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THE HEALTH SYSTEM ASSESSMENT APPROACH: A HOW-TO MANUAL

VERSION 2.0

September
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Foreword

A strong health system ensures that people and institutions, both public and private, effectively undertake core functions to improve health outcomes. It protects citizens from catastrophic financial loss and impoverishment resulting from illness or injury, and ensures consumer satisfaction, in an equitable, efficient and sustainable manner. Many low and middle income countries face significant challenges in providing essential health services due to inefficient use of resources, weak information systems, a limited health workforce, and other systemic challenges. However, even the most resource constrained health system can improve health outcomes by addressing critical systems gaps. Scientific advances, technