers including traditional birth attendants, medicine sellers, and maybe midwives and clinical officers.

19. Existence of corporate social responsibility (CSR) programs that offer health services among the country's largest employers

Definition, rationale, and interpretation

CSR programs exceed legally mandated services and include services provided through a company facility or by contracting out. They do not include employers that provide health insurance for their employees. Large employers, which may be multinational firms, national firms, or parastatals, can increase access to health services by providing those services directly to employees, employee families, and surrounding communities. Furthermore, some large employers such as mining and timber concerns are often located in remote areas with little access to health services.

Existence of CSR programs establishes a precedent in a country, which might be leveraged to encourage other large employers to provide similar services, or a firm that offers health services to employees could be persuaded to offer services to other community members. The absence of CSR programs might indicate an opportunity to encourage service provision by large employers.

19. Existence of corporate social responsibility (CSR) programs that offer health services among the country's largest employers

Direct health service provision by large employers should be pursued as a health systems intervention in areas that have numerous large employers with substantial numbers of employees and where health services are not available or are adequate.

Stakeholders to interview

Interview chambers of commerce, business associations, and donors. Explore local reports and international websites on CSR activities (e.g., <<http://www.ifc.org>> and <<http://www.csreurope.org>>)

Issues to explore

Try to determine the scope of health service provision to estimate the number of people with access to health services through the largest companies. If businesses are interested and active in CSR, determine if other opportunities—such as health promotion or health product distribution—can capitalize on the interest in the business community.

Notes and caveats

In many countries, CSR will not offer a mechanism for significantly increasing access to health services or otherwise improving health systems. If opportunities for CSR appear limited, you should not invest your time on this indicator.

F. Organization of Service Delivery

Organization of service delivery has been defined by WHO (2001b) as “choosing the appropriate level for delivering interventions and the degree of integration.” This assessment will focus on integration and continuity of care—two areas that can feasibly be covered within the scope of this assessment and that are not covered by other modules. The higher the degree of integration and the greater the continuity of care, the more efficient the organization of care is in attending to patient needs (the efficiency gains have an upper limit, and many would argue that there may be a trade-off with effectiveness—and trade-off is partly how vertical programs are justified).

Tip!

For summarizing issues related to access to care—

- In the document review process, identify community, household, or patient studies that—
 - *Identify barriers to care.*
Have any community surveys sought to determine whether utilization fees were a barrier to care? For instance, reproductive health studies may ask women where they last gave birth (e.g., facility vs. home delivery) or whether they sought prenatal care during pregnancy. For women who did not use health facilities, a common follow-up question is to identify the reason or barrier to access, such as cost, geographical, or cultural barriers. The Measure DHS (2006) survey includes the indicator *percentages of women with specific problems in accessing health care for themselves*, which probes on the nature of the barriers to care. Cultural access may be more of an issue if the country has many ethnic groups or languages. Existing studies may also probe whether people are not seeking services because staff or medicines are not available or because they choose to go to the private sector. Any such observations would be important to note.
 - *Compare access, coverage, or utilization of rural vs. urban areas or private vs. public providers.*
- Are any strategies available to improve (geographical, financial, cultural) access? What are they and how widespread are such efforts? How effective have these strategies been?

The questions in the following indicators can be asked at the primary care level, at the regional health authority, and at national MOH programs. The answers may differ regionally, so as much as possible, attempt to find at the central level what the pattern might be for the country as a whole. Assessment of the organization of service delivery will rely more on key informant interviews and produce more descriptive information than the previous sections.

Tip!

For vertical service delivery systems:

If the health delivery system is significantly “verticalized” (i.e., facilities and providers focused on a single disease or population such as reproductive health clinics or HIV/AIDS programs), you may need to focus on one or two priority vertical programs identified with the Mission. Because vertical programs receive external assistance, generalization across the system is not possible. One approach would be to compare the organization and performance of a vertical program with the country’s primary care system. Compare budgetary and technical support and output expectations (range of services expected to be delivered, population groups expected to be served).

20. Daily availability of full range of key primary health care services

Definition, rationale, and interpretation Fraction of the following services (immunization, TB, prenatal care, family planning, malaria, malnutrition) that are available at primary care facilities five days a week

This measure is a proxy for integration of services. Ideally, a client should be able to access all primary care services from any primary care provider at all times. Often, where services are not fully integrated, clients have access to certain services only on certain days of the week.

This indicator is measured as positive if *all* health facilities are supposed to offer immunizations all the days the facility is in operation, which would suggest greater continuity of care.

Suggested data source Interviews with stakeholders

Stakeholders to interview MOH vaccine program official
WHO, UNICEF

Issues to explore If the indicator measures “None,” then note exactly how available immunization services are, noting the degree to which there may be regional differences. Find out how often other priority services are offered, such as prenatal care or HIV testing in high-burden countries.

At the facility level, are specific days of the week assigned to certain services, such as new prenatal care visits or tuberculosis? The more this scheduling is the case, the less integrated the system, though you might find regional variations.

Has the country adopted integrated management of care strategies, such as Integrated Management of Childhood Illnesses (IMCI), Integrated Management of Pregnancy and Childbirth (IMPAC), Integrated Management of Adult and Adolescent Illness (IMAI)? This information should be easily obtainable—IMPAC and IMAI have been in place since 2000. If the country has or is in the process of implementing these programs, it reflects MOH efforts to integrate services.

21. Number of vertical programs

Definition, rationale, and interpretation

Number of MOH vertical programs

“Vertical” programs are programs that focus on specific interventions, normally focusing on a specific disease or condition, such as HIV/AIDS, family planning and population, malaria, TB, malnutrition, polio. Many of these programs, which are often supported by multilateral donor organizations, are often found to be unsustainable once donors withdraw. Currently, the emphasis is on strengthening health systems to help countries achieve sustainable improvements in health status.

Suggested data source

Organizational chart of MOH, both overall chart and organizational charts of subdivisions likely to house vertical and nonvertical programs

Stakeholders to interview

MOH official with overview of MOH as a whole (for example, planning and statistics departments)

Issues to explore

What vertical disease programs does the country have? To what extent do they collaborate with other programs (e.g., child health, reproductive health), particularly in overlapping areas (e.g., HIV/AIDS and reproductive or maternal health or HIV/AIDS and TB)? For instance, overlapping might mean, in the case of TB and HIV that health workers working primarily with HIV/AIDS are trained in TB case management, and that HIV patients are consistently screened for TB and vice-versa.

One informal indicator of the degree of integration is the number of different clinical supervisors that visit a primary care facility (for different programs such as HIV, malaria, maternal health). The more supervisors, the less integrated the system. This issue has implications for the supervision portion of this assessment as well.

22. Level of informational continuity of care

Definition, rationale, and interpretation

Identified with the longitudinal or chronological dimension of continuity

Informational continuity of care refers to the ability of the health system to identify, store, and retrieve medical information on any particular patient over time, so that current care is appropriate in the context of previous known conditions and treatment (without the need to recollect such information based on the patient’s memory).

Some key questions to ask in increasing level of complexity are the following—

- a. Does the country have a nationally (or state or provincial level standardization if the level of decentralization is high) standardized system for recording multiple prenatal visits for the same pregnancy in the same patient?
- b. Does the country have a nationally standardized system for recording multiple prenatal visits for the same pregnancy in the same medical record stored at the health facility?

22. Level of informational continuity of care

- c. At the first-referral hospital level, are medical records centralized so that a provider has access to previous hospital encounters with a particular patient, including those in different hospital departments?

Suggested ways of scoring this might be the number of points out of 3, or a grading of level a through c.

Suggested data source

Hospital and health center in-charges, as well as district supervisors or program managers at the MOH level to determine extent to which facilities differ in this regard across the country

Stakeholders to interview

Issues to explore

Find out how the system has worked—a mere yes or no answer is insufficient to confirm that a system is functional. How broadly (i.e., geographically) are such systems in place?

23. Level of vertical continuity of care

Definition, rationale, and interpretation

Continuity of care across different levels of care

Three characteristics are emphasized: communication, transportation, and referral systems. For this high-level assessment, try to obtain qualitative information (if not, seek quantitative information as specified below) on the extent to which continuity of care between levels of care is reasonably supported.

- *Communication*: percentage of primary care facilities that have reliable access to telephone or radio communication to the referral hospital level
- *Transportation*: percentage of health centers with transportation to first referral level care
- *Referral systems*: existence of referral system data at the district level.

What data does the health system track to monitor referrals between facilities of different referral levels (e.g., community, health posts, health centers, and secondary and tertiary referral level hospitals)? How does the system know whether referrals are made and followed up? If such data exist, even if just at the district or facility level, *ask to see the data*.

The objective of this indicator is to inform on whether vertical continuity of care should be emphasized as an area for improvement in the recommendations to the MOH.

Suggested data source

Country studies on access and referral systems

Stakeholders to interview

MOH health services department

Issues to explore

Are referrals made to or from private sector (including pharmacies)? What evidence did you find of this practice?

G. Quality Assurance of Care

To assure the clinical quality of health services, health systems must define, communicate, and monitor the level of quality of care. This information is used by policy makers and providers to improve the level of quality of care. Defining quality of care is often achieved by establishing national evidence-based standards, which represent an ideal of how clinical care should be implemented. Unfortunately, in many developing countries, the gap between such standards and what is possible to implement at the facility level is wide due to limited resources (e.g., lack of supplies and equipment). Even when resources are available, many providers may not have the time or motivation to implement new standards of care.

To help providers perform according to standards, policy documents need to be adapted into a practical form that providers can use, such as clinical guides or manuals, job aids, charts, forms, checklists, or posters. In addition, adherence to standards must be monitored to close the quality gap. Supervisors are instrumental in assuring quality of care by giving feedback on performance according to clinical standards. They usually assess the quality of care during site visits or from facility level service delivery data and documentation. Consult with the Health Financing module assessor (if health financing is being assessed), to see if he or she has found any example of provider payment mechanisms that reward quality.

Tip!

On assessing quality—

The data needed to answer the section on quality would ideally be nationwide data which, in most cases, are not available.

At site visits—

1. Identify organizations that have focused on quality of care in the country by contacting the mission and other major donors
2. Read and analyze key reports that focus on service delivery and quality assurance including background sections or situation analyses
3. Interview stakeholders involved in quality assurance (donors and their health project teams, WHO and other United Nations entities, professional organizations, medical or nursing schools, MOH staff responsible for quality assurance or licensing).

24. Existence of national policies for promoting quality of care

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>Determine whether the country has national level policy (e.g., written guidelines for course of action or other government documents) defining the government's role in promoting quality. Such guidelines indicate, at a basic level, the degree to which quality of care is formally recognized as a government priority.</p>
Stakeholders to interview	<p>Start with the USAID Mission and consultant, then, if necessary, try the MOH divisions that might be responsible for implementing such policies (e.g., divisions in charge of health promotion, quality or health services).</p> <p><i>Module link:</i> Human Resources, indicators 18–20 (training of human resources)</p>
Issues to explore	<p>What national structures (i.e., divisions or departments of MOH) are defined to implement such policy?</p> <p>How does that structure act—does it have a budget and an action plan (to define who will do what when)?</p> <p>Who funds the quality assurance work?</p> <p>What is the policy regarding the government role in assuring quality in the private sector?</p>

25. Existence of adaptation of clinical standards into a practical form that can be used at local level

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>Select two priority national clinical areas (e.g., high morbidity or mortality) stated in policy documents or elicited by interview with high-level health officials. For these two areas, investigate the existence of clinical guides or manuals developed for use on-the-job for the provider or supervisor (e.g., pocket guides, memory or job aids, algorithms, flowcharts, forms, posters, checklists, etc) <i>that are based on clinical standards.</i></p> <p>These tools facilitate adoption of clinical standards by providers and thus lower the barriers to change. In clinical areas in which updated national standards exist but poor quality of care persists, such tools are a first step toward improving quality of care.</p>
Stakeholders to interview	<p>Interviews at MOH programs, <i>in addition to</i> providers at facility site visits, to verify they have materials produced at the MOH level</p>
Issues to explore	<p>Site visits might also be an opportunity to ask providers whether they have published guidelines and how useful or practical they find job aids.</p>

26. Existence of clinical supervision by district level supervisor

Definition, rationale, and interpretation

Response: yes or no

To assure quality of care, the system must have the capacity to measure the current level of care against a defined level and to implement improvement when a quality gap is found. Supervision is often the most basic method health delivery system has to monitor quality of care; the response to supervisor feedback would be a change leading to improvement. For most developing countries, the capacity of the district, provincial, or regional health authority in conducting supervision is key to sustaining quality care.

Finding nationwide data on this indicator may be difficult, but the basic point is that, regardless of quality of supervision, it is a basic level of quality control. How does the central level monitor whether this oversight is being conducted? If the MOH has no method of monitoring this parameter, this finding is telling.

Module link: Human Resources, indicators 14 (supervision) and 15 (percentage of supervisory visits to health centers)

Suggested data source

Interviews with MOH programs as well as district, provincial, or regional levels during provincial or local visits

Stakeholders to interview

Issues to explore

- Who is responsible for clinical supervision of primary care facilities— Central MOH? If so, from what departments? Provincial authority?
 - Does each facility have a recognized *clinical* supervisor?
The quality and style of supervision can greatly influence the effectiveness of a supervision visit. Supervision visits that seem like an audit check or merely an opportunity for collecting service delivery data do not encourage the type of dialogue and feedback that help providers improve the quality of care.
 - How many trainings did supervisors receive on how to supervise in the last year?
 - To what degree is supervision integrated? Do supervisory teams conduct supervisions using a single supervision tool?
 - What is the frequency of supervision visits? To be conducted each month or quarter?
 - Does a document formally define the content of supervision or method of supervision? If so, describe. Get a copy to be able to describe how supervision works.
 - How do supervisors stay up-to-date with new standards of care?
-

27. Percentage of supervision visits to health centers planned that were actually conducted

Definition, rationale, and interpretation [Number of supervision visits to health centers conducted in the last year for which data are available]/[Number of planned supervision visits to health centers for the same year]

A measure of frequency of supervision visits—how many planned visits (as defined by the system) actually occur

Suggested data source Find out at the MOH or district level how many visits need to be conducted in a year, and then ask how the completion of supervision visits is monitored.

Stakeholders to interview Ask to see this information for the previous year to count how many supervision visits were actually made. Conduct interviews at the district, provincial, or regional level or MOH program level to find out where facility supervisors reside. This means that depending on data availability, the indicator may be limited to just one program or one district, province, or region.

Module link: Human Resources, indicator 15 (percentage of supervisory visits conducted)

Issues to explore If the percentage is low, probe for barriers to conducting supervision. Does the country have a national standard for the frequency of supervision visits at primary care facilities? If so, how does the system assess whether the expected number of supervision visits is conducted?

Notes and caveats In some cases, supervision visits may be conducted by national MOH staff from various programs. In such cases, identifying which national MOH programs to interview by first interviewing supervisors at the regional level department might be more efficient.

28. Existence of other processes assuring quality of care besides supervision

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>Supervision is only one method of improving the quality of care. The previous two indicators have focused on the district level. Examples of other such quality assurance processes are formal or informal accreditation, continuous quality improvement teams, periodic health audits followed by improvement efforts, periodic client satisfaction surveys or suggestion boxes, or other processes in which quality of care is formally assessed and improved.</p> <p>This indicator is qualitative and designed to identify previous quality assurance efforts.</p>
Suggested data source	<p>Documents from or interviews with stakeholders that support quality of care or quality management, donors or their health project teams, WHO and other United Nations entities, professional organizations, medical or nursing schools, MOH staff responsible for quality assurance or licensing</p>
Stakeholders to interview	<p>Interviews at the facility level</p>
Issues to explore	<p>If such processes exist, at what levels is quality assurance occurring (i.e., central, provincial, district, local)? Where (how broadly) are these processes implemented? What have been the results of such efforts from the point of view of different stakeholders?</p> <p>In particular, probe for strategies that involve the community so that services offered meet community needs. Are assessments of client or community needs done regularly—for instance, a study that might assess where people choose to access health services first (e.g., traditional doctors or midwives, pharmacies, private providers, public providers)? If yes, what do the findings indicate?</p>

H. Community Participation in Service Delivery

Although utilization reflects the intersection of supply and demand, community participation refers to the demand side of the service delivery equation and demonstrates accountability and responsiveness to local needs. These indicators look at governance issues. For the purposes of this assessment of service delivery, clients and patients will be included as part of the community. (This section may overlap with the Governance module’s “Social Participation and System Responsiveness” section.)

29. Presence of official mechanisms to ensure the active engagement of civil society and the community in management of the health system

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>Examples might include local community health committees, community health promoters, community representation in health center management, inclusion of traditional health practitioners and traditional midwives in health management, participation of community associations (e.g., women’s groups, people living with HIV/AIDS) in decision making</p>
Suggested data source	<p>Interview intermediate health system level (e.g., provincial, regional, or district) or MOH division for health services and health promotion. Verify information during visits to health facilities.</p>
Stakeholders to interview	<p><i>Module link:</i> Governance, indicators 19 (participation of stakeholders in policy development) and 20 (participation at local levels)</p>
Issues to explore	<p>Describe existing mechanisms, how they function, and any available information regarding actual local implementation. In some cases, an official mechanism may not exist, but regional external donor-supported initiatives may be in place.</p>

30. Presence of official mechanisms to ensure the active engagement of civil society and the community in service delivery

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>Examples would include any community roles in the provision of health services, such as community health promoters, community providers of antiretroviral for HIV/AIDS patients or DOTS for TB patients, traditional health practitioners or traditional midwives in service delivery, health campaigns.</p>
Suggested data source	<p>Interview intermediate health system level (e.g., provincial, regional, or district) or MOH division for health services or health promotion. Verify information during visits to health facilities.</p>
Stakeholders to interview	<p><i>Module link:</i> Governance, indicators 18 (engaging advocacy groups to develop policy) and 22 (responsiveness to stakeholders)</p>
Issues to explore	<p>Describe existing mechanisms, how they function, and any available information regarding actual local implementation</p> <p>In some cases, an official mechanism may not exist, but regional external donor-supported initiatives may be in place</p>

31. Existence of official mechanism for eliciting population priorities, perceptions of quality, and barriers to seeking care

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>Examples might include periodic client satisfaction surveys at facilities or meetings in the community or with community associations (e.g., women’s groups, people living with HIV/AIDS) in which health staff participate and elicit, for example, community health needs, perception of service delivery quality, barriers.</p>
Suggested data source	<p>Interview intermediate health system level (e.g., provincial, regional, or district) or MOH division for health services or health promotion. Verify information during visits to health facilities.</p>
Stakeholders to interview	<p><i>Module link:</i> Governance, indicators 18 (engaging advocacy groups to develop policy) and 22 (responsiveness to stakeholders)</p>
Issues to explore	<p>If the country has no official mechanism, regional external funder-supported efforts may institute such initiatives and they might be useful to describe.</p>

8.3.3 Summary of Issues and Indicators to Address in Stakeholder Interviews

Overall, discussions with stakeholders should elicit their perspectives on specific strengths, weaknesses, opportunities, and threats in the service delivery system. These discussions provide the chance to get information beyond the story told by the indicators. Because this assessment is taking place under the aegis of USAID, however, note that stakeholders may have a tendency to emphasize those areas of their specific programs that need additional funding, rather than take the perspective of the health system as a whole.

Table 8.3 Summary of Issues to Address in Stakeholder Interviews

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
USAID Mission or consultant; documents, partners, and programs that they identify or that you identify via stakeholder analysis	<p>Determine USAID’s role. Because the USAID Mission is the main client for the assessment, eliciting as much detail as possible on what its needs and interests are will be crucial. When necessary, helping the Mission to clarify its objectives for the assessment will help make best use of the assessment period. In addition, find out what key documents and key stakeholders the Mission considers to be useful in understanding how the current system works. This information will help to identify both the Mission’s perspective and possibly what may be missing from its perspective.</p>
MOH officials or departments responsible for licensing, maintaining, equipping, and infrastructure planning	<ul style="list-style-type: none"> • Explore issues regarding coverage, availability, access, and utilization of services • Determine extent and functioning of facilities and health staff

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
MOH statistical or planning division compiling service delivery data	<ul style="list-style-type: none"> • Explore utilization data • Determine data reliability • Understand the process of data collection, including coverage of private sector
MOH maternal health or reproductive health division, United Nations agencies, donors, NGOs involved in maternal and reproductive health	<ul style="list-style-type: none"> • Explore issues regarding MOH programs' ability to gauge health needs, service delivery activity, and quality of services; to coordinate major health players; and to address gaps at the systems' level • Determine integration of health programs
MOH child health or vaccine-preventable diseases division, WHO, UNICEF, NGOs involved in child health	Explore issues regarding MOH programs' ability to gauge health needs, service delivery activity, and quality of services; to coordinate major health players; and to address gaps at the systems' level, including issues regarding coordination and management of data
Regional health authority (including provincial, district) or MOH division(s) that conduct(s) supervision if regional level does not	<ul style="list-style-type: none"> • Explore the formal supervisory system, compare it to reality, and understand the barriers. Issues regarding management and supervisory capacity include the following— <ul style="list-style-type: none"> ○ Availability of equipment, materials, clinical standards, staff at facilities ○ Existence of clinical supervision by district level supervisor ○ Frequency of supervision visits ○ Content or methodology of supervision visits, or both ○ Percentage of planned supervision visits to health centers that were actually conducted ○ Existence of other processes assuring quality of care besides supervision • Ask: At the facility level, are specific days of the week assigned to certain services such as new prenatal care visits or TB? The more this is the case, the less integrated the system, though you might find regional variations. • Ask: What vertical disease programs (e.g., polio, TB, HIV/AIDS, malaria) are offered? • Ask: Has the country adopted any integrated management of care strategies, such as IMCI, IMPAC, IMAI?
Primary care facility	<p>Ask: What are the main challenges to providing sufficient quality services at the primary care level? Inquire about the following—</p> <ul style="list-style-type: none"> • Availability of equipment, materials, clinical standards, staff • Existence of clinical supervision by district level supervisor • Frequency of supervision visits • Existence of in-house facility supervisor • Content or methodology of supervision visits, or both • Existence of other processes assuring quality of care besides supervision
<ul style="list-style-type: none"> • Private providers of different cadre, including from associations (e.g., private clinics, hospitals, doctors, nurses) • Business associations 	<p>Explore issues regarding coordination with public sector and existing intersectoral communication structures. You will need to understand private sector perspective on government: does government facilitate or constrain private service provision?</p> <p>Obtain a description of private providers association (if any): number of members, are all private providers required to register with association, to</p>

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
<ul style="list-style-type: none"> • Private health delivery companies 	<p>what extent is membership believed to represent all private providers in country</p> <p>Understand the following issues regarding the private sector—</p> <ul style="list-style-type: none"> • Relative importance of the private sector compared to public sector • Rate of utilization (as compared to the public sector, or between urban and rural settings) • Main constraints for private businesses to develop or maintain themselves, for example, in terms of— <ul style="list-style-type: none"> ○ Infrastructure ○ Access to financing ○ Government policies and regulations ○ Crime ○ Corruption ○ Innovation ○ Labor laws • Existence of policies developed, promoted, and used by the government to involve the participation of the private sector in health
<p>Donors (involved in service delivery)</p>	<p>Explore how the donors operate in the country. Who are the major donors working on health system strengthening issues? What are the key systems issues that donors have attempted to address? What has been their success? What remaining gaps exist and lessons learned from their experience? What are different ways USAID can complement existing efforts while contributing in a manner that plays to the mission's strengths that maximize (if possible measurable) impact?</p> <p>Determine the following—</p> <ul style="list-style-type: none"> • Number of public vs. private sector facilities • Main constraints for private health care providers to develop, or maintain themselves, for example, in terms of— <ul style="list-style-type: none"> ○ Infrastructure ○ Access to financing ○ Government policies and regulations ○ Crime ○ Corruption ○ Innovation ○ Labor laws • Policies developed, promoted, and used by the government to involve the participation of the private sector in health

8.4 Summarizing Findings and Developing Recommendations

Chapter 4 describes the process that the team will use to synthesize and integrate findings and prioritize recommendations across modules. To prepare for this team effort, each team member must analyze the data collected for his or her module(s) to distill findings and propose potential interventions. Each module assessor should be able to present findings and conclusions for his or her module(s), first to other members of the team and eventually at a stakeholder workshop and in the assessment report (see Chapter 3, Annex 3J for a proposed outline for the report). This process is iterative; findings and conclusions from other modules will contribute to sharpening and prioritizing overall findings and recommendations. Below are some generic methods for summarizing findings and developing potential interventions for this module.

8.4.1 Summarizing Findings

Using a table that is organized by the topic areas of your module (see Table 8.4) may be the easiest way to summarize and group your findings. (This process is Phase 1 for summarizing findings as described in Chapter 4.) Note that additional rows can be added to the table if you need to include other topic areas based on your specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Annex 4A of Chapter 4. In anticipation of working with other team members to put findings in the SWOT framework (strengths, weaknesses, opportunities, and threats), you can label each finding as either an S, W, O, or T (please refer to Chapter 4 for additional explanation on the SWOT framework). The “Comments” column can be used to highlight links to other modules and possible impact on health system performance in terms of equity, access, quality, efficiency and sustainability.

Table 8.4 Summary of Findings—Health Service Delivery Module

Indicator or Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments ^a

^aList impact with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

8.4.2 Developing Recommendations

After you have summarized findings for your module (as in Section 8.4.1 above), now it is time to synthesize findings across modules and develop recommendations for health systems interventions. Phase 2 of Chapter 4 suggests an approach for doing this with your team. Table 8.5 below provides a list of common interventions seen in the area of service delivery that you may find helpful to consider in developing your recommendations.

Table 8.5 Strategies for Strengthening the Service Delivery Sector

Strategies	Topical Areas
Develop strategies that increase access to services in remote areas such as organizing community transportation; rotating community clinics; coordinating and sharing clinical responsibilities with community midwives, traditional healers, and community health workers; planning and budgeting; advocating for construction, full staffing of health posts, health centers and hospitals; seeking collaborative partnerships with private sector (for-profit, NGO, church, pharmacies) to serve more people.	<ul style="list-style-type: none"> • Availability, access, coverage, and utilization of service delivery • Community participation in service delivery
Collaborate with communities (i.e., via local governments, associations, local NGOs, ad hoc community meetings) to participate in seeking solutions for improving health services to the community.	<ul style="list-style-type: none"> • Community participation in service delivery
Strengthen and integrate supervision capacity at the intermediate (district) level by introducing supportive supervision.	<ul style="list-style-type: none"> • Organization of service delivery • Quality assurance of care • Service delivery outputs and outcomes
Improve quality (i.e., adherence to clinical standards) in a selected clinical domain using facility level quality improvement teams working as a collaborative.	<ul style="list-style-type: none"> • Quality assurance of care • Service delivery outputs and outcomes
Institute a formal or informal accreditation system that gives recognition or other incentives for a minimum level of quality of services.	<ul style="list-style-type: none"> • Quality assurance of care • Service delivery outputs and outcomes
Institute a “pay for performance” incentive system that rewards facilities for improved quality of services.	<ul style="list-style-type: none"> • Organization of service delivery • Service delivery outputs and outcomes
Engage the private sector by informing or educating private providers about new approaches, such as IMCI or health improvement measures; training private providers in health service provision or business skills; training public sector staff to improve their skills to manage and negotiate with the private sector.	<ul style="list-style-type: none"> • Organization of service delivery • Service delivery outputs and outcomes
Engage private sector by providing incentives, such as subsidies, tax-breaks or non-financial incentives to the private sector for specific health services. Establish alliances with private providers or employers on behalf of specific health services (such as immunization).	<ul style="list-style-type: none"> • Organization of service delivery • Service delivery outputs and outcomes

As much as possible, make conclusions about service delivery findings within the first week of the assessment so that you can check your findings with interviewees. Organize this section by topical area unless another organizational structure is clearly preferable. One approach may be to start from the end, in other words, to identify service delivery outputs and outcomes that point to weakest areas in the service delivery system. Are the weaknesses due to key system inputs that tend to be in short supply? Is it possible to postulate root causes of these problems? In the context of the given country (i.e., its needs, USAID niche identified from stakeholder analysis, and constraints), what key areas of improvement would be feasible?

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CHAPTER 9 HUMAN RESOURCES MODULE

9.1 Overview

9.1.1 Chapter Outline

This chapter presents the Human Resources module of the assessment. Section 9.1 defines Human Resources and its key components. Section 9.2 provides guidelines on preparing a profile of Human Resources for the country of interest. Section 9.3 presents the indicator-based assessment, including detailed descriptions of the indicators. Section 9.4 details the process for summarizing findings and developing recommendations, based on the analyses and data-gathering activities in this assessment.

Information for this assessment was based in part on the resources for Human Resource Development (HRD) Assessment Instrument for Non-governmental Organizations (NGOs) and Public Sector Health Organizations (MSH 1998) developed by the Family Planning Management Development Unit of Management Sciences for Health (MSH).

9.1.2 What Is Human Resources?

The term *human resources* refers to the people who work in an organization. The World Health Organization (WHO) uses the phrase “human resources for health” to include public and private sector nurses, doctors, midwives, and pharmacists, as well as technicians and other paraprofessional personnel. It also includes untrained and informal sector health workers, such as practitioners of traditional medicine, community health workers, and volunteers.

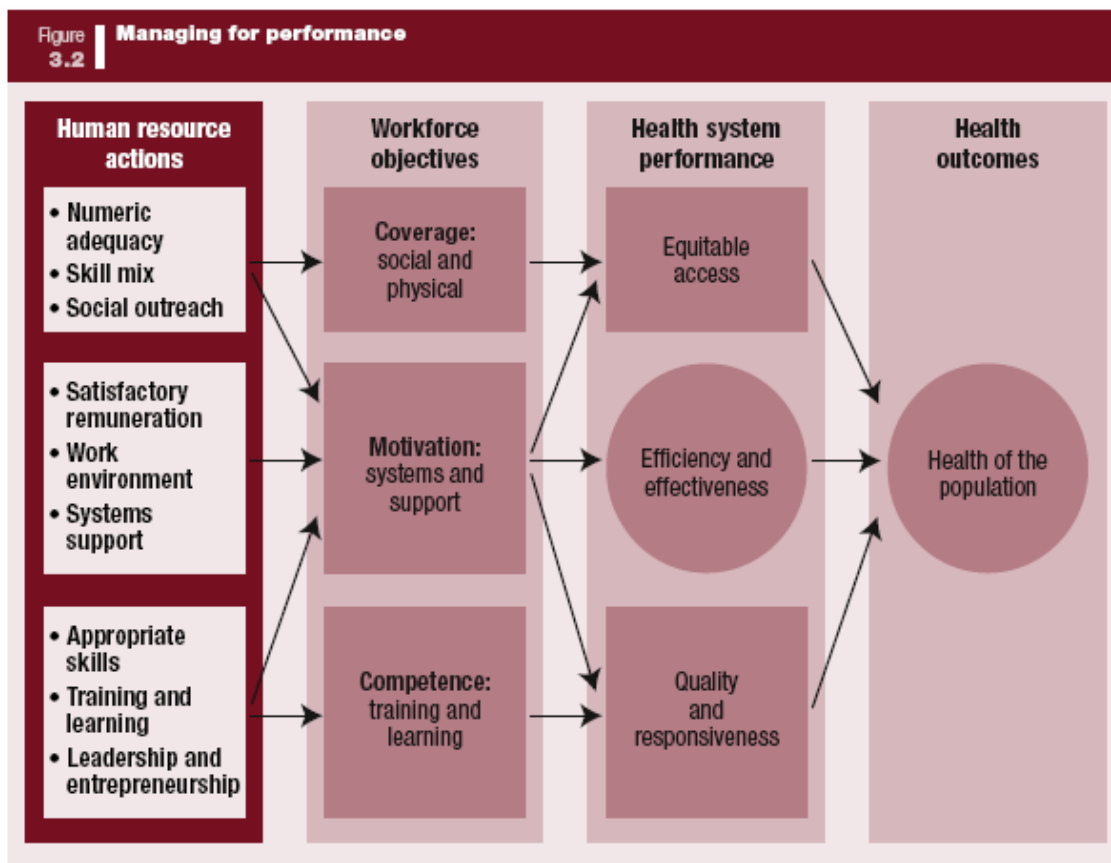
The *World Health Report 2006* (WHO 2006b) defines human resources (HR) for health, or the health workforce, as follows: “all people engaged in actions whose primary intent is to enhance health.” According to the WHO website, this includes “those who promote and preserve health as well as those who diagnose and treat disease. Also included are health management and support workers— those who help make the health system function but who do not provide health services directly.” (See also WHO 2006a.)

Regarding some of the aspects of HR for health that WHO considers to be more urgent, sub-Saharan Africa in particular has pressing issues including (1) the loss of staff due to death, burn-out, or emigration—some of these as a result of the HIV/AIDS epidemic, and (2) reduced productivity perhaps due to low motivation, poor environmental support, and lack of supervision (Dovlo 2005; WHO 2004). WHO recommends that Ministries of Health develop policies for their own HR that aim to protect health workers and focus on issues of HIV/AIDS awareness, protection from infection during their work, counseling and support, and provision of antiretroviral medications (ILO/WHO 2005; WHO n.d.). An example of a policy for protection of health workers in Tanzania is available online (United Republic of Tanzania 2001).

The Joint Learning Initiative on Human Resources for Health and Development has issued a strategy report, *Human Resources for Health: Overcoming the Crisis* (Joint Learning Initiative 2004). According to the report—

Strategic management should aim to achieve positive health outcomes from a better performing health system—and from more productive health workers. One way to consider performance and productivity is through the goals of equitable access, efficiency and effectiveness, and quality and responsiveness.... These performance parameters, in turn, are shaped by three core workforce objectives—coverage, motivation, and competence, each of them affected by workforce strategies. Coverage depends on numerically sufficient and appropriately skilled workers well distributed for physical and social access. Motivation is promoted by satisfactory remuneration, a positive work environment, and systems that support the worker. Competence requires education with an appropriate orientation and curriculum, continuing learning, and fostering innovation and leadership (Joint Learning Initiative 2004).

Figure 9.1 (Figure 3.2 in Joint Learning Initiative 2004) shows the interaction and effect of having the right number and distribution of competent, motivated, and well-supported health workers on the system performance and, ultimately, on the health outcomes of the population.



Source: Joint Learning Initiative (2004).

Figure 9.1 Managing for Performance

9.1.3 How Does HR Management Work?

HR management is an organizational function that effectively manages and uses the people who work in the organization. The HR function is important because it addresses an organization's or health system's need for a competent, stable workforce that meets its needs (i.e., having the right number of service providers with the right skills in the right locations at the right time). To retain a motivated, competent workforce, HR management must also address the needs of the workforce. The key functions of HR include recruitment, selection, performance appraisal and management, compensation, development, and other related activities such as benefits, employee relations, and labor relations.

In effective organizations, HR functions are carried out in a systematic manner using established, standardized processes by dedicated staff trained in HR management. In a large organization, the functions may be performed by many specialists; in a small one, by one or more generalists. Having standardized processes is a method of reducing unwanted variation to improve quality.

In a country where decentralization has taken place, important HR issues can emerge as a result of how the process of transferring power downward is handled (Kolehmainen-Aitken 1998). These issues include the following—

- HR data and how decentralization affects its adequacy and availability
- Transfer of HR functions and staff
- The impact of professional associations, unions, and registration bodies on HR management structures and jobs
- The morale and motivation of health workers

9.2 Developing a Profile of Human Resources

To gain an overview of the institutions and functions concerned with HR in the health sector, you will develop a profile of the HR component of the health system. The profile is an exercise to aid you, others in the assessment team, and stakeholders in conceptualizing the system.

You might choose to map the HR components of the sector using organizational charts and diagrams, or by adapting other tools that capture the HR structure and elements, including the following—

- HR policy and management units and HR functions at various levels within the Ministry of Health (MOH) and related organizations (e.g., municipal health services; professional associations; licensing councils; the private sector; schools of medicine and nursing; other ministries, such as Ministry of Labor; and trade unions)
- HR information systems and data flows

- Numbers and distribution of various categories of professionals in relation to norms and targets.

You might find the following approaches helpful.

- Obtain organizational charts of the MOH at central, regional, and district levels to ascertain where HR fits into the larger system.
- Study conceptual frameworks or analyses of HR in health if available. Review the MOH's HR establishment register or registries of health professionals.
- Prepare lists or tables that capture and synthesize key elements of the HR system, for example, categories, numbers, and distribution of health workers; levels of authority for key HR functions at various levels within the system.
- Seek existing reports or survey data with total estimates of HR including public and private sectors. Data from the World Bank, WHO, or a national statistics bureau may be useful, but use it with caution because it could be outdated or incomplete.
- Seek data from professional provider associations or other private sector entities for augmenting or cross-referencing.

9.2.1 Distribution of Personnel

Distribution of HR is important in determining access to health care. To have a more complete picture of HR, obtain the data or estimates needed to fill in the sample in Table 9.1 (you may need more personnel categories and the terminology may vary from country to country). Each cell should contain a discrete number. For example, obtain data that may be available from health provider surveys, United Nations agencies in country, the MOH, and associations of private providers to indicate the number of doctors, nurses, and other personnel that work in the public and the private sectors in both urban and rural areas. If data on the size and composition of the private health sector are lacking, identify this deficit as an opportunity for the U.S. Agency for International Development to support a survey of private providers.

Table 9.1 Country’s Human Resources (Sample Table)

Cadre	Public		Private		Totals
	Urban	Rural	Urban	Rural	
Doctors					
Nurses					
Midwives					
Traditional healer					
Other (e.g., laboratory technicians)					

9.2.2 Decentralization

In the public sector, HR may be a centralized function, with most decisions being made at the central level. In some countries, although policy is made at central level, most other functions are managed by a lower level; large municipalities often have their own HR structures. HR may be housed in the MOH, or in another ministry, such as the Ministry of Labor. In creating the profile, you should describe the relationship of the HR department to other departments, as well as the level of authority for hiring, firing, disciplining, promoting, and deploying workers (e.g., what level of authority can execute rewards and incentives or initiate disciplinary action to influence performance?).

9.3 Indicator-based Assessments

The indicators assessed in this module are organized in the two components described in Chapter 2. Component 1 has general human resource indicators, data for which can be obtained from the data file titled “Component 1 data” (available on the CD that accompanies this manual and discussed in Chapter 5.2) or from the internet if you do not have access to the CD. Component 2 combines a desk-based assessment and stakeholder interviews to collect information on additional human resource indicators. Stakeholder interviews should complement the information collected from a review of documents, as well as provide important information that may not be available through document review.

9.3.1 Topical Areas

The indicators in this module are grouped by the following topics—

- Component 1: Human Resources Data
- Component 2 topical areas—

- A. Planning
- B. Policies
- C. Performance Management
- D. Training and Education

9.3.2 Detailed Descriptions of Human Resources Indicators

Table 9.2 groups the indicators in this module by topic.

Table 9.2 Indicator Map—Human Resources

Component	Topical Area	Indicator Numbers
Component 1	Human Resources Data	1
Component 2	Planning	2–5
	Policies	6–12
	Performance Management	13–17
	Training and Education	18–20

9.3.2.1 Component 1

1. The ratio of five cadres of health care professionals to the population

Definition, rationale, and interpretation	<p>The ratio of doctors (physicians), nurses, midwives, pharmacists, and laboratory technicians, per 1,000 population</p> <p>This indicator is a necessary, but not a sufficient, measure of coverage. Adequate numbers of health care professionals and the appropriate distribution of those human resources are needed to ensure coverage.</p> <p>A low number can mean that a particular cadre does not have enough service providers. This indicator is useful for cross-country comparisons, for monitoring targets, and for comparing against international standards.</p>
Suggested data source	<p>WHO (2006b). <i>The World Health Report 2006</i>. <www.who.int> or most recent.</p> <p><i>Module links:</i> Core Module, section 5.3.4 (Structure of government and private health organizations); and Health Service Delivery, indicator 13 (ratio of health care professionals to population)</p>
Stakeholders to interview	<p>MOH central level HR or Ministry of Planning</p>
Issues to explore	<p>Examine the number of general or family practitioners (existing and/or new graduates produced) versus specialists, the migration of providers outside country (the so-called brain drain), and staffing in post-conflict settings.</p>

9.3.2.2 Component 2

A. Planning

2. The distribution of health care professionals in urban and rural areas

Definition, rationale, and interpretation	<p>Number of health personnel employed in urban areas, per 10,000 population; number of health personnel employed in rural areas, per 10,000 population</p> <p>This indicator is related to access to care. In general, urban areas may have more providers, leaving rural areas underserved. You will need to compare the distribution of personnel to the population distribution. If possible, look at the distribution by cadre, because doctors are often more likely than other cadres to be clustered in urban areas.</p> <p>In some countries, certain geographic areas are chronically underserved. When appropriate, be aware of other geographic distinctions such as states or provinces if they provide more information than the urban-rural split.</p>
Suggested data source	<p>MOH data, health provider surveys, United Nations agencies in country, the MOH, and associations of private providers</p>
Stakeholders to interview	<p>MOH central level HR or the Ministry of Planning</p>
Issues to explore	<p>In addition to the urban-rural distribution, look at numbers in hospitals versus other facilities if possible. Doctors tend to be clustered in hospitals. Also look at urban-rural distribution by state or province if certain regions pose more of an issue.</p>
Notes and caveats	<p>The split may be affected by MOH policies or incentives for newly formed providers to work in rural locations and by recent decentralization requiring local jurisdictions to recruit their own staff for health centers.</p>

3. HR data—Presence of human resources data system

Definition, rationale, and interpretation Response: yes or no
 This indicator measures the presence of an HR database in the country. (Some countries will have this database in a computerized system, which enables managers to use and share data more efficiently and effectively.)
 Accessible, accurate, and timely data are essential for good planning, that is, appropriate allocation, promotion, training of staff, and tracking of personnel costs.
 If this indicator is “no,” it will imply that planning is not optimal.

Suggested data source For the public sector, central level HR, health information system. At the facility-level, HR department. These departments may be kept at more than one level (central, district, or local)
Module link: Health Information System Module, profile development (Chapter 11.2) may contain useful information on HR-specific systems

Stakeholders to interview Central level HR or planning manager; district managers or managers within the institution (e.g., a hospital or other facility)

Issues to explore Describe which of the above categories of data are collected systematically and whether the category is available and up to date. If data are present, are they used in planning? A good data system can exist without computers, but an electronic system is easier to search and share. Are any computers or data systems available? Maybe a country has computers but no resources to develop a data management system. Staff may not be trained to use them. Data files may be incomplete. If computerization is absent, how are records kept? At what level are data kept (national, district, or local)? Are the data available at relevant levels? Are they complete? Are they up-to-date? All these facets contribute to the overall quality of the data.

Although there is no standard minimal data set, useful information for planning should probably include a staff and record identifier; date of birth; sex; date of employment or affiliation; cadre, discipline, training, or profession; highest degree or education level; license or certification; post location; employment or affiliation status; hours typically scheduled each week within this organization; primary job function; languages other than official; participation in job-related or career-development training; income from the organization (actual or estimated income range for annual salary or reimbursement received from this organization, including overtime and bonuses, and excluding fringe benefits); fringe benefits value (include incentives for rural postings); separation date (for persons who reported HR data for a previous period or who joined or left the organization during the current reporting period); reasons for separation (e.g., attrition due to HIV/AIDS, retirement, emigration).

Other information that is important to HR may be kept in different division—for example, the number of unfilled posts.

3. HR data—Presence of human resources data system

Notes and caveats That the data exist is what is most important—can you see the data? Do a physical check by looking at the databases, if possible. Is someone managing it? Refer to the Health Information System Module (Chapter 11) for additional guidance.

In a decentralized system, the available information on HR at the central level may be more fragmented because records may come from multiple sources with different timetables for updating.

4. The existence of a functioning HR planning system

Definition, rationale, and interpretation Response: yes or no

This indicator looks for evidence of an HR plan or planning system and processes to address staff development and training, recruitment and retention policies, deployment, and staff evaluation and promotion processes.

The presence of HR planning indicates that staffing is linked to the needs of the organization.

Suggested data source For the public sector, central Level MOH

Stakeholders to interview HR staff at central level MOH

Issues to explore Review the plan. Is it based on the organizational mission or goals or staffing needs? Has it been implemented? To what extent was it used? Has it been evaluated for its effectiveness? Have professional associations, especially those that represent the private sector, been involved in developing the plan? Does it contain a staffing plan (look for job classifications, training needs)? Have long-range staffing and recruitment needs been forecast? Find out if the MOH has a written mission statement or goals. If so, are the goals linked formally to HR planning?

The country may have only an operational, or action, plan. Compare the plan with existing reports and targets; compare planned to actual. Are private sector health personnel included in national plans and targets?

Notes and caveats Although decentralized systems may still rely on national level recruitment for professionally trained providers, local jurisdictions may be responsible for hiring technical support (nurses, laboratory technicians, and pharmacies' staff).

5. HR dedicated budget	
Definition, rationale, and interpretation	<p>Response: yes or no.</p> <p>This indicator looks for the presence of a budget allocation for HR staff and related functions.</p> <p>Without a budget, HR activities cannot be assured.</p> <p>If a line item does not exist, you may find limited resources to fund HR positions or conduct HR activities—planning, training, performance planning, and monitoring.</p>
Suggested data source	<p>MOH—the level will differ between centralized and decentralized countries</p> <p><i>Module link:</i> Health Financing Module, indicator 13 (government health budget by cost category)</p>
Stakeholders to interview	<p>HR staff, MOH Planning and Budgeting Department</p>
Issues to explore	<p>Ideally, HR staff and related activities are permanent budget items, reviewed and adjusted annually. HR staff are necessary to carry out HR functions and activities. Note whether dedicated staff exist, which positions, and how many. The country may have no dedicated staff, or the staff may have only limited experience in the personnel field (recruitment, management) or have other functions to perform outside HR. There may be trained HR staff but only at a level to maintain basic procedures and record-keeping functions. The highest level would be to have experienced staff who maintain HR functions, participate in long-range planning, and are housed within the MOH.</p>
Notes and caveats	<p>The budget may vary from a one-year budget to a multiyear budget, depending on the funding cycle. Furthermore, in some countries the HR function may be situated in another ministry, such as Planning or Labor. When hiring, firing, staffing, and deployment are not inside the MOH, the country will probably have great difficulty getting the right service delivery staff with the right skills in the right place.</p>

B. Policies

6. Presence of job classification system

Definition, rationale, and interpretation

Response: yes or no

This indicator looks for a system of classifying jobs for all staff (i.e., a system of job evaluation by which jobs are classified and grouped according to a series of predetermined wage grades).

The purpose of a job classification system is to enable an organization to determine the overall worth and value of a job to that organization for the purpose of establishing a compensation system. The organization evaluates and groups its job descriptions in regard to the work to be done (for what purpose, with what methods and materials, and the required qualifications). Each job fits within a classification (e.g., medical officer, nurse) that describes duties, responsibilities, and qualifications.

The system allows organizations to standardize the jobs and types of skills required as well as salary ranges based on qualifications.

Suggested data source

Central level MOH, private hospitals, NGOs

Stakeholders to interview

HR staff at central level MOH

Issues to explore

Look for a formal classification system with job or position descriptions that contain title, qualifications, duties for various levels of staff (clinical, technical, and support staff). Qualification standards are used to set minimum requirements and guide pay grades. For example, the U.S. government personnel system has a classification called “Nurse Series.” This classification requires a minimum set of qualifications regarding education and registration. It is then further divided into pay grades depending on education or experience (those that exceed the minimum standard receive higher pay). The best case is one in which a country has a formal job classification system that is used also for other HR planning and staffing functions.

Notes and caveats

You may find that a system exists but is not used for other functions. The system may attempt to classify jobs but be incomplete (e.g., no job descriptions). Check whether salaries are based on this classification (take into consideration qualification requirements, experience, education, duties). The presence of job descriptions is an indicator (number 13) in “C. Performance Management” topic area below.

7. Compensation and benefits system that is used in a consistent manner to determine salary upgrades and merit awards

Definition, rationale, and interpretation

Response: yes or no

This indicator looks for a policy that governs compensation and benefits.

The purpose of such a policy is to establish and authorize an equitable and market-competitive compensation and benefits system.

A country may have no formal system to assign salary scale and benefits to each job classification or it may have a system but does not use it in a routine manner.

Suggested data source

Central level MOH

Stakeholders to interview

HR staff at central level MOH (then lower level employees to determine whether they are aware of this policy)

Issues to explore

Look for—

- Equity
 - Transparency
 - Communication of policy to staff
 - Clear lines of authority
-

Notes and caveats

The system should be understood by all employees and used consistently to determine salary upgrades and merit increases. The policy may use “differentials” to provide additional compensation for positions that may cause a hardship or inconvenience to the employee, such as working in a rural or underserved area. Compensation is not limited to salary (e.g., it could include a car allowance). Pay that is market competitive may aid in retention of staff or decrease moonlighting.

For public sector workers, if motivation or performance is low, or moonlighting is a problem, consider innovative provider payment mechanisms, such as those related to output or quality of services, or both. Motivation is not created by a single incentive, however, and focusing solely on financial incentives is unlikely to solve motivation problems (Bennett and Franco 1999).

8. Formal process for recruitment, hiring, transfer, promotion

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>This indicator looks for a formal process for recruitment, hiring, transfer, and promotion, based on established criteria.</p> <p>These functions are necessary for a fair and open process based on candidates' job qualifications.</p> <p>Lack of such functions casts doubts on issues such as fairness and whether employees are properly selected for the job.</p>
Suggested data source	Central level MOH
Stakeholders to interview	HR staff at central level MOH
Issues to explore	Note whether the process is documented and used consistently in all recruitment, hiring, transfer, and promotion decisions. Are there any policies for equity?

9. Employee conditions of service documentation (e.g., policy manual)

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>This indicator looks for an employee manual or other written documentation of the conditions of employment—the rules and regulations that govern employees' conditions of service, benefits, and related policies and procedures.</p> <p>Service documentation lets employees know what to expect in general from the organization and what rules they will be governed by.</p> <p>Lack of service documentation raises issues of fairness.</p>
Suggested data source	HR department
Stakeholders to interview	<p>HR department</p> <p>Also ask a couple of employees if they are aware of such a document or are in possession of it.</p>
Issues to explore	<p>Investigate whether documentation (or a policy manual) has been updated and made available to all employees. Does it contain policies governing work hours, discipline, grievances, benefits, travel, leave, allowances, and legal issues? Documentation may exist but not be available to all employees, may not be up-to-date, or may not include all relevant information.</p> <p>Does the policy manual contain formal discipline, termination, and grievance procedures? (Such procedures provide fair and consistent guidelines for addressing performance problems.) Find out if these procedures exist at all; if they do, they should be clearly related to performance standards, based on performance standards, known to all employees, and followed consistently.</p>

9. Employee conditions of service documentation (e.g., policy manual)

Does an overtime policy exist? Does a policy regarding moonlighting exist?

Are such issues as equity, gender discrimination, and disability addressed? Does the documentation outline a code of conduct?

Notes and caveats

A facility may have only one document for the whole facility. If so, do workers know about it, and is it available to them?

10. Presence of a formal relationship with unions (if applicable)

Definition, rationale, and interpretation

Response: yes or no

This indicator looks for the presence of a formal relationship with unions (if present). Alternately, the indicator could be the number of strikes, labor disputes, and collective grievances.

This indicator examines the country's effort to have good relations between management and labor and avoid labor strikes or disputes and adversarial relations.

The lack of a relationship could be an indication of poor management-labor relations.

Suggested data source

Central level MOH

Stakeholders to interview

Central level MOH, labor union representative

Issues to explore

Ask whether the country has experienced labor disputes, strikes, collective grievances, or other work disruptions and, if so, how they were resolved. Western countries have a history of adversarial relations between labor and management. This rift is sometimes attributed to a lack of trust and respect between the two. A well-functioning organization depends, however, on good relations between them, and those relations can and should be cultivated. By using consultative methods to develop an agenda and policy that reflect common goals of both labor and management, adversarial behavior (and outcomes) can be reduced.

Notes and caveats

Document your findings along a range from no link between HR, management, and the union to their working together to resolve issues and prevent problems.

11. Registration, certification, or licensing is required for categories of staff in order to practice

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>This indicator looks for policies in place requiring registration, licensure, or certification for cadres of staff such as doctors, nurses, midwives, pharmacists, laboratory technicians, and other personnel.</p> <p>This requirement is a mechanism for ensuring that certain professional qualifications are met upon entry to the profession and that periodic reassessments or re-qualification procedures are in place to ensure staff maintain their qualified status.</p>
Suggested data source	<p>HR central level; medical council; nursing council; professional associations; regulatory bodies</p> <p><i>Module link:</i> Governance Module, indicator 42 (accreditation and certification of providers)</p>
Stakeholders to interview	<p>HR staff at central level MOH (they will have information on requirements) and staff at medical, nursing, and other associations (they may know about enforcement)</p>
Issues to explore	<p>If certain cadres have requirements, list the cadre and the requirements. Is periodic recertification required? Review the Governance module (Chapter 6). Regulation and control of traditional and other types of providers within and outside the formal system. Some countries have formal programs in which a certain number of continuing medical education hours is required for physicians to be members in good standing or maintain their license.</p> <p>Can anyone “hang up a shingle” and practice medicine? Are the requirements monitored?</p>
Notes and caveats	<p>The country may have requirements but may not enforce them. If licensing or registration is required, find out how many individuals were registered in the past period or what the proportion of licensed or registered providers is.</p>

12. Salary

Definition, rationale, and interpretation	<p>Salaries are paid on time regularly, paid in full, and represent a viable living wage.</p>
Suggested data source	<p>MOH or Ministry of Finance; NGOs and other private providers or provider organizations</p>
Stakeholders to interview	<p>MOH or Ministry of Finance representatives; employees</p>

12. Salary

Issues to explore If salaries are not regular, how often are they late? Do employees moonlight? How prevalent is moonlighting? Is it more prevalent among certain cadres? Can employees live on what they make in compensation? Are salary surveys conducted to compare government salaries with those in the private sector, or with Social Security staff salaries?

Notes and caveats Information on moonlighting may be difficult to determine.

C. Performance Management

13. Job descriptions are present

Definition, rationale, and interpretation Response: yes or no
 Job descriptions are necessary for performance management, review, and appraisal. Job descriptions, which define what employees are expected to do and how they should be prepared for their job, are necessary so that both employees and their supervisors can be held accountable for performance.
 If none exist, pinning down just what exactly employees are expected to do in their job is hard; in fact, holding them accountable for doing or not doing whatever it is they are “supposed” to be doing is difficult.

Suggested data source Central level MOH

Stakeholders to interview HR staff at central level MOH; managers and employees at every level

Issues to explore Workers need job descriptions—clear information on their duties—to know what is expected of them, and their supervisors need them to evaluate performance. Investigate whether staff are aware of their job descriptions and whether they have a copy. If job descriptions exist, do all staff have them? Are they up to date? Are they specific enough in terms of duties and clear lines of supervision? Are they complete (i.e., do they contain job title, qualifications, responsibilities, supervisor)? Do they exist for every position? Are they reviewed and updated regularly? Look at a few job descriptions to get a sense of how detailed they are.

Notes and caveats In decentralized systems, job functions may differ for the same personnel category because of limited numbers of management or key staff working in rural locations.

14. Supervision (especially clinical supervision)

Definition, rationale, and interpretation

Response: yes or no

This indicator determines if supervision takes place according to a formal process.

Supervision is the most basic tool to monitor and improve quality of care, for the performance of the facility as a whole as well as for individual staff performance.

If the MOH has no method of monitoring whether supervision is conducted, then the existence of formal supervision is questionable.

Suggested data source

Interviews with managers at all levels—district, provincial, and regional. Also interview a few lower level workers to ask about their experience of being supervised.

Stakeholders to interview

Module link: Health Service Delivery Module, indicators 24–28 (quality control and supervision)

Issues to explore

Ask the following questions—

- Who is responsible for clinical supervision of primary care facilities? Central MOH? If so, from what departments? Provincial authority?
- Does each facility have a recognized *clinical* supervisor?
- How many different clinical supervisors (e.g., for different programs such as HIV, malaria, maternal health) visit a primary care facility (the more supervisors, the less integrated the system)?
- Is supervision of the supportive (i.e., modern) or the traditional surveillance and inspection type? The latter focuses on catching errors and is punitive; the former is empowering to employees.

Find out whether supervisors are prepared with supervision skills and perform their roles in monitoring and increasing employee performance, for example, meet with employees to develop workplans, evaluate performance, provide mechanism for training, recognize staff for achievement, and upgrade employee skills as needed. Clear lines of authority are needed. Explore the following—

- How many supervisors received training on how to conduct supervision in the last year?
- To what degree is supervision integrated? Do supervisory teams conduct supervisions using a single supervision tool?
- What is the frequency of supervision visits? To be conducted each month or quarter?

14. Supervision (especially clinical supervision)

- Does a document that formally defines the content of supervision or method of supervision exist? If so, describe it. Get a copy to be able to describe how supervision works.
- How do supervisors stay up-to-date with new standards of care? How many supervisors received clinical updates in the last year?
- Do supervisors have a plan and schedule, conduct joint problem solving, keep supervision records, and follow up (continuity) on issues identified in the last visit?

Notes and caveats

The quality and style of supervision can greatly influence the effectiveness of a supervision visit. Supervision visits that seem like an audit check or merely an opportunity for collecting service delivery data do not encourage the type of dialogue and feedback that help providers improve the quality of care. Do supervisors observe performance? Do they provide just-in-time training or correction? Do they practice joint problem-solving or act punitively? Do they give feedback to individuals on performance?

If there is supervision, is it on-site or from one level to the next level down (i.e., district level to facility level). “Supervision” covers a wide range of behaviors. Sometime it refers to a district level supervisor coming to inspect a health facility with a checklist, without observing or giving feedback to workers. Supervisors themselves are often service providers who rise in the ranks to supervisor with no specialized training in how to be a good supervisor.

Supportive supervision entails the supervisor working with his or her supervisees in a nonthreatening way to improve their performance by providing, for example, corrective or supportive feedback, joint problem-solving, training, incentives, consequences, tools and supplies, or other environmental or organizational support.

Especially in a decentralized system, a dual system may be in place, in which the same worker receives technical supervision (e.g., doctors supervising doctors) and administrative supervision by a local government official. This overlap can cause confusion because the line is not clear. Furthermore, administrative guidance may conflict with technical guidance and impact health care quality.

15. Percentage of supervision visits to health centers planned that were actually conducted

Definition, rationale, and interpretation

[Number of supervision visits to health centers conducted in the last year for which data are available]/[number of planned supervision visits to health centers for the same year]

A measure of frequency of supervision visits—how many planned visits (as defined by the system) actually occur

15. Percentage of supervision visits to health centers planned that were actually conducted

Suggested data source	<p>MOH central, provisional, or district level</p> <p>Private organization HQ</p> <p><i>Module link:</i> Health Service Delivery Module, indicator 27 (Percentage of supervision visits to health centers planned that were actually conducted)</p>
Stakeholders to interview	<p>Find out at the MOH or district level how many visits need to be conducted in a year, and then ask how the completion of supervision visits is monitored. Ask to see this information for the previous year to count how many planned supervision visits were actually made. Conduct interviews at the district, provincial, or regional level or MOH program level to find out where facility supervisors reside. Thus, depending on data availability, the indicator may be limited to just one program or one district, province, or region.</p>
Issues to explore	<p>Ask: What are the reasons for the discrepancy in planned versus conducted?</p> <p>If the percentage is low, probe for barriers to conducting supervision. Does the country have a national standard for the frequency of supervision visits at primary care facilities? If so, how does the system assess whether the expected number of supervisory visits is conducted?</p>
Notes and caveats	<p>In some cases, supervision visits may be conducted by national MOH staff from various programs. In such cases, identifying which national MOH program managers to interview by first interviewing supervisors at the regional level department might be more efficient.</p>

16. There is a formal mechanism for individual performance planning and review

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>This indicator looks for a formal mechanism for performance planning and review (appraisal). The planning provides expectations on performance, and the appraisal provides information to staff and organization on level of performance. The review or appraisal also serves as a basis for promotion, disciplinary action, and staff development.</p>
Suggested data source	<p>Policy manual or documentation; personnel data (individual reviews)</p>
Stakeholders to interview	<p>HR staff at central level MOH; HR department of private health institutions; supervisors and managers at all levels</p>

16. There is a formal mechanism for individual performance planning and review

Issues to explore

Ask the following questions—

- Are reviews conducted on a regular basis between personnel and their supervisors, and if so, do they jointly develop plans and goals for the employee for the coming period? Are review results documented?
- Are review results used for personnel decisions?
- Is a system of rewards and consequences for performance in place?
- Once an employee is in the government system, is he or she in “for life”?

Notes and caveats

Look for a standard personnel performance review form for various classes of employee.

Performance review and management are difficult and some (e.g., Martínez and Martineau 2002) say rare, because they require levels of local decision-making and personnel management that are lacking in most developing country health systems.

17. Incentives, monetary and non-monetary

Definition, rationale, and interpretation

Response: yes or no

Are there formal and informal methods, either monetary or non-monetary, that are used to influence, encourage, or reward worker performance or to motivate employees to work in rural or underserved (and undesirable) areas? These incentives could take the form of monetary or nonmonetary programs such as pay for performance, employee recognition programs, and incentives for distribution (e.g., to work in rural areas) and retention. When incentives take the form of provider payment, salaries are the most common method that MOHs use, although they have been deemed to provide the least incentive for performance.

Performance contracts are sometimes used in the public sector to tie health worker pay or facility recurrent budget allocations to performance (e.g., the percentage of children fully immunized, the percentage of relevant patients receiving family planning counseling, the percentage of cases with correct diagnosis). These types of contracts promote targets set by the MOH or other health services employers.

For monetary incentives, describe the payment method(s) used and whether performance contracts or other targeted incentives exist.

17. Incentives, monetary and non-monetary

Suggested data source	Key informants
Stakeholders to interview	MOH officials, supervisors, donors supporting HR, and health workers
Issues to explore in stakeholder interviews	List any programs and who can benefit. Describe how the program works and who is eligible. Ask whether workers were consulted about what they would want as an incentive. Assess with key informants whether other incentives may be needed.
Notes and caveats	You may have difficulty drawing conclusions about the effectiveness of the program. For public sector workers, if motivation or performance is low, or moonlighting is a problem, consider innovative provider payment mechanisms, such as those related to output or quality of services, or both.

D. Training and Education

18. There is a formal in-service training component for all levels of staff

Definition, rationale, and interpretation	<p>Response: yes or no</p> <p>This indicator looks for a formal training component for personnel. Such training is a cost-effective way to develop staff and organizational capacity. In its most evolved form, the training component is based on staff and organizational needs assessment and linked to organizations' priorities and changes in the health sector and health practices. More often it is ad hoc and not based on a needs assessment nor linked to the organizations' needs. Training could be continuing professional education for the various cadres of health care professionals including physicians, nurses, pharmacists, and midwives. Such a program can serve as a mechanism for professionals to receive continuing education in their technical area. Continuing education may be provided by the MOH, by donors, by professional societies, or others. A certain number of credit hours of continuing education may be required annually for membership or certification.</p> <p>Find out whether the training is available to all staff and evaluated for effectiveness, especially assessing whether employees perform better on the job, not just on how good the training was perceived to be.</p>
Suggested data source	Central level MOH, professional associations, donors supporting training, professional training institutions
Stakeholders to interview	HR staff at central level MOH; professional associations

18. There is a formal in-service training component for all levels of staff

Issues to explore Ask: Is a central training planning function in place? Continuing professional education activities, whether off site or in-service, may be sponsored by the organization or by donors. How are training needs identified? How are potential participants identified? Who develops the training materials and programs? Are the trainers specially prepared? Is there follow-up? Are there any plans or policies? Is training a permanent line item in the budget? Are private providers ever invited to updates or training programs? Do any policies govern leaving one's post to go for donor-funded training? Are training requirements enforced? If so, how?

Notes and caveats Training may be predominantly donor funded. In the United States, continuing professional education for credit is developed only by agencies that are approved for granting credit by the accrediting bodies associated with each professional cadre (e.g., for physicians, the Association for Continuing Medical Education; for nurses, the American Nurses Credentialing Center's Commission on Accreditation). These bodies monitor and regulate the agencies to ensure their activities are developed in compliance with certain standards, including the use of sound instructional design strategies, good record-keeping, and freedom from bias (e.g., free from pharmaceutical company bias especially when financially supported by it). This oversight may or may not exist in other countries.

19. There is a management and leadership development program

Definition, rationale, and interpretation Response: yes or no
Leadership and good management are keys to a more sustainable organization. Having a development program prepares employees to advance and provides incentives for good performance.

Suggested data source Central level MOH

Stakeholders to interview HR staff at central level MOH

Issues to explore Judge whether the country has a philosophy or policy regarding the importance of developing staff management capacity. Note whether the program allows equal opportunity to participate based on performance and other established criteria. Is the program used to develop current staff for promotion? Are promotions open to all, or are women or other groups not equally represented? To whom are these programs targeted? Who is groomed and mentored?
Do specific donors provide funds for such programs?
Are programs or courses conducted locally, regionally, or through Web-based technologies?

20. There are links and “feedback loops” between the organization and pre-service training institutions

Definition, rationale, and interpretation	Response: yes or no This indicator looks for a formal link between organizations and the pre-service training institutions that train future employees for the health sector. Pre-service training based on skills needed in the workplace is necessary so that the right numbers and cadres enter the workforce with the right skills. Note whether the organization (MOH primarily) has a systematic process for feeding its needs regarding skill sets and cadres into the pre-service curricula. Preservice training institutions can also in-service training to the MOH, and the MOH can offer practicum sites to the schools.
Suggested data source	Central level MOH
Stakeholders to interview	HR staff at central level MOH; deans and management of schools of medicine, nursing, pharmacy, and other educational institutions
Issues to explore	Ask: Does the MOH have a relationship with other related ministries, such as the Ministry of Education and the Ministry of Labor? Are the curricula of the professional and allied health sciences schools targeted toward a profile that matches the needs of the country? The numbers of graduates produced and the skills that they have should be linked to the strategic HR plans. Has an HR capacity analysis been done, aimed at determining the ability of the country to fill its HR needs in the future?
Notes and caveats	Often no real feedback loops exist to let the schools know if they are teaching the correct curricula or producing the right numbers and cadres of future staff, or whether graduates enter the profession having the right set of skills to do their jobs.

9.3.3 Summary of Issues to Address in Stakeholder Interviews

Which stakeholders are selected to interview depends on many factors, such as whether there is a centralized HR function, whether that function resides in the MOH or in another ministry, and whether it is a centralized versus decentralized system. Private sector, professional associations, donors, and academic institutions are also sources.

For some indicators, you may want to cross check the answers from managers with those of lower level employees to determine whether they are consistent (e.g., on awareness of policies). In a centralized system, much of the information for this chapter can be obtained by interviewing an HR manager.

In a decentralized system, these data may be found at district levels or in some cases at local levels.

Table 9.3 Summary of Issues to Address in Stakeholder Interviews

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
Private provider associations, private clinics, private hospitals, NGOs	All issues where private providers are concerned— <ul style="list-style-type: none"> • Training for professionals • Salary levels • Emigration of personnel • Competition with public sector for staff • Ability to establish private practices
MOH officials	<ul style="list-style-type: none"> • Basic data • Legal and regulatory mechanisms regarding private practitioners— <ul style="list-style-type: none"> ○ Are there any? ○ Which cadres of providers are regulated? ○ Are rules and laws enforced?
Donors	Mostly issues of funding— <ul style="list-style-type: none"> • Do they support training programs? Management and leadership courses? • Do they support the salaries of health care workers?
Professional associations for physicians, nurses, midwives, and other personnel	<ul style="list-style-type: none"> • How many members do they have? • Do they have numbers of private practitioners? • Do they require continuing education for credentialing? • Do they provide continuing education?
Labor union representative	Labor relations
Educational organizations such as medical and nursing schools	Pre-service training— <ul style="list-style-type: none"> • How do they ensure that their curriculum meets the needs of the organizations where their graduates eventually work? • How do they give their graduates experience? • How often are their curricula updated? • What mechanisms are in place to monitor the needs of the workplace for which they are preparing their students?

9.4 Summarizing Findings and Developing Recommendations

Chapter 4 describes the process that the team will use to synthesize and integrate findings and prioritize recommendations across modules. To prepare for this team effort, each team member must analyze the data collected for his or her module(s) to distill findings and propose potential interventions. Each team member should be able to present findings and conclusions for his or her module(s), first to other members of the team and eventually at a stakeholders’ workshop and in the assessment report (see Chapter 3, Annex 3J for a proposed outline for the report). This process is iterative; findings and conclusions from other modules will contribute to sharpen and prioritize overall findings and recommendations. Below are some generic methods for summarizing findings and developing potential interventions for this module.

9.4.1 Summarizing Findings

Using a table that is organized by the topic areas of your module (see Table 9.4) may be the easiest way to summarize and group your findings. (This process is Phase 1 for summarizing findings as described in Chapter 4.) Note that additional rows can be added to the table if you need to include other topic areas based on your specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Annex 4A of Chapter 4. In anticipation of working with other team members to put findings in the SWOT framework (strengths, weaknesses, opportunities, and threats), you can label each finding as either an S, W, O, or T (please refer to Chapter 4 for additional explanation on the SWOT framework). The “Comments” column can be used to highlight links to other modules and possible impact on health system performance in terms of equity, access, quality, efficiency, and sustainability.

Table 9.4 Summary of Findings—Human Resources Module

Indicator Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments ^a

^aList impact with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

Another way to group your findings could be a table similar to the example in Table 9.5.

Table 9.5 Human Resources Performance Criteria (Sample Table)

Human Resources Performance Criteria				
Equity: Are human resources distributed equitably or inequitably?	Access: Is access to care inhibited by lack of competent personnel in rural and distant facilities?	Efficiency: Is personnel use inefficient because of lack of HR planning and coordination?	Quality: Is the quality of care affected by access to qualified personnel, provider behavior, or incompetence?	Sustainability: Are personnel supported or given incentives (e.g., through a community financing system)?

9.4.2 Developing Recommendations

After you have summarized findings for your module (as in Section 9.4.1 above), it is now time to synthesize findings across modules and develop recommendations for health systems interventions. Phase 2 of Chapter 4 suggests an approach for doing this step with your team. Table 9.6 provides a list of common interventions seen in the area of Human Resources that you may find helpful to consider in developing your recommendations.

Key problems can be grouped by the topic areas addressed in the chapter.

When suggesting interventions, make sure that the link between the problem and the suggested intervention is direct.

Table 9.6 contains some common issues related to the topic areas of the HR chapter and some possible interventions. Keep in mind that causes of problems related to retention and motivation overlap and thus are likely to respond to similar interventions.

Table 9.6 Illustrative Recommendations for Human Resource Issues

Issue	Possible Intervention
Shortages of qualified personnel to carry out tasks	<ul style="list-style-type: none"> • Consider training lower cadres of workers and community health workers in less demanding tasks, and shift those tasks to them. • Eliminate mandatory retirement policy for public sector.
Retention	<ul style="list-style-type: none"> • Offer adequate salary. • Establish a payment schedule. • Provide extra-duty allowances. • Create a good working environment. • Expand the benefits program. <p>For example, the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) is supporting the MOH in Zambia in approaches to retain physicians. They support a scheme that provides housing, hardship allowance, transportation, and educational stipends for employees’ children for the 30 to 35 physicians who serve in rural areas throughout the country (PEPFAR 2006).</p>
Motivation	<ul style="list-style-type: none"> • Improve salary and compensation, and ensure that salary is paid on time. • Provide effective leadership and management systems. • Change existing punitive supervision practices (i.e., reducing incentives, using blame which causes fear) to supportive supervision. • Increase work-related self-efficacy—that is, workers are trained to do the tasks; clear expectations are communicated; workers receive feedback on their performance; workers are appropriately selected; job descriptions and standards are clearly communicated; and systems are established for developmental appraisals (Franco and others 2000). • Measure and share results; recognize and reward.
Unequal distribution of health workers and poor coverage in some (usually rural) areas	<ul style="list-style-type: none"> • Provide monetary incentives such as— <ul style="list-style-type: none"> ○ Incentive payments for rural hardship postings ○ Special bonuses ○ Loans ○ Vehicles ○ Scholarships ○ Promotions ○ Management responsibilities ○ Retirement benefit packages • Provide nonmonetary incentives such as— <ul style="list-style-type: none"> ○ Congratulations and thank-you notes ○ Public recognition programs • Improve intake of medical students from rural areas. • Provide training in the locations where physicians will later practice.

Issue	Possible Intervention
Graduates of professional schools lacking the skills needed in the workplace	<ul style="list-style-type: none"> • Establish feedback loops and links between the professional schools and the MOH. • Place students in facilities for practicums and clerkships using faculty or facility staff as preceptors.
Lack of feedback to employees on their performance	<p>Strengthen supervision—</p> <ul style="list-style-type: none"> • Provide management training for evaluators or supervisors • Define and enforce staff review cycles
No joint planning and review between employees and supervisors	<p>Introduce a process to conduct—</p> <ul style="list-style-type: none"> • Joint planning based on job descriptions and tied to the organization's mission and goals • Periodic employee performance reviews
Workforce at risk of HIV/AIDS	<p>Implement HIV/AIDS programs and policies for prevention and protection of employees, for example—</p> <ul style="list-style-type: none"> • Educate workers on how to prevent needlestick injuries and other exposure to bloodborne pathogens. • Ensure adequate follow-up of injured workers including postexposure prophylaxis. • Provide antiretroviral medicines to HIV-positive personnel. • Decrease stigma.
Punitive or controlling supervision	<ul style="list-style-type: none"> • Train supervisors in supportive supervision techniques. • Introduce self-assessment at facilities.
No regular supervision	<ul style="list-style-type: none"> • Use on-site supervisors (in-charges, peers). • Train health inspectors in supervision to support on-site supervisors.

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CHAPTER 10 PHARMACEUTICAL MANAGEMENT MODULE

10.1 Overview

This chapter presents the pharmaceutical management module of the assessment manual. Section 10.1 defines pharmaceutical management, the key functions of pharmaceutical management, and the various processes that make up a pharmaceutical management system. Section 10.2 provides guidelines on preparing a profile of the pharmaceutical management system in the country of interest. Section 10.3 provides details on pharmaceutical management indicators. Section 10.4 is a brief guide to summarizing the findings and using them to recommend the next steps.

10.1.1 What Is Pharmaceutical Management?

Careful management of pharmaceuticals is directly related to a country's ability to address public health concerns. Even so, many health systems and programs run into difficulty achieving their goals because they have not addressed how the medicines essential to saving lives and improving health will be managed, supplied, and used. Pharmaceuticals can be expensive to purchase and distribute, but shortages of essential medicines, improper use of medicines, and spending on unnecessary or low-quality medicines also have a high cost—wasted resources and preventable illness and death.

Because medicines are so important and resources so limited, ways have been developed to improve the supply and use of medicines while minimizing costs. Pharmaceutical management represents the whole set of activities aimed at ensuring the timely availability and appropriate use of safe, effective quality medicines and related products and services in any health care setting.

The following terms are used in pharmaceutical management.

- **Bid:** A bid is document prepared in response to an expression of procurement needs (also known as a *tender*).
- **Cold chain:** The distribution system used for the storage and transport of pharmaceuticals that require refrigeration (e.g., certain vaccines) is called a *cold chain*. In some countries a formal cold chain is also managed through a vertical program such as an immunization program (e.g., Expanded Programme on Immunization [EPI]).
- **Essential medicines:** The World Health Organization (WHO) defines essential medicines as the limited number of medicines that satisfy the needs of the majority of the population and that should be available at all times. Countries often publish a national essential medicines list (NEML) that identifies the medicines considered to be most important and relevant for the public health needs of that population.
- **Kits:** Kits are standardized packages of essential medicines and supplies that are delivered to the facility. Type and quantities of contents are determined by expected

utilization rates for predefined services. Kits are generally part of a *push* distribution system that does not use requisitions.

- **Lead time:** The time needed to prepare bids, the time required to make an award and place an order, the time required to receive the delivery, and the time between receipt and payment are all defined as *lead time*.
- **Pharmaceuticals:** The term *pharmaceuticals* encompasses medicinal products, vaccines, contraceptives, diagnostics, and medical supplies.
- **Push/pull systems:** Push and pull are two types of distribution systems. In push systems, quantities of supplies and the schedule for their delivery to facilities are determined at a higher (usually central) level with little to no input from lower levels. In pull systems, facilities provide information on actual consumption and needs estimates to higher levels.
- **Rational medicine use:** Rational medicine use occurs when clients/patients are prescribed and dispensed the full amount of the appropriate, quality medicines at the lowest cost to them, to their communities, and to the system, and when clients/patients take the medicines correctly and without interruption.
- **Standard treatment guidelines (STGs):** STGs are disease-oriented guidelines that reflect a consensus on the treatments of choice for common medical conditions. They help practitioners make decisions about appropriate treatments and help to minimize variation in treatments offered by practitioners in the health care system.
- **Tracer products:** Approximately 20 pharmaceuticals or commodities that are selected to evaluate availability of essential products. The items to be selected for a tracer list (see Table 10.1 for a sample) should be relevant for public health priorities and should be expected to be available at all times in the level of facilities of interest (e.g., clinics or hospitals). They are, therefore, likely to be on the NEML.
- **Tender:** Same as *bid*.

For additional definitions and information, see MSH (1995), MSH and WHO (1997), and WHO (2006).

Table 10.1 Example Trace Product List

Product	Form, Dosage
Analgesic and antipyretic medicines	
Acetylsalicylic acid (aspirin)	Tablet, 300 mg
Paracetamol	Tablet, 500 mg
Antihelminthic medicines	
Mebendazole	Chewable tablet, 100 mg
Anesthetic medicines	
Ketamine	Vial, 50 mg/ml
Antibacterial medicines	
Amoxicillin	Tablet, 250 mg
Metronidazole	Tablet, 450 mg
Benzympenicillin sodium	Vial, 5 megaunits
Sulfamethoxazole + trimethoprim (co-trimoxazole)	Tablet, 400 mg + 80 mg
Ciprofloxacin	Tablet, 500 mg
Doxycycline	Tablet, 100 mg
Erythromycin	Tablet, 250 mg
Gentamicin	Ampoule, 40 mg/ml
Rifampicin + isoniazid	Tablet, 150 mg/100 mg
Antimalarial medicines	
Sulfadoxine-pyrimethamine	Tablet, 500 mg/25 mg
Quinine dihydrochloride	Ampoule, 300 mg/ml
Cardiovascular medicines	
Propranolol	Tablet, 40 mg
Hydrochlorothiazide	Tablet, 25 mg
Gastrointestinal medicines	
Oral rehydration salts	Sachet
Minerals	
Ferrous sulfate + folic acid	Tablet, 200 mg/0.25 mg
Ophthalmological preparations	
Oxytetracycline eye ointment 1%	Tube, 5 mg
Vaccines	
Polio vaccine	Vial

10.1.2 How Does Pharmaceutical Management Work?

Pharmaceutical management is the set of practices aimed at ensuring the timely availability and appropriate use of safe, effective, quality medicines, health products, and services in any health care setting. These activities are organized according to functional components of a cycle or system and may take place at various levels of the health system according to the design of the health system. The components are the same for all sectors although procedures and activities within each component may differ.

Activities in the pharmaceutical management system are related to the selection of products that are to circulate in the supply system and to their procurement, distribution, and use (see Figure 10.1).



Source: *Management Sciences for Health*

Figure 10.1 Components of the Pharmaceutical Management Cycle

The pharmaceutical management cycle operates within and is affected by a political, legal, and regulatory framework. This framework defines health priorities that have an impact on the following—

- The types of products and services that can or should be offered at different types of facilities
- The types of personnel needed and required qualifications for carrying out various responsibilities related to the functioning of the cycle
- Quality assurance standards and financial requirements to be met

This cycle applies to the public and private sectors. The capacity to carry out these activities is mediated by the level of management support that is available. Management support includes information systems, human resource capacity, and financial resources.

10.2 Developing a Profile of Pharmaceutical Management

10.2.1 General Issues

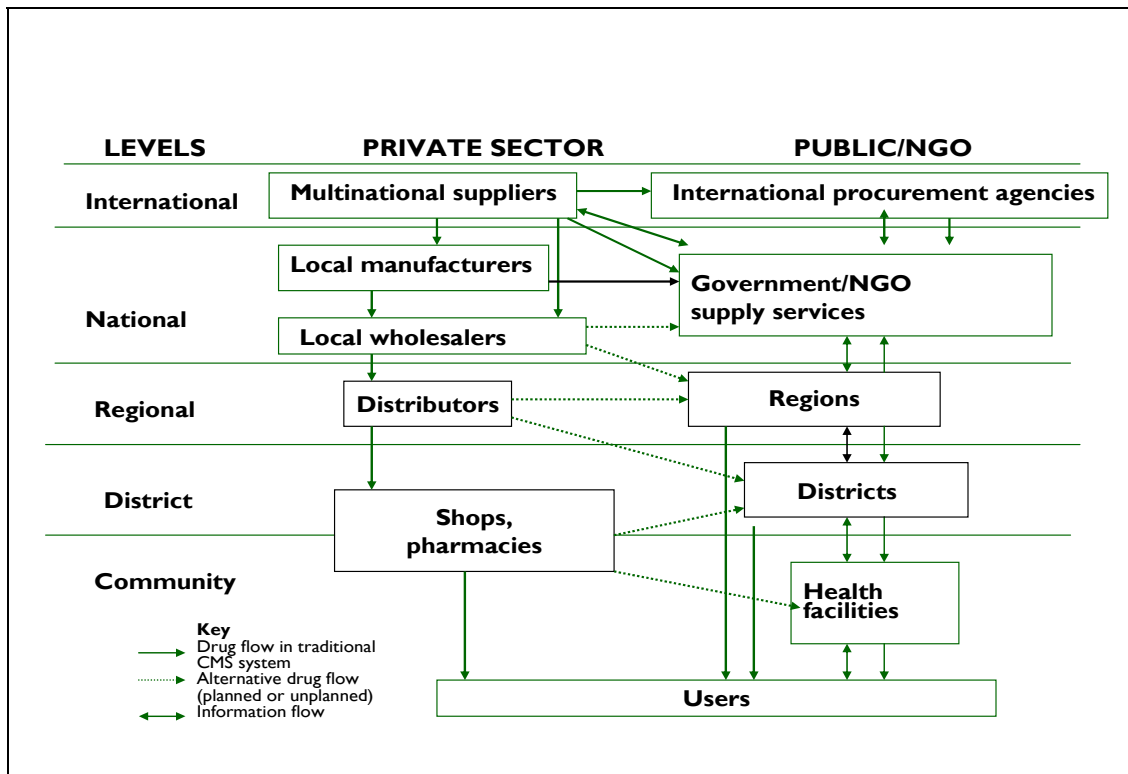
The system of pharmaceutical management generally reflects the health care system in which it operates. The first step to developing a profile of the pharmaceutical management system in a country is to sketch out how the overall health system is organized and how it functions. The following questions should be answered before collecting indicator data.

- What is the participation of various levels of care in the public healthcare system? Of the nongovernmental organizations (NGOs) health care delivery system? Of the private health care system?
 - Primary level of care (e.g., health post or clinic)
 - Secondary level of care (e.g., district hospital)
 - Tertiary level of care (e.g., specialized hospital)
- What has been the country's experience with health sector reform (e.g., decentralization, privatization)?
- Are NGOs present in the country? What is their role?
- Are vertical programs present?¹ What is their role?
- What are the prevalence and incidence of major health problems?
- What role do donors play in managing and providing pharmaceuticals?
- What trade issues apply, including the influence of global and regional trade agreements or initiatives (e.g., North American Free Trade Agreement, Central American Free Trade Agreement, Mercosur, Economic Community of West African States, Association of Southeast Asian Nations, World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights, Southern African Development Community)?

¹ Vertical programs, such as tuberculosis, Integrated Management of Childhood Illness, or malaria programs, may operate with program-specific essential medicine lists, STGs, procurement processes, and distribution systems. In cases where vertical programs conduct separate functions from the general public system, the basic components of the pharmaceutical management cycle apply. For a general evaluation of the performance of the pharmaceutical management system, however, determining the effectiveness of their contribution to the access of pharmaceuticals is generally sufficient. For example, tracer lists that are used to assess the availability of key products may include products that are sourced through vertical programs. Problems with availability may then lead to further inquiry to determine why availability is poor.

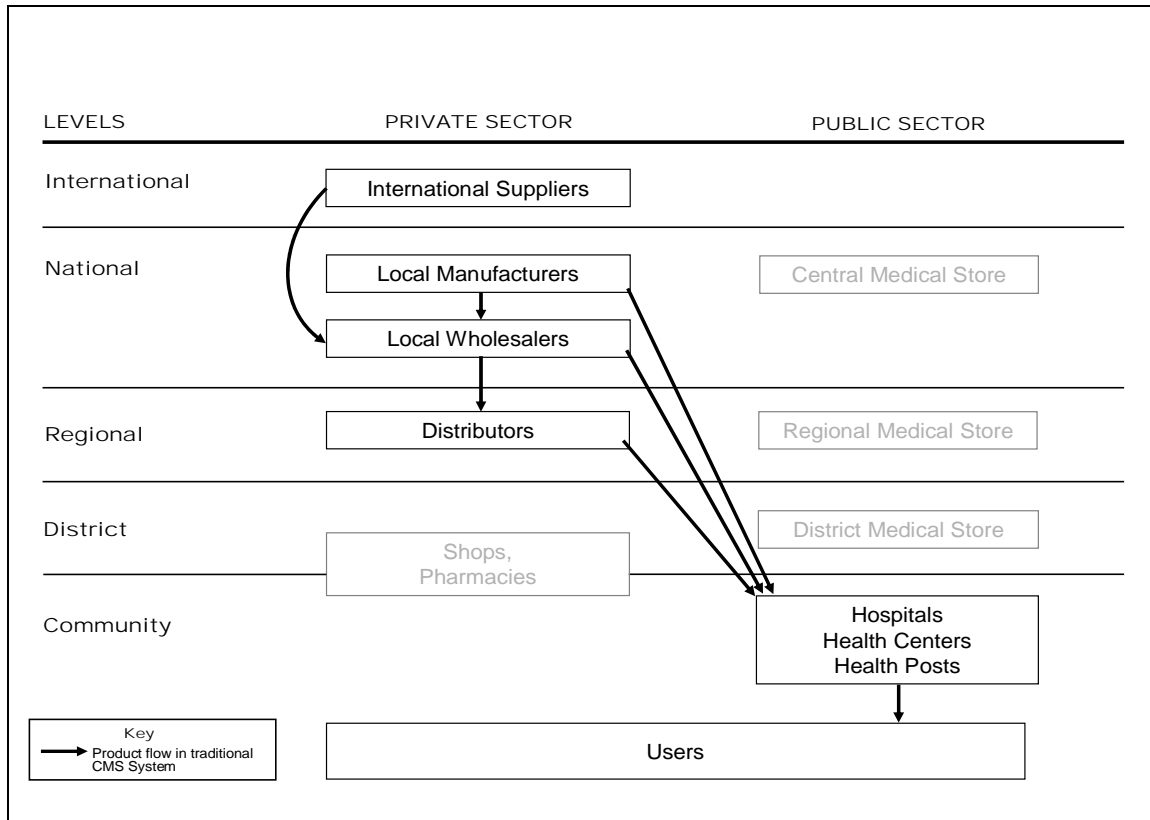
10.2.2 Pharmaceutical Management Flows

The pharmaceutical management system can be diagrammed in terms of the flow of information, funds, and products. The activities involved with carrying out each component of the pharmaceutical management system can be diagrammed. Perhaps the easiest place to start in developing a profile is by diagramming the distribution system to show how pharmaceuticals enter and move through the country. Figure 10.2 diagrams a typical multilevel distribution system, including the participation of the private sector in the public sector supply system. Figure 10.3 diagrams an alternative public sector system in which storage and transportation functions are contracted out to the private sector distributors. Additional flows may be added to demonstrate the flow of funds, including the budget allocation, procurement, payments to suppliers, and payments from clients/patients. Similarly, diagrams can be made to illustrate the process of selecting and quantifying pharmaceuticals. These models allow for numerous potential variations. Determining the best model for any particular context is beyond the scope of this assessment.



Note: CMS = Central Medical Stores
 Source: Management Sciences for Health

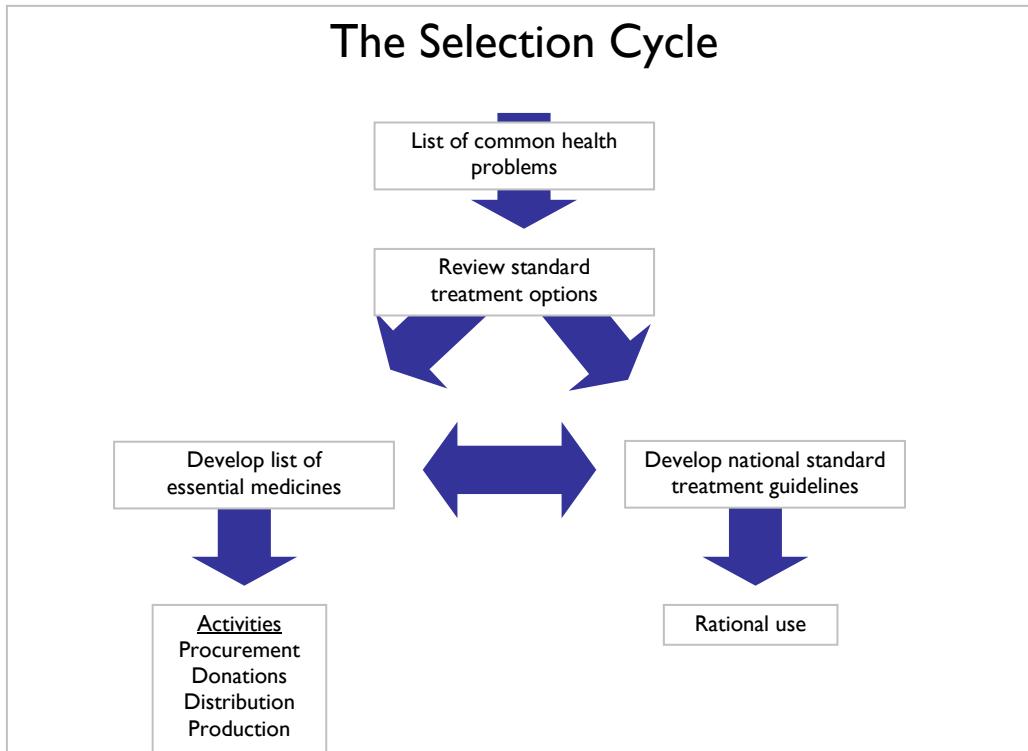
Figure 10.2 Typical Country Distribution System



Note: CMS = Central Medical Stores
 Source: Management Sciences for Health

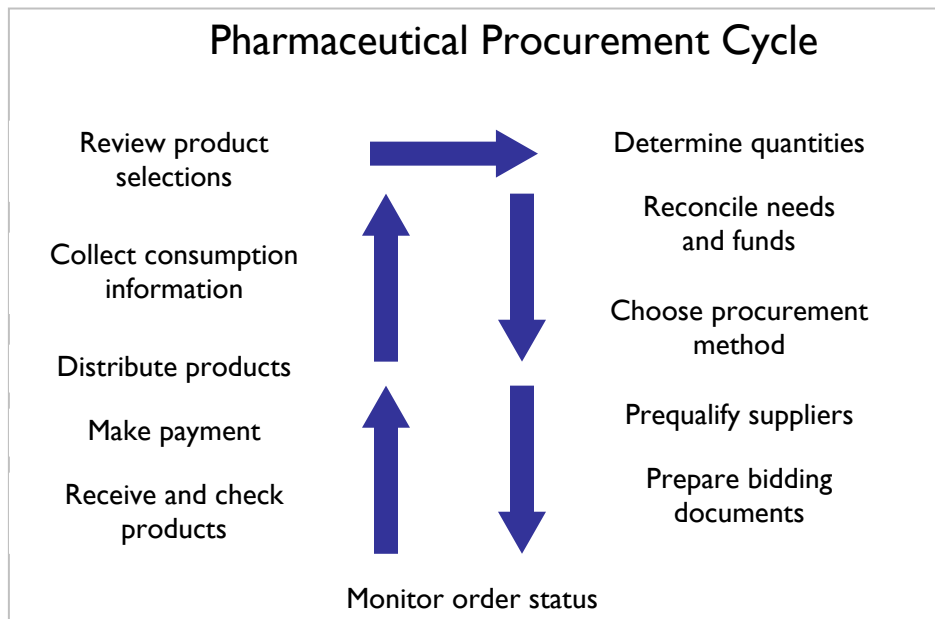
Figure 10.3 Direct Delivery Model for Distribution

The following diagrams (Figures 10.4, 10.5, and 10.6) highlight critical steps in the system's selection, procurement, and distribution components. The specific agency or entity responsible for carrying out these activities, and therefore the source of key indicator data, can differ from country to country. Some functions, such as procurement, may be contracted out by the public sector to private agencies. One source for this information is the national medicines policy. Alternatively, this information can be determined in the course of the in-country assessment.



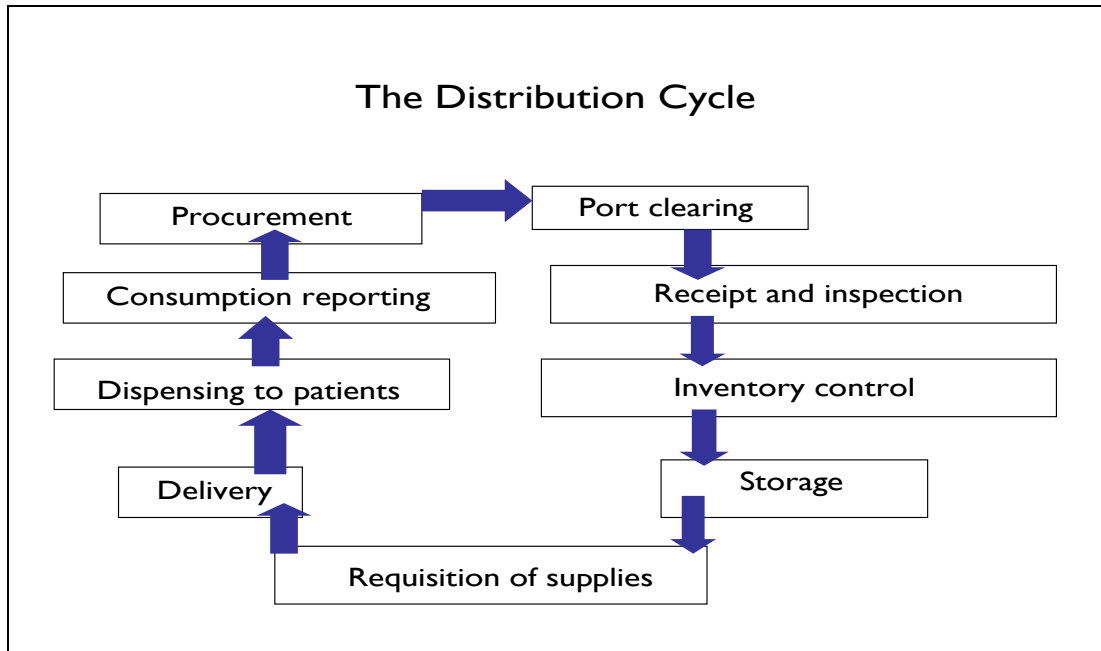
Source: Management Sciences for Health

Figure 10.4 Components of the Selection Process for a Public Health System



Source: Management Sciences for Health

Figure 10.5 Steps in the Procurement Cycle



Source: Management Sciences for Health

Figure 10.6 The Distribution Cycle

10.3 Indicator-based Assessment

10.3.1 Topical Areas

The pharmaceutical management module is divided into Components 1 and 2 as described in Chapter 2 of this manual. The indicators in Component 2 are grouped by topical areas relevant to pharmaceutical management, summarized as follows—

- A. Pharmaceutical Policy, Laws, and Regulations
- B. Selection of Pharmaceuticals
- C. Procurement.
- D. Storage and Distribution
- E. Appropriate Use
- F. Availability
- G. Access to Quality Products and Services
- H. Financing Pharmaceuticals

10.3.2 Detailed Descriptions of Pharmaceutical Management Indicators

Table 10.2 groups the indicators in this module by topic.

Table 10.2 Indicator Map—Pharmaceutical Management

Component	Topical Area	Indicator Numbers
Component 1	Not applicable	1–4
Component 2	Pharmaceutical Policy, Laws, and Regulations	5–11
	Selection of Pharmaceuticals	12–15
	Procurement	16–22
	Storage and Distribution	23–26
	Appropriate Use	27–29
	Availability	30
	Access to Quality Products and Services	31–36
	Financing Pharmaceuticals	37–39

10.3.2.1 Component 1

The pharmaceutical module includes four indicators in Component 1. The source of all four indicators is *The World Medicines Situation* (WHO 2004). This document draws from recent studies in a wide range of countries and regions that may be considered for a health system performance assessment. It also provides an overview of key issues in pharmaceutical management. The annexes of *The World Medicines Situation* include extensive data and information. The following four indicators were selected as key performance indicators that would be available for most countries.

1. Total expenditure on pharmaceuticals (% total expenditure on health)

Definition, rationale, and interpretation Measures relative significance of pharmaceutical spending relative to other spending on health; indicates financial and institutional sustainability
Compare to selected peer group

Suggested data source WHO (2004). *The World Medicines Situation*.

2. Total expenditure on pharmaceuticals (per capita average exchange rate)

Definition, rationale, and interpretation Measures magnitude of pharmaceutical spending; indicates financial and institutional sustainability
Compare to selected peer group.

Suggested data source WHO (2004). *The World Medicines Situation*.

3. Government expenditure on pharmaceuticals (per capita average exchange rate)

Definition, rationale, and interpretation Measures magnitude of government spending on pharmaceuticals; indicates financial and institutional sustainability
Compare to selected peer group

Suggested data source WHO (2004). *The World Medicines Situation*.

4. Private expenditure on pharmaceuticals (per capita average exchange rate)

Definition, rationale, and interpretation Measures magnitude of private sector spending on pharmaceuticals; indicates financial and institutional sustainability
Compare to selected peer group

Suggested data source WHO (2004). *The World Medicines Situation*.

10.3.2.2 Component 2

The Component 2 indicators are organized by topical area. In total, 35 Component 2 indicators are included in this chapter. In addition, suggested issues to explore are noted for some indicators.

A. Pharmaceutical Policy, Laws, and Regulations

A country's national medicines policy specifies the government's goals for the pharmaceutical sector, their relative importance, and the main strategies used to attain them. An NMP provides a framework for developing pharmaceutical laws and regulations, which are important because of the complexity and risk inherent in the pharmaceutical sector.

Indicators 5–11 relate to pharmaceutical laws and policies.

5. Is there a National Essential Medicines Policy (NMP) or other government document that sets objectives and strategies for the pharmaceutical sector based on priority health problems?	
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Definition, rationale, and interpretation	An NMP is a guide to action for the pharmaceutical sector. Existence of an NMP indicates commitment to improving pharmaceutical management in public and private sectors.
Suggested data source	WHO (2004). <i>The World Medicines Situation</i> . WHO database; existing country studies
Stakeholders to interview	Head of the Ministry of Health (MOH) pharmacy department, National Essential Medicines Program
Issues to explore	Has it been updated in the past 10 years? A response of “yes” indicates that the policy is kept up to date.
Notes and caveats	If the country has a National Essential Medicines Program, most likely that program has received some support or guidance from WHO and that the WHO guidelines on how to develop an NMP (WHO 2001) were followed or used as a template to develop the policy.

6. Is there a comprehensive pharmaceutical law?

Definition, rationale, and interpretation	Assesses existence or absence of a comprehensive national pharmaceutical law The existence of a comprehensive law demonstrates commitment to improving pharmaceutical management in public and private sectors. A comprehensive law will include all of the following components— <ul style="list-style-type: none"> • A regulatory framework • Principles for selecting medicines, including donations • Strategies for supply and procurement • Promotion of rational use of pharmaceuticals • Economic and financing mechanisms • Role of health professionals • Monitoring and evaluation mechanisms
Suggested data source	WHO (2004). <i>The World Medicines Situation</i> . WHO database; existing country studies
Stakeholders to interview	Head of the MOH pharmacy department National Essential Medicines Program
Issues to explore	When was the national pharmaceutical law last updated? A policy that is more than five years old may be outdated and require revisions to reflect changes in overall health or national development policies and priorities.
Notes and caveats	Some countries will combine the national medicines law with the national medicines policy.

7. Is there a National Drug Regulatory Authority (NDRA) responsible for the promulgation of regulations and for enforcement?

Definition, rationale, and interpretation	Indicates commitment to implementing and enforcing pharmaceutical laws
Suggested data source	National health and medicines policy; existing country studies
Stakeholders to interview	Head of the MOH pharmacy department National Essential Medicines Program, NDRA
Issues to explore	What are the specific responsibilities of the NDRA? What is the relationship of the NDRA to other governmental agencies? Is it autonomous? How is it financed?
Notes and caveats	If there is not a clear separation of functions, the NDRA is vulnerable to corruption.

8. Is there a system for pharmaceutical registration?

Definition, rationale, and interpretation	Indicates existence of a system to authorize circulation of pharmaceuticals on the market
Suggested data source	WHO (2004). <i>The World Medicines Situation</i> . National drug law; existing country studies; NDRA reports
Stakeholders to interview	Head of the MOH pharmacy department National Essential Medicines Program NDRA director
Issues to explore	<p>Is periodic renewal required, and are pharmacological standards applied? Is registration based on an assessment of product efficacy, safety, quality, and truth of packaging information? If so, then pharmaceutical registration is part of a comprehensive quality assurance program.</p> <p>Is the system kept up to date? Do you have any concerns about the ability of the registration system to keep up with applications? What is the average turnaround time for pharmaceutical registration applications? Although there is no gold standard or optimal turnaround time, an indicator of problems would be having a backlog of several months, which may be confirmed by an examination of dossiers. A very short turnaround time may indicate that the process is not seriously examining the information provided.</p> <p>In the absence of the system characteristics listed above, the registration system may simply be a revenue generating system.</p> <p>Do you have concerns about a black market, products that are circulating in the market and are not registered? The process of registration may be considered too cumbersome (e.g., fees too high, delays too long), or the country may have no way to enforce registration requirements.</p>
Notes and caveats	Some systems may accept registration in reference countries (often neighboring countries or countries with similar systems). This option may be rational for countries that have several types of human resource limitations.

9. Does the pharmaceutical registration system generate revenue for the MOH?

Definition, rationale, and interpretation	Measures the potential for financial sustainability of the registration system for the MOH
Suggested data source	NDRA reports
Stakeholders to interview	NDRA director

9. Does the pharmaceutical registration system generate revenue for the MOH?

Issues to explore If yes, are revenue targets consistently met? If targets are met, sustainability of the registration system may be achieved.

Notes and caveats You may not be able to obtain information about revenues and expenditures of the NDRA. Again, this issue relates more to transparency than performance per se.

10. Is there a system for the collection of data regarding the efficacy, quality, and safety of marketed products (postmarketing surveillance)?

Definition, rationale, and interpretation Indicates existence of system to monitor pharmaceutical product quality problems; does not address how well postmarketing surveillance is conducted

Suggested data source NDRA reports

Stakeholders to interview NDRA, director of pharmacy department, Drug Quality Control Laboratory, National Drug Inspectorate

Issues to explore How long has the system been in place? How extensively is it actually used for tracking action on substandard pharmaceutical products? Are data available? What standards are used?

Does the country have a system by which providers and consumers can report product problems? If so, is it a passive, self-reporting system or a mandatory reporting system? If it is the latter, a key component of quality assurance is in place. This indicator does not address how well follow-up on reports is conducted.

Notes and caveats Postmarketing surveillance systems may focus on some priority pharmaceutical therapeutic categories or products known to be particularly prone to problems.

11. Do mechanisms exist for the licensing, inspection and control of (1) pharmaceutical personnel, (2) manufacturers, (3) distributors/importers, and (4) pharmacies/drug retail stores?

Definition, rationale, and interpretation Indicates existence of mechanisms to enforce regulations and ensure quality of pharmaceuticals on the market

If these mechanisms are used, a key component of quality assurance is in place. This indicator does not address whether licensing, inspection, or control activities are fully functional.

Suggested data source Country reports

Module link: Governance, indicator 40c (pharmaceutical regulation processes)

11. Do mechanisms exist for the licensing, inspection and control of (1) pharmaceutical personnel, (2) manufacturers, (3) distributors/importers, and (4) pharmacies/drug retail stores?

Stakeholders to interview	NDRA, Head of Pharmacy Inspection
Issues to explore	<p>How rigorous is the enforcement of licensing requirements? Is a report of inspections and enforcement results generated regularly?</p> <p>Does the country have sufficient qualified staff to conduct all inspection activities?</p> <p>Are statistics available about compliance and enforcement of pharmaceutical laws and regulations? Available statistics are evidence of a functioning system for follow-up. How often are the statistics produced? Ask to see a report.</p>
Notes and caveats	MOH staff are often wooed and recruited by the private sector. Inspection staff recruitment is often a major and constant concern.

B. Selection of Pharmaceuticals

The rationale for using an NEML is that it leads to more rational prescribing, lower treatment costs, and more reliable supply of medicines. NEMLS are based on consensus-based standard treatments for priority public health conditions. The selection of medicines for NEMLS has a considerable impact on the quality of care. Indicators 12–15 relate to pharmaceutical selection that is meant to guide treatment in the public sector.

12. Is there a national essential medicines list (NEML)?

Definition, rationale, and interpretation	Measures a country's commitment to rational resource allocation and containing pharmaceutical costs
Suggested data source	<p>WHO (2004). <i>The World Medicines Situation</i>.</p> <p>National Essential Medicines Program; WHO reports</p>
Stakeholders to interview	National Essential Medicines Program, MOH pharmacy department
Issues to explore	<p>Is the NEML based on national STGs? Does it identify medicines by level of care?</p> <p>Was the NEML updated within the last three years? If so, it likely to contain information most pertinent to current public health concerns and new advances in medicines.</p> <p>Is the NEML meant to guide cost control issues (procurement) as well as therapeutic issues (quality of care)?</p>

12. Is there a national essential medicines list (NEML)?

Notes and caveats The definition of purpose and use of the NEML may be stipulated in the national medicines policy.

13. Is there an active national committee responsible for managing the process of maintaining a national medicines list?

Definition, rationale, and interpretation Measures awareness of need for up-to-date pharmaceutical information and existence of a system to provide it
 If the NEML is being updated (see Indicator 12 above) and an active committee is in place, then the medicines list is being updated by a committee and not by an individual.

Suggested data source National Essential Medicines Program

Stakeholders to interview MOH pharmacy department, National Essential Medicines Program, National Drug and Therapeutics Committee (DTC) Chair

Issues to explore Does this committee have terms of reference (TORs) or standard operating procedures (SOPs)? The existence of TORs or SOPs indicates that a formalized process is in place and that issues of transparency are being addressed.
 If the country has SOPs, do they require review or up-to-date, unbiased scientific data? Does the committee have access to such data?
 Does the country have a system for distributing the NEML to facilities?

Notes and caveats As some countries develop their pharmaceutical management systems, they may rely on a generic EML developed by WHO, or the NEML of a neighboring country that shares a similar epidemiological profile.

14. What is the total number of pharmaceuticals (in dosage forms and strengths) on the NEML?

Definition, rationale, and interpretation On average, NEMLs normally contain 300–400 individual pharmaceutical products. The country’s morbidity and mortality situation should be the guide for the number of products on the NEML, and lower mortality and morbidity ratios should be consistent with a shorter list of NEML products. Consideration should be given to what is appropriate by level of care.

Suggested data source National Essential Medicines Program, existing country studies, NEML documents and policy

14. What is the total number of pharmaceuticals (in dosage forms and strengths) on the NEML?

Stakeholders to interview	This information would be available in the NEML and would require an actual count. Copies of the NEML may be obtained from the pharmacy department, National Essential Medicines Program, and the MOH procurement office.
Issues to explore	<p>The number of pharmaceutical products for any one level of care should not exceed the total number of items on the NEML. On average, the spread of items by type of facility is likely to be as follows—</p> <ul style="list-style-type: none"> • First-level care facilities: 40–50 pharmaceutical products • Secondary care facilities: 150–200 pharmaceutical products • Tertiary care facilities: 300–400 pharmaceutical products <p>How stable has the NEML been over time? Are more items added than eliminated?</p>
Notes and caveats	Increases in the number of medicines over time may indicate that items are not reviewed for obsolescence or lack of need. New items are often added to the list to replace items already on the list.

15. Are international nonproprietary names (INN) or generic names used for products on the list?

Definition, rationale, and interpretation	Helps to ensure that the NEML contains no duplications of medicines; facilitates reviews of therapeutic equivalence and cost-efficacy (studies typically refer to the chemical entities rather than branded products)
Suggested data source	WHO (2004). <i>The World Medicines Situation</i> . Review of the NEML
Stakeholders to interview	This information may be determined by a visual review of the list.
Issues to explore	<p>Are generic names used throughout the pharmaceutical management information system management system (inventory cards)?</p> <p>Is the list used for procurement purposes?</p> <p>Is any preference given for brand name products? Why? For some products (very few), bioequivalence may be an issue (the generic or therapeutic equivalent may not be bioequivalent and may have clinical implications). Such cases are generally well documented.</p>
Notes and caveats	None.

C. Procurement

The primary purpose of procurement is to provide regular delivery of adequate quantities of high-quality supplies at the lowest cost. National procurement decisions take place within a country's policy and legal framework and may take place at the central level or be decentralized down to the facility level. Some steps of the procurement process may be centralized whereas others take place at the local level. Understanding the where the various steps of procurement take place is critical. It will contribute to identifying the appropriate stakeholders to interview. For example—

- *Centralized system:* Procurement is conducted at central level by a national procurement unit (which may be a parastatal enterprise).
- *Decentralized system:* Procurement is conducted by subnational entities, including regional or provincial authorities and facilities.
- *Mixed systems:* In some systems that have decentralized as a result of health sector reform, pharmaceutical systems have been redesigned to maintain economies of scale at the central level, so prices may be tendered or negotiated at the central level and actual purchases from approved suppliers at approved prices are made at the local level by budgetary units.

For the purposes of this assessment, the focus will be on procurement for the public sector. Indicators 16–22 relate to the procurement of pharmaceuticals. Because procurement involves many steps and agencies, you should, during the document review and interviews, develop and refine a step-by-step description of how procurement takes place and who the responsible authorities and agents are.

16. Are there formal standard operational procedures (SOPs) for conducting procurement of pharmaceuticals in the public sector?

Definition, rationale, and interpretation	Formalized SOPs include detailed descriptions of the roles and responsibilities of all offices and agencies involved in the procurement process. They promote accountability and transparency.
Suggested data source	National procurement guidelines, standard bidding documents
Stakeholders to interview	Procurement unit or office, relevant agency
Issues to explore	<p>Has an independent audit of the public sector procurement been conducted within the last three years?</p> <p>Were the SOPs developed specifically for health sector goods and pharmaceuticals, or are they general SOPs? The procurement of pharmaceuticals requires unique considerations, including specifications and sourcing issues. General procurement guidelines are inadequate for pharmaceuticals.</p>
Notes and caveats	Use this indicator in centralized and decentralized systems.

17. Are generic or INN used for MOH procurement of pharmaceuticals? (Generic names are to be differentiated from generic branded products.)

Definition, rationale, and interpretation	<p>Measures a country’s commitment to rational resource allocation and containing pharmaceutical costs</p> <p>Generic names refer to the chemical names defining the medicines. In most cases, the generic is the same as the INN. Use of generic or INN names facilitates competition among suppliers and manufacturers on the basis of the chemical entity of interest.</p>
Suggested data source	<p>SOPs for MOH procurement</p> <p>If an independent audit has been conducted, most information will be found there.</p> <p>Procurement guidelines; actual procurement lists</p>
Stakeholders to interview	<p>MOH procurement office (or responsible authority)</p>
Issues to explore	<p>Do health professionals feel pressure to procure brand name products that are used by visiting practitioners from other countries?</p> <p>Does the country have an NEML? Is procurement limited to the list?</p>
Notes and caveats	<p>Use this indicator in centralized and decentralized systems.</p>

18. On average, how many procurements are conducted per year?

Definition, rationale, and interpretation	<p>Demonstrates level of activity of the central procurement system</p> <p>More than two central pharmaceutical procurements per year suggest system inefficiencies and a high level of activity. Inefficiencies may be related to poor quantification or to problems with the availability of financing at the time procurement is needed.</p>
Suggested data source	<p>Procurement guidelines and actual procurement lists, existing country studies</p>
Stakeholders to interview	<p>Procurement office</p>
Issues to explore	<ol style="list-style-type: none"> a. How many unprogrammed (emergency) procurements occurred in the last two years? This number indicates the effectiveness of regular procurements. Any emergency procurements may indicate problems with planning and programming of regular procurement needs, barring force majeure. b. What was the value of those emergency procurements (as a percentage of the pharmaceutical budget over those two years)? This value adds further insight on effectiveness of the procurement program. Most funds should be spent on regular procurements. Emergency procurements should not represent a significant portion of the pharmaceutical procurement budget.

18. On average, how many procurements are conducted per year?

- c. What is the average lead time for procurement? Shorter lead times are preferred but must be appropriate for the specific context. An unpredictable lead time contributes to stock-outs.
- d. What percentage of items listed for procurement in the last three tenders were actually purchased? A high percentage would indicate successful tenders. It would imply lesser need for emergency purchases and a possible willingness among suppliers to bid and participate in the procurement system

Notes and caveats

Use this indicator in centralized and decentralized systems. National procurements may be negatively affected by local purchases made by health facilities unless agile information systems are in place to ensure that purchase information is communicated to the central level.

19. On average, what percentage (by value) of MOH pharmaceuticals is procured through competitive bid?

Definition, rationale, and interpretation

Measures the degree of potential cost minimization afforded through competitive procurement

Competitive tenders are among the best ways to lower the cost of pharmaceutical purchases. Competitive bidding may be open to both international and national bidders or only to national bidders. The choice of method used depends largely on the market (availability of qualified suppliers) and national economic development policies. A high percentage of procurement through competitive processes suggests that the purchaser is obtaining reasonable prices.

Suggested data source

WHO (2004). *The World Medicines Situation*.

Existing country studies; procurement records, and reports

Stakeholders to interview

Procurement officer

Issues to explore

Why is procurement not conducted through competitive bid? What reasons are cited?

What was the percentage of average international price paid for the last regular procurement (for tracer products)? This information may be available from existing studies. A study may compare prices to neighbors in the region or to statistics for the country over time. If procurement prices compare favorably to average international prices, it is a rough measure of the effectiveness of the procurement system. Results higher than the average international price may indicate that the procurement might have been able to result in lower prices.

19. On average, what percentage (by value) of MOH pharmaceuticals is procured through competitive bid?

Notes and caveats

Use this indicator in centralized and decentralized systems. For decentralized systems, revise the question to cover the relevant procurement entity and not the MOH.

A well-organized procurement unit should have this information readily available. An estimate of the value would be acceptable in most cases if the question is also asked about the percentage of suppliers that are international versus national or local.

Not all items are best procured through competitive tenders. For example, because the reliable suppliers for vaccines are so few, these products are usually procured through direct purchase.

20. Is there a procurement pre- or post-qualification process for suppliers and products based on review of objective information about product safety, efficacy, and quality?

Definition, rationale, and interpretation

Indicates the existence of a quality assurance mechanism within the procurement system

If quality assurance is present, it can limit participation of suppliers and products of dubious quality in the procurement process.

Suggested data source

Procurement office reports and records

Stakeholders to interview

Procurement office

Issues to explore

Is the process transparent? Are the criteria for qualification clear?

Notes and caveats

Use this indicator in centralized and decentralized systems.

21. Are samples requested and tested as part of the procurement process?

Definition, rationale, and interpretation

Indicates the existence of a quality assurance mechanism within the procurement system

If quality assurance is present, it can limit participation of suppliers and products of dubious quality in the procurement process.

Suggested data source

Reports from quality control laboratory

Stakeholders to interview

Procurement office, drug quality control laboratory

21. Are samples requested and tested as part of the procurement process?

Issues to explore Is the capacity to conduct testing sufficient?

Notes and caveats Use this indicator in centralized and decentralized systems.

22. Are quantities of pharmaceuticals to be procured based on reliable estimates?

Definition, rationale, and interpretation Measures efficiency and appropriate use of resources
If reliable needs estimates are used, then the risk of overstock and stock-outs are reduced.

Suggested data source Procurement SOPs, reports from quantification exercises; interviews

Stakeholders to interview Pharmacy department, medical stores manager, procurement unit, health facilities managers

Issues to explore How and at what levels is quantification conducted? What data are used (historical consumption data, morbidity data, a combination of these two, or other)? A combination of data is the most reliable.
Some systems have access only to historical consumption data from facilities. What is the quality of this data?
When was the last time a national quantification was conducted?
To what extent do needs exceed the available budget for procurement? How are discrepancies resolved?

Notes and caveats Use this indicator in centralized and decentralized systems.

D. Storage and Distribution

The storage and distribution topical area includes all activities related to managing an inventory: ordering, receiving, storing, issuing, and reordering supplies. These activities may take place at various levels of the system. The goals of inventory management are to protect stored items from loss, damage, theft, or wastage, and to manage the reliable movement of supplies from source to user in the least expensive way. Indicators 23–26 relate to the storage and distribution of pharmaceuticals.

23. Is distribution of (some or all) pharmaceuticals managed through a push or pull system?

Definition, rationale, and interpretation	<p>Indicates the type of information system and storage requirements that should be in place</p> <p>Pull, or requisition-based, systems require staff at facilities to be able to predict requirements in a timely fashion and for suppliers to provide needs. This procedure requires an understanding of consumption patterns.</p> <p>In a push system, supplies are sent to facilities in the absence of a specific request. This procedure may result in overstocks of unused items or supplies may not arrive when needed. Push systems tend to be logistically easier to manage.</p> <p>Kits are often used in push systems but may also be used in a pull system. Some health systems may use a combination of push and pull, depending on the type of product and the presence of vertical programs.</p>
Suggested data source	Country distribution plan
Stakeholders to interview	Medical stores department, pharmacy department, private sector distributors
Issues to explore	<p>Systems that are very fragile with extreme human capacity limitations may be best supported initially by a kit-based push system.</p> <p>Storage and distribution functions may be conducted by different agencies and sectors. Who is involved in distributing medicines? MOH medical stores and vehicles? NGO-owned stores and vehicles? Or are storage and transportation services contracted out?</p> <p>How is information about receipt and use of supplies communicated to the central level?</p>
Notes and caveats	<p>Kit-based push systems are often donor supported.</p> <p>If storage and distribution functions are contracted out, do potential contractors compete on the basis of tenders? How are they selected? Which agency is responsible for monitoring contract performance?</p>

24. Are there independent supply systems for vertical programs (such as tuberculosis, malaria, HIV/AIDS)? For what programs?

Definition, rationale, and interpretation	To give them greater control over the supplies they need, vertical programs are often defined by their own supply systems. This kind of definition often occurs when the MOH system is considered to be weak.
Suggested data source	<p>MOH reports</p> <p><i>Module link:</i> Health Service Delivery, indicator 21 (number of vertical programs)</p>

24. Are there independent supply systems for vertical programs (such as tuberculosis, malaria, HIV/AIDS)? For what programs?

Stakeholders to interview	Pharmacy department, medical stores department, donors
Issues to explore	Are these programs coordinated for distribution? How involved is the MOH in the planning for these vertical programs? What is the impact of donor control on vertical or parallel systems?
Notes and caveats	None

25. Value of inventory loss (as % of average inventory value) over 12 months

Definition, rationale, and interpretation	Inventory loss is a holding cost. This indicator measures waste or efficiency of the inventory management system and identifies opportunities for minimizing costs. Current standards for commercial firms dictate a maximum 20–30 percent of costs due to holding costs, one part of which are inventory loss costs. Current standards for commercial firms dictate a maximum 5 percent of expenses due to inventory loss. A total value of inventory loss of 5 percent may be cause for concern about the management of products.
Suggested data source	MOH reports, existing country studies, Ministry of Finance (MOF) reports
Stakeholders to interview	Medical store department, MOF
Issues to explore	<p>Compare the value of inventory loss among public entities and commercial firms in the country. Large disparities in the figures would suggest opportunities for improved efficiencies. For example, where costs are lower in the commercial sector, options may include contracting out for commercial services.</p> <p>Types of inventory loss that can be examined in detail include—</p> <ul style="list-style-type: none"> • <i>Expiry</i>: Loss due to expiry indicates that stock is not moving fast enough, that unused products are purchased, or that products have too short a shelf life. • <i>Damage</i>: Loss due to damage indicates storage or transport problems. • <i>Obsolescence</i>: Loss due to obsolescence indicates that products purchased do not meet needs. • <i>Theft</i>: Loss due to theft indicates that enhanced security measures are needed. <p>If available, list the inventory loss experienced by each of the participants in the distribution system (e.g., public, private, donor). Note if any of the losses might have been due to any particular unusual event or basic storage conditions, such as storage facilities that are dilapidated or of inadequate size or construction.</p>

25. Value of inventory loss (as % of average inventory value) over 12 months

Other costs in the distribution system that can be explored include transportation costs (e.g., fuel, vehicle depreciation, maintenance) and other storage costs (e.g., personnel, rent, machinery, utilities). Transportation and storage costs should be minimized and ideally should be compared to the commercial sector in country.

Notes and caveats

The information should cover at least 12 months or one procurement cycle. If possible, obtain this information for the last three years. If large values have been lost, especially due to theft or unexplained reasons, it may not be prudent to probe. You may note whether losses occur regularly or appear to be sporadic.

26. At each level of the distribution system (central, regional, district, facility), are there refrigeration units (such as refrigerators or coolers) with functional temperature control?

Definition, rationale, and interpretation

Distribution systems include a cold chain of some sort. Interruptions in the cold chain due to inadequate or insufficient cold storage for sensitive products, such as vaccines, can result in damage and loss of important commodities. Each level of the distribution system should have functioning units to provide cold storage of temperature-sensitive commodities. In weaker systems, the cold chain is best managed as a separate vertical program.

Suggested data source

Existing health facility surveys or monitoring reports, EPI reports

Stakeholders to interview

Pharmacy department,; medical stores department, vertical program managers (EPI, donors)

Issues to explore

Are the thermostats checked regularly? Are facilities equipped with a backup power supply?

Are private sector facilities required to maintain a cold chain?

Notes and caveats

In some countries, a separate cold chain is managed by vertical programs. EPI, for example, is typically managed separately. The main supply system should still maintain some system for other products that require temperature control. This system may include electric- or gas-operated refrigerators as well as simple cold boxes.

E. Appropriate Use

The aim of any pharmaceutical management system is to deliver the correct product to the client/patient who needs it, and the steps of selection, procurement, and distribution are necessary precursors to the rational use of medicines. The rational use of medicines means that client/patients are prescribed and dispensed the full amount of the appropriate, high-quality medicine when needed, at the lowest cost to them, to their communities, and to the system, and that clients/patients take the medicines correctly and without interruption. Indicators 27–29 relate to the appropriate use of pharmaceuticals and should be explored for both the public and private sectors.

27. Are there any functioning mechanisms/tools in place to improve the use of medicines in hospitals and health facilities?

Definition, rationale, and interpretation	The commitment to ensuring the appropriate use of medicines is generally described in a national medicines policy. The procedures and corresponding tools may also be specified. Tools that help improve the use of medicines include STGs, prescription controls such as limited formularies, dispensing controls, and pre- and in-service training in rational medicines use. Supervision and regular reviews of prescribing and dispensing practices should support the use of such tools. Prescribing reviews may be conducted by formalized DTCs. These committees may exist at the hospital level primarily, but they may support review of prescribing at the lower level facilities.
Suggested data source	NMP, existing country reports and special studies
Stakeholders to interview	MOH pharmacy department, National Essential Medicines Program, National Pharmacy and Therapeutics Committee Chair
Issues to explore	<p>Are regular reviews of prescribing practices conducted at the public facility level? How regular are the reviews? Who is responsible for conducting these reviews?</p> <p>Does the country have any active DTCs? How long have the DTCs been active? Is there a national network of DTCs? Are DTCs active in both public and private hospitals?</p> <p>Do public facilities have any managerial controls of prescribing (e.g., limited formularies, prescribing by generic name only, limiting the number of medicines prescribed per client/patient)?</p> <p>Are regular reviews of prescribing practices conducted at the public facility level? How regular are the reviews? Who is responsible for conducting these reviews?</p>
Notes and caveats	There is no gold standard for the number of medicines per prescription. Types of prescribing problems often identified include prescribing multiple antibiotics in a single prescription or other irrational combinations, and prescribing inappropriate medicines or amounts for a given indication. Understanding the reasons for poor prescribing and dispensing, and hence the most appropriate interventions, requires in-depth research that is beyond the scope of this assessment.

28. Are there national therapeutic guides with standardized treatments for common health problems?

Definition, rationale, and interpretation	<p>Indicates potential capacity to provide consistent treatment for common health problems</p> <p>If guidelines and STGs exist, evidence-based best practices for treatments of common conditions are reviewed and codified.</p>
Suggested data source	<p>Existing country reports</p> <p><i>Module link:</i> Health Service Delivery, indicator 25 (existence of clinical standards)</p>
Stakeholders to interview	<p>Pharmacy department, National Essential Medicines Program, National Pharmacy and Therapeutics Committee Chair</p>
Issues to explore	<p>Are the guidelines used to develop the NEML? Are they used to guide procurement activities?</p> <p>When were the guideline last updated? Does the system that ensures that the guidelines are updated rely on use of unbiased pharmaceutical information? If so, treatments and medicines are consistent with changing evidence-based best practices and changing country disease patterns.</p> <p>Are these guidelines distributed to and used in the private sector?</p>
Notes and caveats	<p>Guidelines may be developed by national health insurance agencies, NGOs, and international health agencies such as WHO. These guidelines may not be consistent with each other.</p>

29. Are the treatment guidelines used for basic and in-service training of health personnel?

Definition, rationale, and interpretation	<p>Indicates dissemination of treatment guidelines to health personnel and greater potential for guidelines to be implemented by health care professionals in the public and private sectors</p>
Suggested data source	<p>Curricula; existing country studies</p> <p><i>Module link:</i> Health Service Delivery, indicator 28 (quality assurance processes)</p>
Stakeholders to interview	<p>Pharmacy department; medical, pharmacy, and nursing schools</p>
Issues to explore	<p>Are treatment guidelines used for supervision and monitoring activities in public-sector health facilities? If so, supervision and monitoring practices incorporate oversight of quality and appropriateness of treatment.</p>

29. Are the treatment guidelines used for basic and in-service training of health personnel?

What percentage of prescriptions in the public-sector health facilities complies with the treatment guidelines for a tracer condition? Ideally, 100 percent of prescriptions are consistent with guidelines. This level of consistency is rarely the case, however. If monitoring is in place (see above) and data are available, an improvement trend for this indicator would indicate improved appropriateness of prescribing practices for that tracer condition.

Other information that may be available includes the average number of pharmaceuticals prescribed for a given condition and the average number of antibiotics per prescription. Both may demonstrate over- or underprescribing depending on the treatment guidelines for the health condition studied.

Notes and caveats

Evaluating medical records to determine appropriate diagnosis and prescribing is a labor intensive effort, and needed information may not be recorded. Few systems capture this information in a computerized fashion.

F. Availability

Physical availability is defined by the relationship between the location, time, type, and quantity of product or service needed and the location, time, type, and quantity of the product or service provided. Indicator 30 is perhaps the single most important outcome indicator of the functioning of a pharmaceutical management system. It should be measured repeatedly over a period sufficient to cover at least one procurement cycle, preferably three. It should be measured at all relevant points in the distribution system (central, regional, and municipal medical stores; health facilities; and pharmacies) and in all relevant sectors (public, private, and NGO). To simplify this measure and to keep focused on priority issues, a sample list of tracer products should be used for this measure. A sample tracer list is presented in Table 10.1.

30. What percentage of a set of unexpired tracer items is available (at time of study and over a period of time) in a sample of facilities?

Definition, rationale, and interpretation

Measures the physical availability of a set of essential or key medicines where they are expected to be

Ideal levels would approximate 100 percent. Low levels of availability indicate potential problems with procurement, including poor quantification, distribution, and inventory management. Shortages can lead to failure to treat clients/patients and may lead to high-cost emergency purchases. Note that only unexpired products are considered.

Suggested data source

These data are not collected as part of this assessment. Ideally data would be available from a computerized pharmaceutical management information system or reports from supervisory or inspection visits.

30. What percentage of a set of unexpired tracer items is available (at time of study and over a period of time) in a sample of facilities?

Stakeholders to interview	Pharmacy department; National Essential Medicines Program, medical stores managers, pharmacy managers.
Issues to explore	<p>Is availability more of a problem for some products than for others? Why? When?</p> <p>What is the average frequency of stock-outs for tracer items at different levels of the health system (e.g., CMSs, regional medical stores, health facilities) over a 12-month period? This information may be available from existing studies that look at a specific set of tracer items. Ideal levels would approximate zero percent, or no stock-outs, over a prolonged period of time.</p> <p>If stock-outs occur, what is the average duration of stock-outs for tracer items at different levels of the health system (CMSs, regional medical stores, health facilities)? This information may be available from existing studies.</p>
Notes and caveats	You must consider the impact of the procurement cycle at the time of the study. Note which types of tracer items were used in the study, and determine if the study authors checked if the products were expired.

G. Access to Quality Products and Services

Access to quality pharmaceutical products and services involves physical access to those products and services and the quality of the products and services that are provided. Indicators 31–36 relate to access to quality pharmaceutical products and services.

31. What percent of the population has access to a public or private health facility/pharmacy that dispenses pharmaceuticals?

Definition, rationale, and interpretation	<p>Measures geographic access to pharmaceutical services</p> <p>A high percentage indicates a high level of access to health facilities that offer quality pharmaceutical services.</p>
Suggested data source	<p>National health services statistics</p> <p><i>Module link:</i> Health Service Delivery, indicator 14 (people living within X km of a health facility)</p>
Stakeholders to interview	Department of health services or health services research (university or MOH), office of health statistics
Issues to explore	<p>What categories of facilities are licensed to dispense pharmaceuticals? Are any sources of pharmaceuticals not licensed but nonetheless popular among clients/patients because they are easily accessible?</p> <p>Are private sector facilities and pharmacies more accessible than public sector facilities?</p>

31. What percent of the population has access to a public or private health facility/pharmacy that dispenses pharmaceuticals?

Notes and caveats

This indicator needs to be adapted to the system being assessed. For example, in some systems, public health facilities do not dispense medicines so availability cannot be assessed for these facilities. If clients/patients must fill their prescriptions at a private sector retail pharmacy, the indicator must be applied to the pharmacy.

If information is available, differentiate between licensed and unlicensed facilities.

32. Are there any licensing provisions or incentives in place to increase geographic access by consumers/patients to quality products and services through private wholesalers and retailers?

Definition, rationale, and interpretation

Measures the potential role of the private sector in improving access to medicines

The presence of licensing provisions or incentives for the private sector indicates a commitment to and potential for a private sector role in providing medicines to the market. It does not measure the level of involvement of the private sector in the market.

Suggested data source

National health or medicines policy, pharmacy laws and regulations

Stakeholders to interview

Department of health services or health services research (university or MOH), office of health statistics, private sector representatives

Issues to explore

What is the capacity to implement these policies? What has actually taken place?

What are the barriers for the private sector to participate in public health initiatives to improve access to medicines?

Notes and caveats

In some countries, the sale of all medicines is limited to designated outlets with a responsible, licensed professional. An example of increasing access to essential medicines is the assignation of over-the-counter status to medicines so that they can be sold in a larger variety of commercial outlets. Similarly, the definition of outlets permitted to sell medicines may be broadened to include a wider variety of shops. Shops may be offered a tax incentive if they are established in remote or otherwise underserved areas.

33. Population per licensed pharmacist or pharmacy technician

Definition, rationale, and interpretation	<p>Measures coverage of pharmaceutical services; indicates access to and availability of skilled pharmacy personnel in the country</p> <p>A high ratio of population per pharmacist or pharmacy technician indicates a potential need to improve pharmaceutical service delivery and should include in their human resource management plan the recruitment, training, and development of this resource.</p>
Suggested data source	<p>National health services study</p> <p><i>Module link:</i> Core Module, section 5.3.4 (organization of government and private health sector); Health Service Delivery, indicator 13 (ratio of health care professionals to population)</p>
Stakeholders to interview	<p>Department of health services or health services research (university or MOH), office of health statistics</p>
Issues to explore	<p>If data are available, compare population per licensed pharmacist or pharmacy technician in the private and public sectors. The private pharmaceutical sector is the primary source of medicines consumed in many countries. A high ratio of population per pharmacist or pharmacy technician in the private sector indicates a potential need to identify opportunities to improve private sector pharmaceutical service coverage.</p>
Notes and caveats	<p>None</p>

34. Population per authorized prescriber

Definition, rationale, and interpretation	<p>Measures access to and availability of prescribers</p> <p>Adequate numbers of technically qualified staff who are authorized to prescribe medicines are essential to a sound health care system.</p>
Suggested data source	<p>National health services study</p> <p><i>Module link:</i> Health Service Delivery, indicator 13 (ratio of health care professionals to population)</p>
Stakeholders to interview	<p>Department of health services or health services research (university or MOH), office of health statistics</p>
Issues to explore	<p>If available, compare population per authorized prescriber in the private and public sectors. A high ratio of population to prescriber in the private or public sector (or both) may indicate a need to improve the coverage of prescribers in the population.</p> <p>Where are most prescribers trained? Would the majority be exposed to the national STGs?</p>
Notes and caveats	<p>None</p>

35. Population per drug retail outlet in the private sector	
Definition, rationale, and interpretation	Measures coverage of pharmaceutical services in the private sector The private pharmaceutical sector is the primary source of medicines consumed in many countries. A high ratio of population per medicine retail outlet in the private sector indicates a potential need to identify opportunities to improve private sector pharmaceutical service coverage.
Suggested data source	National health services study
Stakeholders to interview	Department of health services or health services research (university or MOH), office of health statistics
Issues to explore	Does the country have different categories of medicine outlets? What is the basis for differentiation? Are they all licensed?
Notes and caveats	None

36. Percent of households more than 5/10/20 km from a health facility/pharmacy that is expected to dispense a set of tracer items in stock	
Definition, rationale, and interpretation	Measures geographic access to and availability of facilities with dispensary services A high percentage of households more than 5, 10, or 20 km from a health facility or pharmacy indicates that services may not be located in places where people need them.
Suggested data source	National health services study; other special studies <i>Module link:</i> Health Service Delivery, indicator 14 (people living within X km of health facility)
Stakeholders to interview	Department of health services or health services research (university or MOH), office of health statistics
Issues to explore	Are there concerns about the existence of unlicensed facilities? Are unlicensed facilities more widely distributed geographically than licensed outlets?
Notes and caveats	None

H. Financing Pharmaceuticals

Because pharmaceuticals save lives and improve health, financing systems must help ensure access to essential medicines for all segments of the population. Most countries rely on a diverse set of financing mechanisms for pharmaceuticals. Sources of funding may include public

financing based on national budgets, donor contributions, and direct private spending or indirect spending through insurance programs. Indicators 37–40 address these issues.

37. What proportion of the annual national expenditure on medicines is by the government budget, donors, charities, and private patients?

Definition, rationale, and interpretation	Measures personal or individual burden of pharmaceutical spending and the sustainability of financing
Suggested data source	WHO national accounts database, World Bank country reports; existing country studies <i>Module link:</i> Health Financing, indicators 13 (government health budget allocation by cost category) and 14 (local level spending authority)
Stakeholders to interview	Health services financing department; health services research department (MOH or university), local World Bank representative, donors
Issues to explore	What is the spending by income level? By urban-rural split? By condition? These breakdowns measure the equity of personal or individual burden of pharmaceutical spending. If disparity exists in out-of-pocket expenditures among income groups, then equity and financial access are issues. Donor commitments are not generally considered to be sustainable. How many donors are involved? What types of medicines do they support?
Notes and caveats	Be sure to include contributions by reimbursement mechanisms (public and private sectors) and various subnational budgets.

38. Is there a system to recover the cost of pharmaceuticals dispensed in MOH facilities?

Definition, rationale, and interpretation	In most countries, the funds available through government budgets and donors are not sufficient to meet rising demands for medicines. Existence of a cost recovery system, which is defined as any system that supports medicine costs by charging clients/patients, indicates that mechanisms are in place to supplement the pharmaceutical budget.
Suggested data source	National Medicines or Health Policy states if cost recovery is a policy, MOH or MOF reports for performance of cost recovery programs <i>Module link:</i> Health Financing, indicators 15 and 16 (user fees)
Stakeholders to interview	Pharmacy department, health services financing department
Issues to explore	What is the value of pharmaceutical cost recovery funds received as a percentage of the total acquisition cost of pharmaceuticals? This figure provides an indication of whether cost recovery systems exist in practice or on paper only and how much is recovered. A high percentage indicates that cost recovery provides a significant source of funds to the pharmaceutical procurement system.

38. Is there a system to recover the cost of pharmaceuticals dispensed in MOH facilities?

What portion of recovered costs is used for purposes other than to replenish stock? Did you find evidence that cost recovery schemes are not meeting targets (e.g., are revolving drug funds [RDFs] decapitalizing)?

When was the system instituted? Why? Are there any political concerns or management issues regarding the system?

Notes and caveats

RDFs are a common type of cost recovery mechanism. RDFs may be at a national level, “cash and carry” type of medical store and can also be at the facility level although at that level, data on the performance may not be available.

Pharmaceutical cost recovery may be achieved through fees for medicines dispensed or may be incorporated into an overall fee for visit.

39. Is there a price control mechanism for pharmaceuticals in the private sector?

Definition, rationale, and interpretation

Records whether policies and regulations control the prices of pharmaceuticals in the private sector

Governments often attempt to influence the price of medicines and their affordability by controlling the level of profit the private sector can obtain from pharmaceutical sales. This indicator demonstrates the existence of price controls but does not indicate the type or performance of control and enforcement.

Suggested data source

WHO (2004). *The World Medicines Situation*.

Nation medicines and health policy

Stakeholders to interview

Pharmacy department, Ministry of Commerce, wholesalers and retailers of pharmaceuticals

Issues to explore

When was the policy adopted? How is it enforced?

How often is the policy reviewed?

Are data available on the performance of the cost control measures to address affordability to clients/patients?

Are all medicines covered by price controls? How are the medicines selected for price controls?

Notes and caveats

Price controls are often ceilings placed on prices that may be charged to clients/patients. Retail outlets may compete on the basis of discounts on this ceiling.

10.3.3 Summary of Issues to Address in Stakeholder Interviews

This section includes a summary listing of the types of stakeholders to interview in assessing the indicators from Component 2 and the issues to address with each stakeholder. This information will help the assessors in planning the topics to discuss in stakeholder interviews. Table 10.3 provides a summary.

Table 10.3 Summary of Issues to Address in Stakeholder Interviews

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
Head or director of the pharmacy department, others at the pharmacy department, Department of Medical Services	<ul style="list-style-type: none"> • Existence of a national medicines policy and pharmaceutical law • Role of the NDRA • Existence of a pharmaceutical registration system • Composition of the NEML • Structure of the distribution system • Existence of DTCs • Existence of STGs • Costs of pharmaceuticals
National Essential Medicines Program	<ul style="list-style-type: none"> • Existence of a national medicines policy and pharmaceutical law • Role of the NDRA • Existence of a pharmaceutical registration system • Composition of the NEML • Existence of DTCs • Existence of STGs
NDRA or director of the NDRA	<ul style="list-style-type: none"> • Role of the NDRA • Existence of a pharmaceutical registration system • Practices for postmarketing surveillance of pharmaceuticals • Practices for licensing, inspection, and control of pharmacies, pharmacy personnel, manufacturers, importers, and other entities
Drug Quality Control Laboratory	<ul style="list-style-type: none"> • Practices for postmarketing surveillance of pharmaceuticals
National Drug Inspectorate, Head of Pharmacy Inspection	<ul style="list-style-type: none"> • Practices for postmarketing surveillance of pharmaceuticals • Practices for licensing, inspection, and control of pharmacies, pharmacy personnel, manufacturers, importers, and other entities
Procurement office, MOH	<ul style="list-style-type: none"> • Processes for procurement • Results of procurement (number and values of

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
	procurements, number and types of suppliers, supplier performance issues)
Medical stores department	<ul style="list-style-type: none"> • Structure of the distribution (storage and transportation) system in both the public and private sectors • Availability of pharmaceuticals
Donors	<ul style="list-style-type: none"> • Existence of health programs, including information, education, and communication • Type of procurements • Structure of the distribution system • Provisions for human resource capacity building and training • Development of the infrastructure
MOF	<ul style="list-style-type: none"> • Composition of budgets, amounts of expenditures • Costs of the distribution system • Costs of pharmaceuticals • Sales of pharmaceuticals
Vertical program managers (e.g., EPI)	<ul style="list-style-type: none"> • Structure of the distribution system
National DTC Chair	<ul style="list-style-type: none"> • Composition of the NEML • Role of the DTCs • Existence of STGs
Medical, pharmacy, and nursing schools	<ul style="list-style-type: none"> • Existence of STGs
Department of Health Services or Health Services Research (university or MOH)	<ul style="list-style-type: none"> • Access to health facilities or pharmacies, pharmacy personnel, and prescribers • Costs of pharmaceuticals
Office of Health Statistics	<ul style="list-style-type: none"> • Access to health facilities or pharmacies (public and private), pharmacy personnel, and prescribers • Handling of priority health problems
Health Services Financing Department	<ul style="list-style-type: none"> • Prices of pharmaceuticals • Costs of pharmaceutical benefits programs
Local World Bank representative	<ul style="list-style-type: none"> • Prices of pharmaceuticals • Sales of pharmaceutical
Local pharmaceutical industry, wholesale and retail and associations	<ul style="list-style-type: none"> • Prices of pharmaceuticals • Sales of pharmaceutical, control of costs • Capacity for storage and distribution • Extent of the geographic reach • Opinion of MOH as a purchaser of pharmaceuticals
National public insurance institution (procurement unit)	<ul style="list-style-type: none"> • Prices of pharmaceuticals • Expenditures for pharmaceuticals

10.4 Summarizing Findings and Developing Recommendations

Chapter 4 describes the process that the team will use to synthesize and integrate findings and prioritize recommendations across modules. To prepare for this team effort, each team member must analyze the data collected for his or her module(s) to distill findings and propose potential interventions. Each module assessor should be able to present findings and conclusions for his or her module(s), first to other members of the team and eventually at a stakeholder workshop and in the assessment report (see Chapter 3, Annex 3J for a proposed outline for the report). This process is an iterative one; findings and conclusions from other modules will contribute to sharpening and prioritizing overall findings and recommendations. Below are some generic methods for summarizing findings and developing potential interventions for this module.

10.4.1 Summarizing Findings

Using a table that is organized by the topic areas of your module (see Table 10.4) may be the easiest way to summarize and group your findings. (This process is Phase 1 for summarizing findings as described in Chapter 4.) Note that additional rows can be added to the table if you need to include other topic areas based on your specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Annex 4A of Chapter 4. In anticipation of working with other team members to put findings in the SWOT framework (strengths, weaknesses, opportunities, and threats), you can label each finding as either an S, W, O, or T (please refer to Chapter 4 for additional explanation on the SWOT framework). The “Comments” column can be used to highlight links to other modules and possible impact on health system performance in terms of equity, access, quality, efficiency, and sustainability.

Table 10.4 Summary of Findings—Pharmaceutical Management Module

Indicator or Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments^a

^aList impact with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

Table 10.5 is an example of how the table might be completed.

Table 10.5 Summary of Findings—Pharmaceutical Management Module (Example)

Indicator or Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments^a
Availability	Poor availability in health facilities (W); better availability in private sector but not well controlled (O)	Observations in facilities, interviews with donors	Link with quality of care
Policy, laws, and regulations	There is a national drug policy draft (S); several relevant laws exist (S); poor enforcement capacity (T)	Draft NMP, interviews with the pharmacy department staff	Link with Governance module
Selection	NEML used as basis for kit system in public sector (S)	Draft NMP	Link with quality of care
Procurement	MOF conducts international competitive bids on behalf of the MOH for a limited number and quantity of essential medicines, but the process is not transparent (W); donors do not feel confident about current capacity (T)	Audit report; interview with the director of procurement, MOF	Link with efficiency and sustainability
Distribution	Kit system for essential medicines, with distribution, facilitated by donor and NGOs depending on province (O); many areas with limited to no access by road (W)	Interviews with the director of the pharmacy department and the medical stores manager	Link with equity and access
Use	STGs for some, not all, conditions endorsed by MOH (W); no data on quality of medicine prescribing or use (W)	Interview with the director of the pharmacy department, university department of clinical therapeutics	Link with quality
Information Systems	Inventory management information is systematically collected at central and facility levels (W,T)	Observations in health facilities, interview with staff in the pharmacy department	Link with Health Service Delivery Module
Financing	Dependency on donors for kits (W), facilities make local purchases (W)	Interview with MOH; MOF audit report	Link with sustainability, and with Health Service Delivery and Health Financing Modules

^aList impact with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

10.4.2 Developing Recommendations

After you have summarized findings for your module (as in Section 10.4.1 above), it is time to synthesize findings across modules and develop recommendations for health systems interventions. Phase 2 of Chapter 4 suggests an approach for doing this with your team. Below is a list of common issues and interventions seen in the area of pharmaceutical management; you may find it helpful to consider these points in developing your recommendations.

- **Availability**
 - *Finding:* Facilities have low availability of key essential medicines.
 - *Possible interventions or activities:* Low availability of essential medicines in the public sector may be affected by several elements of the pharmaceutical and public health system, for example, poor quantification practices, poor storage management practices, or inefficient distribution. Additional study is required to identify the root causes and possible appropriate interventions. Low availability of essential medicines in the private sector, when several other products are available in the market, reflects a low demand for those products. Irrational prescribing may be creating problems in both sectors.

- **Pharmaceutical policy, laws, and regulations**
 - *Finding:* Up-to-date policies and laws regulating the pharmaceutical sector, including a national medicines policy are lacking. Registration system does not address product quality.
 - *Possible interventions or activities:* Consider updating the NMP. Work with the NDRA to develop or update policies and procedures for the pharmaceutical registration system. Develop SOPs, and provide training to improve inspection capacity.

- **Selection**
 - *Finding:* NEML does not exist, is out-of-date, or does not include medicines for key health conditions.
 - *Possible interventions or activities:* Formulate a committee or process to review and revise the NEML based on morbidity patterns and standard treatment guidelines. Establish drug information centers or an alternative mechanism to increase access to unbiased information about medicines.

- **Appropriate use**
 - *Finding:* Prescribing does not follow STGs, national STGs do not exist or are out-of-date, or STGs do not include guidelines for key public health conditions.
 - *Possible interventions or activities:* Formulate a committee or process to review and revise STGs based on morbidity patterns and evidence-based best practices. Make copies of STGs available to facilities and providers. Provide training on the guidelines to practitioners. Establish DTCs and provide training to DTCs; provide pre- and in-service training on appropriate prescribing; develop managerial interventions to restrict prescribing.

- **Procurement**

- *Finding:* At the national level, purchasing prices are high compared to international prices.
- *Possible interventions or activities:* Review and update procurement procedures according to international best practices (e.g., competitive bidding, appropriate specifications, and delivery and payment terms). Provide training on procurement procedures and practices.

- **Storage and distribution**

- *Finding:* Holding costs (storage costs and inventory loss) are high relative to inventory value.
- *Possible interventions or activities:* Improve inventory management practices through training on inventory management functions and monitoring of key indicators. Explore lower cost alternatives with private sector (e.g., contract with prime distributor).

- **Access to products and services**

- *Finding:* Geographic access to public health centers that provide pharmaceuticals and pharmaceutical services is limited; a relatively greater number and wider distribution of private sector outlets exist, albeit offering varied quality services.
- *Possible interventions or activities:* If availability of essential products is not a problem in the private sector, study opportunities to partner with distributors and retailers to fill the gaps in the delivery system. Identify opportunities for strengthening human resource capacity to manage pharmaceuticals (public and private sectors). Develop accreditation system to increase the number of outlets in the quality services in the private sector and thus to complement the public sector.

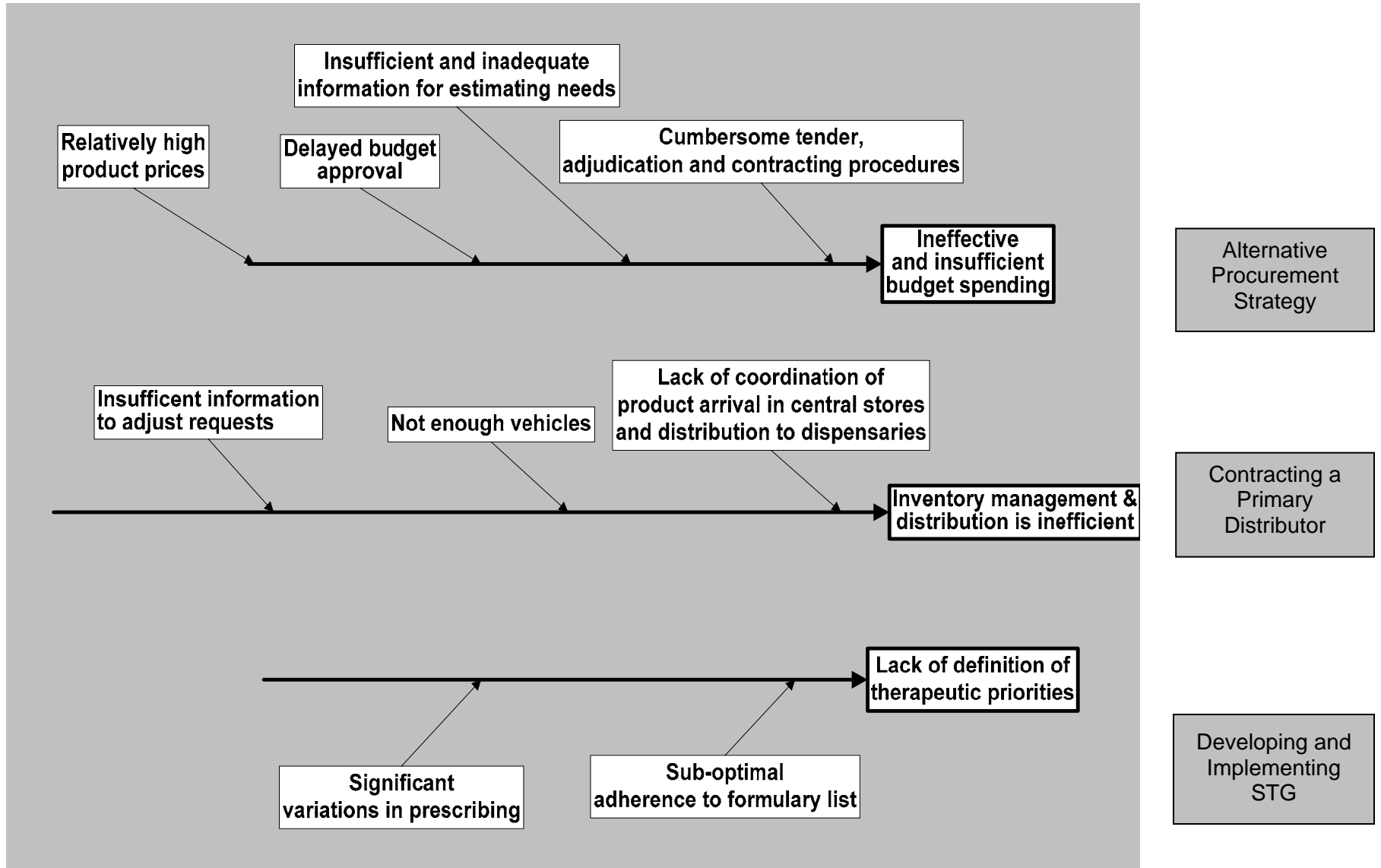
- **Financing**

- *Finding:* The level of public financing of pharmaceutical expenses is low.
- *Possible interventions or activities:*
 - National level (and subnational level in decentralized systems): Study cost recovery or other cost-sharing options (e.g., RDFs and insurance). Improve efficiencies elsewhere in the system to reduce costs. Study alternatives for reallocation of funds (review medicine selection to focus more on priority medicines).
 - Facility level: Explore options for cost recovery or other cost sharing (e.g., RDFs and community-based insurance).

Figure 10.7 demonstrates how observed performance problems can be linked to appropriate interventions. Note that some issues and observed problems may actually be only the symptoms of larger systemic problems. Careful consideration must be given to historical, economic, sociocultural, and political factors that may have contributed to or exacerbated current performance problems. Keep in mind the U.S Agency for International Development (USAID) Mission’s priorities,² their competitive advantages compared to that of other donors, and the gaps in current donor programming, as well as opportunities for consistent, coordinated donor focus.³ In addition, consult the Mission’s “Strategic Objectives and Intermediate Results” document for the health sector for potential linkages to pharmaceutical management issues.

² If this assessment is being done with the MOH as the primary audience, prioritization of problem areas and recommendations will need to focus on a broader range, because the MOH is responsible for addressing all health systems issues. Prioritization can be done based on criteria such as urgency, government priorities, and funding possibilities.

³ For example, other donors may participate in a sector-wide approach while USAID leads with technical assistance, or other donors may focus on the public sector while USAID focuses on the private sector.



Source: Management Sciences for Health

Figure 10.7 Sample Fishbone Diagram of Pharmaceutical Management Issues and Potential Interventions

References

MSH (Management Sciences for Health). 1995. *Rapid Pharmaceutical Management Assessment: An Indicator-Based Approach*. Arlington, VA: MSH.
<<http://erc.msh.org/newpages/english/toolkit/rpma.pdf>> (accessed Sept. 29, 2006).

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CHAPTER 11 HEALTH INFORMATION SYSTEM MODULE

11.1 Overview

The purpose of this module is to provide guidance on how to conduct an assessment of a country's health information system (HIS). Note that the intent of the assessment is *not* to review, interpret, or analyze the values of health statistics or data produced by the system but rather to assess the ability of the system to produce valid, reliable, timely, and reasonably accurate information for use by planners and decision-makers. The outcome of the assessment will allow the user to better appreciate the ability of a country's HIS to "integrate data collection, processing, reporting, and use of the information necessary for improving health service effectiveness and efficiency through better management at all levels of health services" (Lippeveld, Sauerborn, and Bodart 2000).

The goal of an HIS is to allow decisions to be made in a transparent way, based on evidence. Therefore, the objective of the HIS is to produce relevant and quality information to support decision making (Health Metrics Network 2006).

Note that a review of a country's HIS should not be limited to the data that are routinely collected and reported by health care facilities and other important population-based sources such as census, demographic and health survey, and vital statistics reporting. Performance of HIS should be measured both in terms of the quality of data produced and the evidence of continued use of data for improving the performance of the health system and, ultimately, the population's health status.

The results of this assessment will therefore provide insights into how HIS strengthening might be included in plans to support overall health system strengthening.

Section 11.1.1 defines an HIS and its key components, and Section 11.1.2 outlines how it works. Section 11.2 provides guidelines on preparing a profile of the HIS of the country of interest. Section 11.3 presents four topical areas around which the HIS assessment should be structured and includes indicators to assess the performance of the HIS in these topical areas. Section 11.4 provides suggestions on how the assessment results can be developed into possible solutions to strengthen the health system by addressing HIS-related issues that have been identified through this assessment.

11.1.1 What Is a Health Information System?

For the purposes of this assessment, an HIS can be defined as "a set of components and procedures organized with the objective of generating information which will improve health care management decisions at all levels of the health system" (Lippeveld, Sauerborn, and Bodart 2000).

An approach for describing the HIS in any given country is to consider the dimensions of demand (i.e., who needs data and for what purpose), of supply (i.e., tools and methods available to generate the needed information), and of level (i.e., the level of the health system at which data are generated and used) (AbouZahr and Boerma 2005).

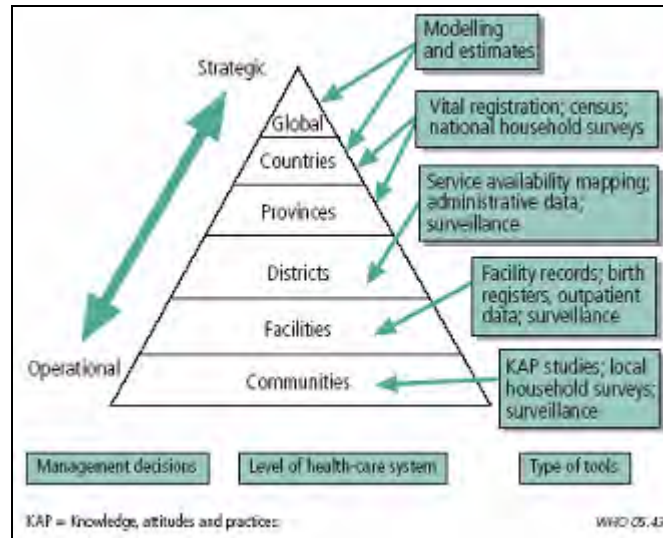
The HIS should address the following demand dimensions—

- Health determinants
- Inputs to the health system and related processes (e.g., health infrastructure, human and financial resources, equipment, policy, and organization)
- Performance or outputs of the health system
- Health outcomes (e.g., mortality, morbidity, disability, well-being, and health status)
- Health inequities in determinants (e.g., coverage and use of services stratified by sex, socioeconomic status, ethnic group, and geographical location)

As for the supply of health information, many methods and sources are available for generating data. They can be divided into those that generate data relative to populations as a whole (census, vital registration, surveys), and those that generate data about the operation of the services¹ (administrative records, service records, health and disease records). Surveillance is considered as a function and not a data source. The notifiable conditions—diseases or health events that require enhanced notification and a public health response—are classified within the disease and health records domain of health services-based sources.

Different data are needed at different levels of the system. At a lower level, data regarding a patient, often presented in patient charts, are needed for patient management. At the facility and district level, summary indicators are needed for management, planning and procurement purposes. Indicators are also needed at district level for planning and reporting to the national level. The national summary indicators are then used for the governance of the health system and for regional/global reporting (for example, reporting on the Millennium Development Goals). Feedback from the national levels to lower, or peripheral, levels is also important and promotes a culture of information use. Even though the data needs are different for the management and stewardship of the health system, policy making, resource allocation and patient care, these needs are also linked along a continuum, as seen in Figure 11.1.

¹ Health services-based data are referred to as health management information systems (HMIS), routine health information systems (RHIS), management information systems (MIS), or even health information systems (HIS). The framework presented here is in accordance with the Health Metrics Network's framework that refers to health information system to describe the total HIS, including population-based and service-based data sources (Health Metrics Network (2006a). The term "health services based data sources" will be used throughout the document to refer to data that originates in the health facilities.



Source: AbouZahr and Boerma (2005)

Figure 11.1 Data Needs and Sources at Different Levels of the Health Care System

11.1.2 How Does a Health Information System Work?

HISs generally evolve in an erratic way in response to different pressures faced by the health system: administrative, economic, legal, or donor pressures. The result has been health systems that are fragmented and have a dispersal and dilution of responsibility. Competing interests between different stakeholders further contribute to the generation of parallel subsystems within the HIS. Programs that are disease-specific also contribute to the fragmentation in their efforts to respond to donor requirements and international reporting of indicators. All these factors result in an overburdened and uncoordinated HIS.

The performance of an HIS is linked not only to technical determinants such as data quality, system design, or adequate use of information technology. Other determinants are also involved, such as (1) organizational and environmental determinants that relate to the information culture within the country context, the structure of the HIS, the roles and responsibilities of the different actors and the available resources for HIS, and (2) the behavioral determinants such as the knowledge and skills, attitudes, values, and motivation of those involved in the production, collection, collation, analysis, and dissemination of information (Lafond and Field 2003).

For the HIS to work adequately, certain prerequisites need to be in place, such as—

- *Information policies*—referent to the existing legislative and regulatory framework for public and private providers, use of standards
- *Financial resources*—investment in the processes for the production of health information (e.g., collection of data, collation, analysis, dissemination, and use)
- *Human resources*—adequately trained personnel at different levels of government

- *Communication infrastructure*—infrastructure and policies for transfer and management or storage of information
- *Coordination and leadership*—mechanisms to effectively lead the HIS

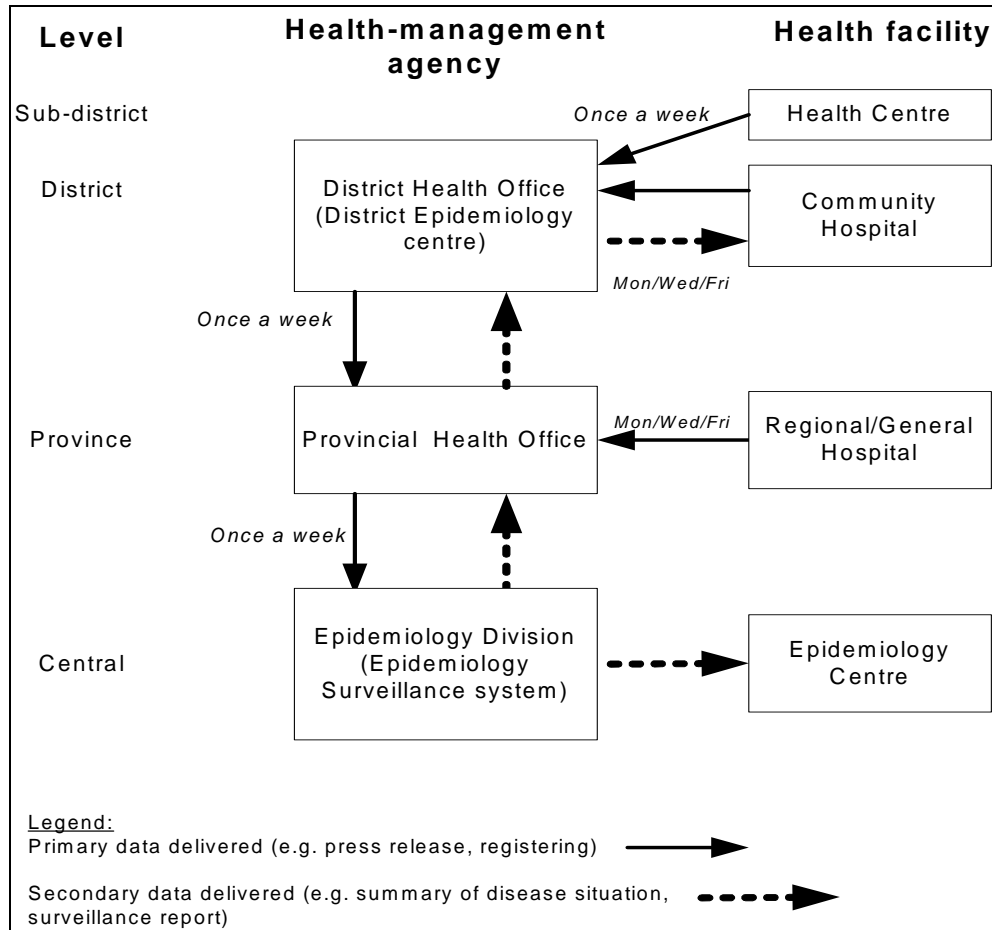
A functioning HIS should be able to provide a series of indicators that relate (1) to the determinants of health, including socioeconomic, environmental, behavioral, and genetic determinants or risk factors; (2) to the health system, including the inputs used in the production of health; and (3) to the health status of the population. The list of indicators should be defined by the users of information at different level in a consensus-building process.

To obtain the data required for the calculation of such estimations, different data sources must be used. A very important function of the HIS is precisely the matching of a data item or indicator with the most cost-effective tool for generating it. In many cases, however, one data item can be obtained from two different sources. Understanding the strengths and weaknesses of each data source and knowing what purpose the information is needed for contributes to making the right choice as to what data source to use.

Because of the diversity in the design or composition of individual country HIS, developing a single schematic flowchart that portrays the function and structure of a generic or universal HIS is difficult. Constructing a flowchart for the HIS² as a product of this assessment is helpful, however, to show the flow of data, linkages with other elements of the HIS, and possible gaps in the HIS. An example of a flowchart is shown in Figure 11.2, which illustrates the information flow of a typical epidemiological surveillance subsystem. It shows, by level of government, who reports to whom, at which frequency, and the type of data reported. It does not reflect the completeness, accuracy, or timeliness of data that moves through the system. Considering the context for the functioning of this flow is also important.

- Is it established by law?
- Are procedures standardized?
- Are international classifications being used for classifying diseases?
- Are control mechanisms in place to ensure the quality of data?

² The development of a single comprehensive flowchart showing all elements of a country's HIS may be well beyond the scope of this assessment. It may, however, still be helpful and insightful to develop flowcharts for some of the key subsystems to understand existing data flows and potential for their improvement and perhaps integration.



Source: Adapted from WHO (2005, Chapter 8 "Thailand").

Figure 11.2 Flowchart of Agencies in the Epidemiological Surveillance System

A number of HIS components may be in operation within a given health sector, and each may have different and separate flows of data and reporting mechanisms. Understanding all of these components and diverse elements, their operation, and their level of integration, consolidation, and cohesion is an important step in assessing and understanding the performance of the HIS and opportunities for its strengthening. Most relevant, consider whether the HIS includes the private sector and, when in existence, social sector providers as well (such as nongovernmental organizations [NGOs]).

The level of integration can be analyzed from two different angles—

- The level and quality of coordination between the subsystems
 - Is there dialog between them?
 - Do they share information and data?
 - Do they coordinate their work to avoid duplication of efforts?

- Are the different components using the same standards for quality assurance?
- Do all subsystems and components use the same coding classifications for facilities and human resources?
- The level of integration and use of the results produced for policy-making and management decisions, including the management and storage of information

Again we must note that the structure and functional format of an HIS reflect the organizational structure of the health system and its functions and the degree of decentralization at its various levels. To do an assessment, you must, thus, first have a clear understanding of the overall, “big picture” organization of the health care system, and of the division of responsibilities among the different levels (see Chapter 5) which, in many countries, are national or ministry level, regional or provincial level, district level, and the health center or facility. You will also need a good understanding of the role of the private sector and its participation in the HIS in advance and the role of other ministries or national statistics offices (e.g., counting births and deaths is often a function of the interior ministry, and the census is often the purview of the office of statistics).

11.2 Developing a Profile of the Health Information System

This section provides guidance on developing a profile of the HIS, a starting point for the indicator-based assessment.³

Before addressing the specific indicators in Section 11.3, you will need to develop a map of the HIS by first listing all the current operational HIS components and subsystems. Developing a schematic or flowchart for each component or subsystem, by level of government, will help you visualize the structure.

An illustrative example of this step is provided in Figure 11.2. For the analysis, you will probably want to be able to produce such a chart and answer the following primary questions.

- For each level of government, where are the data collected?
- Who receives the data?
- At what frequency are the data collected, aggregated, and reported?
- Who manages the information? (What unit is responsible for data collection, analysis, and reporting?)
- What standards and classifications are used?

³ Note that these indicators provide a framework for assessing the structure and function of an HIS. They do not, however, represent or constitute data collection instruments. You will need to organize and develop a process for the review of records and documents as well as the interviews of informants and stakeholders to obtain the information necessary to make judgments with respect to the indicators listed. The organization of data collection will vary from country to country.

- Which indicators are captured? How is the list of core indicators defined?
- Who produces the secondary data, and to whom are they sent?
- What are the intended uses of the data or indicators?

Developing detailed maps of all of the elements of all possible components and subsystems is probably not feasible in the time envisaged for this assessment. Instead, you may want to develop a general map that at least indicates the following—

- What types of data are being collected at which level(s)
- The existence of various subsystems
- Whether any consolidation of data (e.g., unified data collection forms, consolidation at reporting or analysis levels) occurs and, if so, where and how

If time permits, more detailed maps of components and subsystems can be charted to provide illustrative examples of HIS operation in more detail.

Because major HIS-related donor support may affect how the country's HIS is shaped and how it functions, you must investigate the presence of international donors providing specific assistance to strengthen the entire HIS or its

individual components in more than one region. For some countries, it may be the main source of funds and resources for the HIS. This area is covered in Topic A ("Resources, policies, and regulation") in Section 11.3.2. You may also want to look at donor implementation plans and activity reports. (Refer also to the donor mapping performed in the Core Module, Chapter 5.)

Tip!

The mapping steps in the assessment are intended to develop insight into the following questions.

- What components of an HIS actually exist and operate?
- What is the level of integration of those components?
- What is the contextual framework in which they operate?
- What are the available resources for HIS?

As information is collected, by going through the Component 2 indicators, you will be able to formulate answers to the following questions.

- Does the Ministry of Health (MOH) budget include staff and other resources for routine health information and statistics functions?
- Is a law or regulation in place that mandates private health facilities to report health service delivery activities to MOH?
- Are HIS data incorporated into basic management and planning activities?
- How many reports is a typical facility required to submit monthly, quarterly, and annually?

11.2.1 Special Concerns Posed by a Decentralized System

In the context of a decentralized health system, some government functions and responsibilities are devolved to lower levels of government (provincial, regional, or district levels). In such a context, you will need to determine whether the HIS is structured to satisfy the information needs of those levels. Data that flow to the central level and are analyzed there may be needed most at the regional or district level where important resource allocation decisions are made. You will need to determine whether the level of decentralization of the health system is consistent with that of the HIS. Otherwise, the utility of the HIS as a management tool is likely to be severely limited.

In general, most HIS components and subsystems are managed as central level functions. If you find or observe that some or all HIS subsystems are the responsibility of lower levels of government or that just certain areas (e.g., financing, data collection) of these subsystems are the responsibility of lower government levels, you will need to approach the assessment differently and look for information at lower government levels.

A decentralized HIS system could result in the following—

- The presence of different definitions and methods used for data collection at different levels
- Different data collected at different locations (cultural influences may affect the type of data collected)
- Inequity in the number of data collected or in the level of funding (of the HIS subsystems) between regions, provinces, or districts
- Inequity in reporting to the central level and converting data for national programs and having nationally representative data (e.g., in some highly decentralized countries, some regions report to the central level and some regions do not)

This extreme form of decentralization is not desirable. Although the responsibility and management of the HIS may be shifted to districts and regions, that shift must be made with the understanding that the contents and structure of the HIS conform to national standards and guidelines. Even in a decentralized system, lower levels must still be held accountable for the application and implementation of national standards with respect to data collection, reporting, and analysis.

Tip!

Use the HIS system to inform the decentralization process and progress made.

The HIS can be a useful tool to monitor the decentralization process and to identify regional inequities and differences with regard to health indicators, budget allocations, and staff distribution or allocation.

For this module, you will first need to determine if the HIS (as a whole or for just certain functions) is decentralized. For this step, refer to Section 5.3.5 of the Core Module (Chapter 5), which presents the concept of decentralization and how to determine the level of decentralization of the country. Second, you will need to, as much as possible, understand the operation of the HIS at regional, provincial, or district levels by paying special attention to the

following indicators (each indicator below is selected from the comprehensive list of indicators in Section 11.3.2, which also provides more detailed explanations for each indicator)—

- *Indicator 8*: Availability of financial or physical resources (or both) to support the HIS within regional and district budgets
- *Indicator 10*: Existence of policies, laws, and regulations at regional, provincial, or district levels, mandating public and private health facilities to provide reports of defined services and activities to the HIS
- *Indicator 18*: Availability of a national summary report that contains HIS information, analysis, and interpretation (for the most recent year)
- *Indicator 22*: Whether lower levels report to the central level; in some countries, health facilities report to the provincial level, but few provincial governments relay the information to the central level
- *Indicator 23*: Whether the denominators also available for provinces, regions, and districts?

If time allows, further analysis can evaluate the following indicators at provincial, regional, and district levels: Indicators 8, 10, 12–17, 19, 20, 21, 25, and 26.

11.3 Indicator-based Assessment

11.3.1 Topical Areas

The HIS profile to be constructed as a result of this assessment can be organized as responses to the following topical areas—

- Component 1:
 - A. Health Status Indicators—*Mortality*
 - B. Health Status Indicators—*Morbidity*
 - C. Health System Indicators
- Component 2:
 - D. Resources, Policies, and Regulation
 - E. Data Collection and Quality
 - F. Data Analysis
 - G. Use of Information for Management, Policy Making, Governance, and Accountability

The HIS profile to be constructed as a result of this assessment can be organized as responses to the following four topical areas, all of which are Component 2 indicators assessed through in-country document review and interviews—

- Resources, policies, and regulation
- Data collection and quality
- Data analysis
- Use of information for management, policy making, governance, and accountability

11.3.2 Health Information System Indicators

Table 11.1 groups the indicators in this module by topic.

Table 11.1 Indicator Map—Health Information System

Component	Topical Area	Indicator Numbers
Component 1	Health status indicators— <i>Mortality</i>	1–2
	Health status indicators— <i>Morbidity</i>	3–4
	Health system indicators	5–7
Component 2	Resources, policies, and regulation	8–12
	Data collection and quality	13–18
	Data analysis	19–24
	Use of information for management, policy making, governance, and accountability	25–26

11.3.2.1 Component 1

Component 1 guides the user to review the availability of a limited number of key indicators for the country under study. These indicators can usually be found in secondary data sources made available by sources such as the World Health Organization (WHO) and the World Bank. For the most part, these indicators arise from HIS sources other than the routine facility-based reporting systems most commonly assumed to represent a country's HIS.

For the purposes of this assessment, an analysis of the values of these key statistics and the interpretation of their meaning with respect to the health status of the population is not required. The collection of these statistics is meant to allow the user to assess whether a given country's HIS has collected and reported commonly agreed-upon indicators of health status to international sources and how current these data are.

Tip!

Note that interpretation of each indicator in this component is not based on the indicator's value or its comparison to those of similar countries but rather on whether these data are reasonably current (generally within five years or less of the assessment).

The absence of these indicators at this level would be a strong indictment of the system's function and capacity, and lack of current data for these critical indicators would also imply serious weaknesses in the HIS. Completion of this section of the assessment can be carried out via the data sets included as Component 1 data (available only on the CD version of this manual).

A. Health Status Indicators—Mortality

1. Maternal mortality ratio reported by national authorities

Note: Estimates derived by regression or similar modeling methods should NOT be considered

Definition, rationale, and interpretation	Measures the annual number of deaths of women from pregnancy-related causes per 100,000 live births; is a basic indicator of maternal health services
Suggested data source	UNICEF (2006). <i>The State of the World's Children 2006</i> . < www.unicef.org/sowc06/ > or most recent.
Notes and caveats	<p>In assessing this indicator, you need to note the timeliness (age) of its reporting and also any indications of the data's quality or completeness used in the calculation. Indicate whether the data value is at least within the last five years.</p> <p>Note that in most of the least developed countries, routine HIS reporting systems do not or cannot produce maternal mortality ratio estimates. Such estimates can be reliably derived only from separate surveys since many births and deaths are not in health facilities and not reported.</p>

2. Mortality rate, under age 5 (per 1,000)

Definition, rationale, and interpretation The probability that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates; expressed as a rate per 1,000

This measure is one of the indicators of Millennium Development Goal number 4 (to reduce the under age five mortality rate by two-thirds between 1990 and 2015). Furthermore, it is one of the indicators commonly used to monitor and evaluate the results, in terms of health status, of key functions of the health system.

Indicate the year of the most current data value.

Suggested data source World Bank (2006). *World Development Indicators 2006*.
<www.worldbank.org> or most recent.

Module link: Core Module, indicator 10 (mortality rate, under 5 [per 1,000])

Notes and caveats This indicator can be measured using vital statistics records and household surveys. Note whether the country is using vital statistics or surveys. In the case of vital statistics, the degree to which these statistics provide information on all or nearly all births and deaths of children under five is relevant. Using household surveys to obtain this information is subject to sampling and other errors that can lead to uncertainty in the calculation of indicators. Surveys can provide information for as long as 15 years in the past, however, allowing trends to be estimated from a single survey.

B. Health Status Indicators—Morbidity

3. HIV prevalence among pregnant women aged 15–24

Definition, rationale, and interpretation A basic indicator of HIV/AIDS prevalence; measured by the percentage of blood samples taken from pregnant women, aged 15–24, that test positive for HIV during anonymous sentinel surveillance at selected prenatal clinics

Indicate the most recent prevalence rate (year) available.

Suggested data source UNICEF (2006). *The State of the World's Children 2006*.
<www.unicef.org/sowc06/> or most recent.

Notes and caveats In assessing this indicator, note the timeliness (when was it last produced and at what intervals) of its reporting and also any indications of quality or completeness of the data used in its calculation.

4. Proportion of children under 5 years who are underweight for age

Definition, rationale, and interpretation The percentage of children under five years who have a weight-for-age measurement below minus two standard deviations of the WHO's National Center for Health Statistics reference median

This indicator is also associated with the Millennium Development Goals, specifically the goal of eradicating extreme poverty and hunger. It is, therefore, considered one of the core indicators needed to support macro and micro health system functions.

Indicate the most recent prevalence rate (year) available.

Suggested data source WHO (2006). *The World Health Report 2006*. <www.who.int> or most recent.

Notes and caveats In assessing this indicator, note the timeliness (when was it last produced and at what intervals) of its reporting and also any indications of quality or completeness of the data used in its calculation. Data collection is often done with household surveys. Because of the inherent issues of sampling errors and the difficulties in accuracy of measuring height and weight, you will need to obtain some indication as to the accuracy of data collected.

C. Health System Indicators

5. Number of hospital beds (per 10,000 population)

Definition, rationale, and interpretation Number of in-patient beds per 10,000 population. Hospital beds include in-patient and maternity beds. Maternity beds are included while cots and delivery beds are excluded.

The interpretation of this indicator is based not on the number of hospital beds but rather on the most recent year for which data is available. For example, if the reported date of data for this indicator is within the last five years then the country is maintaining fairly current data on this key indicator.

Suggested data source WHO (2006). *The World Health Report 2006*. <www.who.int> or most recent.

Notes and caveats In assessing this indicator, note the timeliness (when was it last produced and at what intervals) of its reporting and also any indications of quality or completeness of the data used in its calculation.

6. Contraceptive prevalence (% of women aged 15–49)

Definition, rationale, and interpretation Measures the percentage of women in union aged 15–49 years currently using contraception; is a basic indicator of family planning services, usually derived from survey data

The interpretation of this indicator is based on its most recent value (year).

6. Contraceptive prevalence (% of women aged 15–49)

Suggested data source	World Bank (2006). <i>World Development Indicators</i> . < www.worldbank.org > or most recent. <i>Module link:</i> Core Module, indicator 4 (contraceptive prevalence)
Notes and caveats	In assessing this indicator, note the timeliness (when was it last produced and at what intervals) of its reporting and also any indications of quality or completeness of the data used in its calculation.

7. Percentage of disease surveillance reports received at the national level from districts compared to the number of reports expected

Definition, rationale, and interpretation	An indirect measure of the performance of the disease surveillance system in place For example, a value of 70 percent would indicate that 70 percent of districts forward surveillance data and reports to the central level. If this percentage is 10 percent, then only 10 percent of districts report to the central level on disease statistics, which could possibly be a sign of a weak HIS. Indicate whether such data are available, and note the most recent compilations (by year).
Suggested data source	WHO and UNICEF. (2005). <i>Annual WHO/UNICEF Joint Reporting Form</i> . < www.who.int/entity/immunization_monitoring/data/indicator_data.xls >
Notes and caveats	If the country has a passive reporting system, reports are submitted only when cases are identified and not necessarily routinely.

11.3.2.2 Component 2

Component 2 provides a list of indicators that can be used to assess the structure and performance of an HIS. Indicators in Component 2 are grouped into the following four topical areas.

D. Resources, Policies, and Regulation

E. Data Collection and Quality

F. Data Analysis

G. Use of Information for Management, Policy Making, Governance, and Accountability

Sources and availability of data for these indicators may be collected through a desk-based review of reports, documents, and forms, as well as through interviews with key informants and stakeholders. Note that data sources for these indicators may not be readily available. Therefore, you will be responsible for organizing and developing a process for the review of records, documents, informants' and stakeholders' interviews to obtain information necessary to make judgments with respect to the indicators listed.

D. Resources, Policies, and Regulation

This topic is concerned with assessing the HIS design and function by looking at the country resources available to the HIS in terms of personnel, funding, and infrastructure, and the laws, regulations, or policies in place for the functioning, sustainability, and political support to the HIS. This topic has five indicators.

8. Availability of financial and/or physical resources to support HIS-related items within MOH/central budget (or other central sources), regional, and/or district budgets

Definition, rationale, and interpretation

The level of support the government provides to the HIS functioning is a contributing determinant to its quality and sustainability.

Assess this indicator by determining which specific HIS-related items, among the items listed below, are funded by the government and which are not. Assess this indicator separately for the central and local levels.

Make notes about amounts (absolute numbers and proportionate to the total budget) for subsequent discussion. If the breakdown suggested below is not available, collect any budget information about personnel involved in HIS activities and allocation of resources.

- Data processing and reporting equipment and software (e.g., computers, printers, telephones)
- Meetings of interagency committees
- Record books, forms, stationery, instruments for data collection, storage, and reporting
- HIS-related training
- Operational costs related to data collection/transmission (e.g., fuel, per diem, phone bills)

8. Availability of financial and/or physical resources to support HIS-related items within MOH/central budget (or other central sources), regional, and/or district budgets	
	<ul style="list-style-type: none"> • Population-based surveys (e.g., health surveys, census) • Facility-based records • Administrative records
Suggested data source	<p>MOH budget, regional and district budgets (review guidelines for what is to be included in these budgets)</p> <p><i>Module link:</i> Health Financing Module, indicators 9 and 13 (MOH budget process and allocations by line items)</p>
Stakeholders to interview	<p>Central level MOH budget authorities; central level heads of units responsible for statistics and HIS and subsystems</p>
Notes and caveats	<p>In some countries, HIS staff may be seconded from the central statistical office and may not appear on the MOH establishment register.</p>

9. Presence of international donors providing specific assistance to support strengthening the entire HIS or its individual and/or vertical components in more than one region	
Definition, rationale, and interpretation	<p>Permits assessment of the integration of support. Specifically, are the donors who fund vertical programs promoting the creation of parallel systems to address their health information needs?</p> <p>Major HIS-related donor support may affect how the country HIS is shaped and functions. For some countries, it may be the main source of funds and resources for the HIS.</p> <p>If donors provide assistance for the HIS, include assessment of the scope, type, level, and impact of such assistance in your analysis.</p>
Suggested data source	<p>Donor implementation plans and activity reports.</p> <p>Refer also to the donor mapping performed in the Core Module (Chapter 5.3.7).</p>
Stakeholders to interview	<p>Donor representatives, MOH unit responsible for donor coordination</p> <p>Even where there is no significant donor involvement in HIS, interviews with international advisers may be highly informative. The public health program directors can also be interviewed (e.g., the head of the malaria or HIV/AIDS programs).</p>
Issues to explore	<p>Note which items are supported directly from donor sources because this support has a direct link to questions of both ownership (of the system or subsystem as well as results) and sustainability. How can vertical HIS systems be linked with the rest of HIS? For example, are the same codes for identifying health facilities being used?</p>

9. Presence of international donors providing specific assistance to support strengthening the entire HIS or its individual and/or vertical components in more than one region

Notes and caveats You may find projects that address HIS issues on a limited basis (i.e., specific program or geographic region) but have little impact on the broader system. Inefficiencies arise when resources (such as computers bought by a program and their use limited to that program only) are not shared.

10. Existence of policies, laws, and regulations mandating public and private health facilities/providers to report indicators determined by the national HIS

Definition, rationale, and interpretation A regulatory framework for the generation and use of health information enables the mechanisms to ensure data availability of public and private providers. If a general law is not available, review decrees pertinent to individual sub-sectors. For example, assess if the legal framework is consistent with the United Nations' "Fundamental Principles of Official Statistics" (UN 2006).

Suggested data source MOH policies, decrees, public health law

Stakeholders to interview Central level MOH authorities (e.g., director of the secretary general's office)

Issues to explore Is any person or office responsible for regulating or interacting with the private sector? Does regulation go beyond licensing? Has any attempt been made to plan health service delivery in collaboration with the private sector? Are clear mechanisms in place for collating health information at the national level? Does the country have specific requirements in terms of periodicity and timeliness of reports? Is there a minimum set of core health indicators that both public and private providers should report?

Notes and caveats If possible, assess the degree to which the laws are enforced since the presence of a regulatory framework does not guarantee compliance.

11. Presence of a clear procedure for allocating resources and planning in the health system based on the information products of HIS (e.g., use of mortality and morbidity indicators to assess health status and allocate resources accordingly)

Definition, rationale, and interpretation One of the ways data obtained from the HIS can be used is for functions, such as planning, reforms, program management, and program design. Consequently, a mandate and the authority to make decisions are critical for data use and the usefulness of generating data.

For this indicator, review documents and make notes if you have concerns.

11. Presence of a clear procedure for allocating resources and planning in the health system based on the information products of HIS (e.g., use of mortality and morbidity indicators to assess health status and allocate resources accordingly)

Suggested data source	MOH decrees, human resource policy documents, public health laws <i>Module link:</i> Health Financing Module, indicator 8 (Needs-based budget allocation process)
Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit), human resources officers, regional and district program heads, medical officers, health management team members

12. Presence of mechanisms to review the utility of current HIS indicators for the planning, management, and evaluation process, and to adapt and modify accordingly

Definition, rationale, and interpretation	<p>An HIS must provide relevant and important information to stakeholders. HIS design and contents should be seen as a dynamic process subject to periodic review and adaptation to the changing health environment in the country.</p> <p>For example, some mechanisms would be the presence of an active national HIS Steering Committee, the existence of a national HIS policy, periodic HIS review meetings, or any combination of the three.</p> <p>Interviews with stakeholders will indicate whether HIS system outputs are reviewed. The lack of such mechanisms may be indicative of a system that is unresponsive to need and ultimately seen as a burden with limited utility.</p>
Suggested data source	Central level authorities (e.g., director or secretary general), head of statistics or analysis unit, central level program heads
Stakeholders to interview	Central, regional, and district level planners
Issues to explore	Does the system provide relevant and necessary information to support the planning, management, and evaluation processes? Is the HIS seen as a burden rather than an effective and important tool?
Notes and caveats	The content of reports and data collection tools has probably been static for many years. Most systems do not regularly reflect on the utility of HIS outputs (or methods). Alternatively, many HIS suffer from a lack of clarity and definition and, as a result, are constantly revised, not fully functional, often error-ridden, and incomplete.

E. Data Collection and Quality

This topic has six indicators investigating the data collection process. You will determine whether guidelines exist for data collection, if the data's quality is verified, where the data come

from, the burden of data collection on health facilities, and finally, if national summary HIS reports are compiled.

This topic is designed to provide insight into the following questions.

- Do all districts report? Are any districts missing? Can this be discerned from reports?
- Do private sector facilities report data to the MOH? Can this be discerned from reports?
- Are clear standards and guidelines available for data collection and reporting procedures?
- Are methods available to assess and document whether the reported data are complete and accurate?
- Does the country have recent national level reports (annual or other interval) for the HIS subsystems? Is a recent comprehensive HIS annual report available?

13. Percentage of districts represented in reported information

Definition, rationale, and interpretation	<p>Incomplete data do not permit adequate decision making. The absence of this indicator is itself an indication of an HIS weakness.</p> <p>Compare the number of reports received at the national level from districts to the number of expected reports for the last six months (separately for each of the HIS subsystems). If the percentage is below 95 percent, then the data quality is compromised.</p>
Suggested data source	<p>All reports at district, regional, and national level</p> <p>Review program specific reporting here as well.</p> <p><i>Module link:</i> Governance Module, indicators 7–11 (information/assessment capacity)</p>
Stakeholders to interview	<p>Staff working in the statistical department, staff who analyze the data</p>
Issues to explore	<p>Is a quality review mechanism in place to improve the reporting of districts or units?</p>
Notes and caveats	<p>You may find that reports do not include indications of the percentage of districts represented. This omission places a question mark over the information reported. The lack of indication regarding the percentage of units reporting may also be indicative of a system that lacks quality control mechanisms to review and improve data and report quality.</p> <p>Note, however, the existence of any regularly published HIS reports or data summaries (complete or incomplete) that are widely disseminated and in the hands of users and decision makers. The existence of a mechanism to disseminate information is an important element that can be built upon when strengthening HIS activities.</p>

14. Percentage of private health facility data included in reported data

Definition, rationale, and interpretation	<p>Inclusion of private facilities in the HIS is important if they provide a considerable amount of services in a given subsector.</p> <p>MOH reports should indicate whether private facilities or services are included.</p>
Suggested data source	<p>MOH reports</p>
Stakeholders to interview	<p>Central level program heads (especially the head of the planning or statistics unit), regional and district program heads, medical officers, health management team members</p>
Notes and caveats	<p>In many cases, information on this indicator will be unspecified and unknown.</p>

15. Availability of clear standards and guidelines for data collection and reporting procedures

Definition, rationale, and interpretation	<p>Clear instructions contribute to increased data quality.</p> <p>To measure this indicator, list available documents and topics covered by them. Review the documents carefully, make notes if they are not complete or if you have other concerns.</p>
Suggested data source	<p>Central level technical guidelines, specific program guidelines, and directives</p>
Stakeholders to interview	<p>District health management team members, central level heads of programs</p>
Notes and caveats	<p>In many instances, staff will indicate that such procedures, standards, and guidelines exist but will be unable to produce copies or evidence of them.</p>

16. Number of reports a typical health facility submits monthly, quarterly, or annually

Definition, rationale, and interpretation	<p>Health workers may be overburdened with data collection and reporting requirements, which can negatively affect the HIS quality.</p> <p>The greater the number of required reports, the higher the HIS burden on a typical health worker. In this case, poor-quality data should be expected. Make notes about the specific types of reports required, duplication, and overlap of information.</p>
Suggested data source	<p>HIS reports</p>
Stakeholders to interview	<p>Facility level workers, health information unit</p>

16. Number of reports a typical health facility submits monthly, quarterly, or annually

Issues to explore Does the staff feel that the number of reports and other HIS requirements are a burden?

Does the staff see or appreciate the importance of HIS activities, including data collection, reporting, or analysis, that they are asked to do?

Is any feedback provided to the data producers? Lack of feedback can have a detrimental effect on data and report quality.

Notes and caveats Some probing and persistence may be needed to fully catalog all of the forms and reports required at this level.

17. Presence of procedures to verify the quality of data (accuracy, completeness, timeliness) reported, such as data accuracy checklists prior to report acceptance, internal data quality audit visits

Definition, rationale, and interpretation Tracking the quality of data, data verification, and subsequent correction are critical methods for data quality improvement. Data quality is an important consideration when interpreting or using system information and results.

According to the International Monetary Fund's "Data Quality Assessment Framework" (IMF 2006), six criteria are used to assess the quality of health data—

- *Timeliness*: the gap between when data are collected and when they become available to a higher level or are published
- *Periodicity*: the frequency with which an indicator is measured
- *Consistency and transparency of revisions*: internal consistency of data within a database and consistency between datasets and over time; extent to which revisions follow a regular, well-established and transparent schedule and process
- *Representation*: the extent to which data adequately represent the population and relevant subpopulations
- *Disaggregation*: the availability of statistics stratified by sex, age, socioeconomic status, major geographic or administrative region, and ethnicity, as appropriate
- *Confidentiality, data security, and data access*: the extent to which practices are in accordance with guidelines and standards for storage, backup, transport of information, and retrieval

Although actually measuring these indicators as a means of assessing data quality is beyond the scope of this assessment, you should attempt to obtain some feel for, or insights into, how the HIS or subsystem under study responds to these important criteria.

Review the documents carefully; make notes if they are not complete or if you have other concerns.

17. Presence of procedures to verify the quality of data (accuracy, completeness, timeliness) reported, such as data accuracy checklists prior to report acceptance, internal data quality audit visits

Suggested data source	This type of information is obtained mainly through interviews with primary stakeholders. Supervision checklists; MOH district level procedures and directives; health information unit routines
Stakeholders to interview	District health management team members, central level program heads, central level statistics and HIS staff
Issues to explore	If these indicators exist, what is the government response to poor quality?
Notes and caveats	Many systems will assign this task to supervision. In many cases, however, such supervision is not carried out for a variety of reasons. Although most systems do have checklists to be used during supervision, the checklists do not often include steps to improve the quality of data or reports. Data entry staff, or those who aggregate forms, often make corrections and carry out data quality functions.

18. Availability of a national summary report which contains HIS information, analysis, and interpretation (most recent year)

Definition, rationale, and interpretation	Is a current-year report that includes HIS data, analysis, and interpretation available? Information availability is a key to its widespread use. Such reports offer an opportunity to bring together results of different HIS subsystems and integrate their analysis and interpretation.
Suggested data source	MOH reports
Stakeholders to interview	Central level program heads, central level statistics, HIS staff
Issues to explore	Why is a summary report not produced? What are the constraints to integration of HIS results? What are the uses of such a report for planning, management, budgeting, and other functions?

F. Data Analysis

This topic is divided into six indicators. The first goal of this topic is to determine what resources are available for the analysis of data (i.e., once the data have been collected) in terms of number

of personnel, infrastructures, guidance, and training. The second goal is to assess how the data are analyzed and whether the results are made available at regular intervals and in what form.

19. Availability at each level of a sufficient number of qualified personnel and infrastructure to compile and analyze information

Definition, rationale, and interpretation	Data analysis by qualified personnel is critical for HIS to function. Look at the percentage of designated posts that are filled and the qualifications of those filling these posts. Identify the type of personnel performing the different tasks for the analysis, as well as their level of skills (i.e., degrees, experience). Try to match level of skills to task performed and note the time devoted to analysis.
Suggested data source	Staffing and human resource documents, organizational charts, program documents <i>Module link:</i> Governance Module, indicator 10 (Technical capacity for data analysis)
Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit), the health information unit, regional and district program heads, medical officers, health management team members
Issues to explore	Investigate the level of motivation of public health managers for data analysis. The staff may be overburdened with data analysis or collection.
Notes and caveats	At the district level and below, HIS functions may be carried out part time by service delivery staff or clerks and not by dedicated staff.

20. Evidence of ongoing training activities related to HIS data collection and analysis

Definition, rationale, and interpretation	Training is essential to maintain analytical skills of personnel. Investigate for the presence of training curricula. Review training curricula, and make notes if you have concerns.
Suggested data source	MOH budget
Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit), regional and district program heads, medical officers, health management team members
Issues to explore	Look for the type(s) of training provided: training to record and analyze data, training in the use of information and the type(s) of staff by type of training.
Notes and caveats	Most HIS training activities are funded by external donors.

21. Presence of written guidelines specifying the methods and products of data analysis to be performed

Definition, rationale, and interpretation	Clear instructions are essential for data analysis.
Suggested data source	<p>Review the documents carefully, make notes if they are not complete or if you have other concerns.</p> <p>Program-specific documents covering MOH general technical guidelines for data collection and analysis</p> <p><i>Module link:</i> Governance Module, indicator 7 (state of systems for data collection, reporting, analysis)</p>
Stakeholders to interview	District health management team members, central level heads of programs
Notes and caveats	Many HIS have predefined analyses, which have been programmed into the system. The origin and utility of these analyses may not be known or reviewed. Most analyses are done as a routine and are a function of what was done in the past.

22. The data derived from different health programs/subsectors are grouped together for reporting purposes (or even integrated in a single document), and these documents are widely available

Definition, rationale, and interpretation	<p>Integrated HIS are cheaper to maintain, and they allow and encourage analysts and decision makers to explore links between indicators in various subsectors (e.g., number of measles cases and immunization rates). Managers get easier access to more consistent and better quality data under such systems. Integration makes sense, first of all, for countries in which public health decisions are concentrated in a limited number of offices. All countries can benefit from reduced administrative burden and inconsistencies generated by overlapping reporting requirements for the same facility.</p> <p>Flowcharting the various HIS subsystems will demonstrate where data are integrated and grouped (if at all). Too many parallel subsystems are indicative of a fragmented HIS that cannot provide the type of analysis necessary for good planning, management, or evaluation of health policies or programs. Interpretation of the level of integration is basically a judgment call on the part of the assessment team.</p>
Suggested data source	<p>Routine program reports; decrees specifying reporting requirements and data flow; annual program reports; annual MOH report (central, regional, and district levels).</p> <p><i>Module link:</i> Governance Module, indicator 9 (data flows) and 11 (data presentation to policy makers)</p>

22. The data derived from different health programs/subsectors are grouped together for reporting purposes (or even integrated in a single document), and these documents are widely available

Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit), health information unit, regional and district program heads, medical officers, health management team members
Issues to explore	You will also need to also identify at which level the data are grouped (facility or district). Are key pieces of information not grouped (but possibly available)? Who is responsible for grouping or integrating data from various sources?

23. Availability of appropriate and accurate denominators (such as population by age groups, by facility catchment area, by sex, number of pregnant women) for analysis

Definition, rationale, and interpretation	Accurate denominators are critical for data analysis. Analyze each subsystem, and answer yes or no. Make notes if you have concerns if the information is partially available.
Suggested data source	Program level and MOH general documents should clearly define the method for determination of the denominators.
Stakeholders to interview	District health management team members, central level heads of programs, the health information unit
Notes and caveats	Denominators for district level and above are based on census data with assumptions about population growth built into the calculations. At lower levels, denominators and effective catchment areas can be difficult to derive and substantiate. Expanded Programme on Immunization (WHO) documents can be a source of commonly used denominators at the facility level, based on numbers of estimated or reported births.

24. Availability of timely data analysis, as defined by stakeholders and users

Definition, rationale, and interpretation	Physical evidence of data analysis can provide support to any theoretical conclusions or observations. This indicator must be assessed at the central, regional, and district levels by reviewing documents; make notes if they are incomplete or if you have areas of concern.
Suggested data source	MOH statistical units, wall charts and other records, and reports at regional, district, and facility levels <i>Module link:</i> Governance Module, indicator 22 (responsiveness to stakeholders)

Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit), regional and district program heads, medical officers, health management team members
Issues to explore	Who defines what analysis to perform? Do staff understand the analysis and its interpretation and implications (or do they carry out analysis as routine required activity)
Notes and caveats	When assessing the timeliness of any analysis, remember that the frequency of analysis depends on the program and on its specific needs and guidelines.

G. Use of Information for Management, Policy Making, Governance, and Accountability

This topic contains two indicators and is concerned with determining how the data obtained through the HIS or other surveys are used for decision making, planning, budgeting, or fundraising activities.

The purpose of any HIS is to provide system managers with information by which to manage and evaluate services delivered by the system. These questions are meant to guide the assessment's understanding of the HIS ability to do so.

- Did you find evidence that the data collected was incorporated into planning, budgeting, and fundraising activities in the past year (e.g., a change in budget in response to a new health issue or funding of new proposals that used HIS data)?
- Did you find evidence that the results of data analysis were communicated to data providers to inform them of their performance?

25. Use of data for planning, budgeting, or fundraising activities in the past year (e.g., a change in budget levels in response to a new major health issue, fund allocation/budgeting proposals utilizing HIS data for advocacy)

Definition, rationale, and interpretation	Gives an idea of the level of commitment of the government as well as an indication of the mechanisms in place to use the data produced by the HIS. Such data will be used to inform decision making in areas such as resource allocation, the issuing of health insurance cards, health promotion, and disease-prevention planning.
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Suggested data source	Inquire of senior managers what key sources they use for health information. This indicator must be assessed at the central, regional, and district levels. <i>Module link:</i> Governance Module, indicator 13 (Policy changes based on performance review) Look for reports, graphs, or maps that display the information provided through the HIS. MOH, regional and district budgets
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25. Use of data for planning, budgeting, or fundraising activities in the past year (e.g., a change in budget levels in response to a new major health issue, fund allocation/budgeting proposals utilizing HIS data for advocacy)

Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit), regional and district program heads, medical officers, health management team members
Issues to explore	Presence of stakeholder cooperation mechanisms. For example, are meetings held to analyze disease patterns, trends, outbreaks, financial issues affecting health facilities, performance of the health care delivery system. What is the promptness and adequacy of response measures?

26. Data or results of analyses are fed back to data providers to inform them of program performance

Definition, rationale, and interpretation	Feedback (written or oral) is the simplest form of data use, which is indicative of information management practices at various levels. Search for evidence in documents or communications.
Suggested data source	Newsletters, supervision reports, central level reports to regions and districts, minutes of review meetings <i>Module link:</i> Governance, indicator 24 (communications with stakeholders on priority health issues)
Stakeholders to interview	Central level program heads (especially the head of the planning or statistics unit) regional and district program heads medical officers health management team members.
Issues to explore	What is the promptness and adequacy of response measures to a noted lack (or problem) of performance?

11.3.3 Summary of Issues to Address in Stakeholder Interviews

As mentioned in Section 11.2, this assessment is based on a desk-based review and on stakeholder interviews. Below is an illustrative list of major stakeholders to identify before the assessment and perhaps interview (adapted from Health Metrics Network 2006b). The number of prospective interviewees will be many, and your time will be limited, so you should attempt to target these interviews to the extent possible to try and interview the major players. Stakeholders can also be a good source to identify published and unpublished reports on the HIS system.

- Central statistics office
 - Officials and analysts responsible for the national population census
 - Officials and analysts responsible for household surveys

- Senior advisers of the MOH and heads or coordinators of the following—
 - MOH planning unit
 - Monitoring and evaluation annual performance review
 - Health management information system unit
 - Acute disease surveillance and response
 - Disease control, immunization, and maternal and child health or family planning programs
 - Noncommunicable disease control programs
 - Unit responsible for management of human resources, pharmaceuticals or logistics, and finances
- Other ministries and government agencies responsible for planning, monitoring, and evaluation of social programs
 - Ministries or government agency responsible for civil registration
 - Planning commission
 - Ministry of Finance
 - Population commission
 - Commissions developing master plans for social statistics
- Researchers and directors of demographic surveillance systems, public health institutes, and universities
- Major donors to the health sector and donors who finance specific activities of relevance, for example, national population census, large-scale national population surveys (such as demographic and health surveys, multiple indicator cluster surveys, or the Living Standards Measurement Study), demographic surveillance systems, sample vital registration systems, demographic survey system, health accounts, health facility surveys
- Representatives of key private sector, NGOs, and civil society
 - Private health professional associations
 - Private health facilities
 - Associations of faith-based health providers and other NGOs
 - Health advocacy groups

Table 11.2 provides a summary of the issues to address with stakeholders.

Table 11.2 Summary of Issues to Address in Stakeholder Interviews

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
Central statistics office; central level MOH budget authorities	<ul style="list-style-type: none"> • Availability of financial and physical resources to support the HIS • Financing of training activities related to the HIS (e.g., for data collection, analysis, or reporting) • Use or role of HIS data in financial management and resource allocation decisions within MOH
Human resources officers at the MOH	<ul style="list-style-type: none"> • Availability of financial and physical resources to support the HIS • Presence and availability of formal documents defining and describing staff responsibilities regarding data collection, analysis, or reporting • Trainings regarding data collection, analysis, or reporting • Use or role of HIS in human resource management
Central statistics office; central level program heads (especially the head of the planning or statistics unit)	<ul style="list-style-type: none"> • Guidelines for data collection • Procedures to verify the quality of data • Availability of personnel, infrastructures, and equipment for data collection, reporting, and analysis • Presence and availability of formal documents defining and describing staff responsibilities regarding data collection, analysis, or reporting and for staff trainings • Availability of appropriate and accurate denominators • Availability of timely data analysis • Use of data and results for planning and decision making
Donor representatives; MOH department or unit responsible for donor coordination	<ul style="list-style-type: none"> • Presence of international donors providing specific assistance to support strengthening the entire HIS or its individual components in more than one region • Ability of HIS to meet donor needs for information • Reporting requirements for vertical programs (HIV/AIDS, malaria)
District health management team	<ul style="list-style-type: none"> • Guidelines for data collection • Procedures to verify the quality of data • Availability of personnel, infrastructures, and equipment for data collection, reporting, and analysis • Whether trainings are taking place • Availability of appropriate and accurate denominators • Availability of timely data analysis • Level of responsibility and authority with respect to program management and perceived data needs

Profile of Stakeholder to Interview	Issues to Discuss with Stakeholder
	<ul style="list-style-type: none"> • Use of data and results for planning and decision making
Facilities	<ul style="list-style-type: none"> • Number of reports they are required to submit and at what intervals • Availability of personnel, infrastructures, and equipment for data collection, reporting, and analysis
Health information unit (there may be no central information management unit and separate programs will be responsible for their individual subsystems, a sign of a fragmented system).	<ul style="list-style-type: none"> • Number of reports they are required to submit and at what intervals • Relationship between information unit and program management units • Availability of personnel, infrastructures, and equipment for data collection, reporting, and analysis • Availability of appropriate and accurate denominators

11.4 Summarizing Findings and Developing Recommendations

Chapter 4 describes the process that the team will use to synthesize and integrate findings and prioritize recommendations across modules. To prepare for this team effort, each team member must analyze the data collected for his or her module(s) to distill findings and propose potential interventions. Each module assessor should be able to present findings and conclusions for his or her module(s), first to other members of the team and eventually at a stakeholder workshop and in the assessment report (see Chapter 3, Annex 3J for a proposed outline for the report). This process is an iterative one; findings and conclusions from other modules will contribute to sharpening and prioritizing overall findings and recommendations. Below are some generic methods for summarizing findings and developing potential interventions for this module.

11.4.1 Summarizing Findings

Using a table that is organized by the topic areas of your module (see Table 11.3) may be the easiest way to summarize and group your findings. (This process is Phase 1 for summarizing findings as described in Chapter 4.) Note that additional rows can be added to the table if you need to include other topic areas based on your specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Annex 4A of Chapter 4. In anticipation of working with other team members to put findings in the SWOT framework (strengths, weaknesses, opportunities, and threats), you can label each finding as either an S, W, O, or T (please refer to Chapter 4 for additional explanation on the SWOT framework). The “Comments” column can be used to highlight links to other modules and possible impact on health system performance in terms of equity, access, quality, efficiency, and sustainability.

Table 11.3 Summary of Findings—Health Information System Module

Indicator or Topical Area	Findings (Designate as S=strength, W=weakness, O=opportunity, T=threat.)	Source(s) (List specific documents, interviews, and other materials.)	Comments ^a

^aList how HIS findings affect the ability of policy makers and health system stakeholders and workers to measure, analyze, and improve system performance with respect to the five health systems performance criteria (equity, access, quality, efficiency, and sustainability) and list any links to other modules.

11.4.2 Developing Recommendations

After you have summarized findings for your module (as in Section 11.4.1), it is now time to synthesize findings across modules and develop recommendations for health systems interventions. Phase 2 of Chapter 4 suggests an approach for doing this with your team. Some generic solutions or recommendations are given if the system is deemed deficient in each area.

The objective of this section is to develop a comprehensive evaluation of the ability of current HIS subsystems to provide timely and relevant information for use by decision makers at all levels (and not necessarily only within the health sector). In interpreting the information gathered, reflect on results and group findings (many of which will be subjective) around the following themes.

- **Completeness:** There are two levels at which the completeness of the HIS can be assessed—
 - The percentage of all cases or events that are captured and represented in HIS outputs and products
 - The extent to which the HIS captures all of the relevant information necessary for informed and effective decision making and resource allocation

In general, improving the coverage of the HIS might include the following activities—

- Inclusion of the private sector in the HIS. This activity may be difficult because in many countries, the private sector is nominally required to submit reports and data to the MOH. In reality, the MOH has little or no means to enforce their participation.
- Capacity building and support or supervision to improve compliance with MOH requirements and guidelines

- **Timeliness:** The usefulness of many HIS subsystem products is determined in part by their timeliness. Epidemiologic surveillance data that are months old are obviously of limited value in helping the health system to recognize and respond to the threat of infectious disease outbreaks. An HIS that cannot collect, analyze, and report on data within a time frame of the data's usefulness (within the time frame of the decision making processes) is of little value or effect.

Timeliness of data collection, transmission, analysis, and reporting might be improved by the following generic activities—

- Capacity building and support or supervision to improve compliance with MOH requirements and guidelines
 - Improved means of communication at all levels to facilitate timely data flow
 - Improved means of data handling and analysis (usually this improvement implies computerization or upgrading of existing means of electronic analysis)
 - Revision of HIS guidelines to better align the needs of data and information users with existing collection, communications, and analysis capacities
 - Revision of HIS guidelines to better reflect the true needs of data users (i.e., are data *really* required on a monthly basis when they are only used annually as part of program review?)
- **Integration and management of information:** To what extent are the various subsystems integrated or linked? In many instances, no linkages exist between the results and outputs of the various subsystems. Some linkages may be subtle, such as whether census data are used to calculate appropriate denominators used in analyzing data collected in other subsystems.

Improving the integration of HIS subsystems might be accomplished by the following—

- Improved means of data handling and analysis (usually this improvement implies computerization or upgrading of existing means of electronic analysis)
 - Consolidation of data collection tools to bring subsystems together
 - Increased demand by information users and stakeholders for integrated analysis (i.e., combining or comparing vaccination program coverage data with vaccine preventable disease data obtained from the infectious disease surveillance subsystem as a means of measuring program effectiveness and not simply coverage)
- **Use for decision making:** There are no obvious or universally recognized indicators of information use. The determination of information use is left to the judgment of the assessment team based upon discussions with key system implementers and health sector decision makers.

The following broad actions, however, can be suggested as strategies to improve the use of data in decision making—

- Increased decentralization and clearly defining limits of authority and decision making. In many nominally decentralized systems, little decision making authority is transferred to lower levels. These lower levels are merely given the responsibility to act upon and carry out decisions actually made centrally.
- Improved information availability
- Dialogue with stakeholders and information users to better define their needs and requirements and adaptation of HIS to fill those defined needs
- Feedback on performance

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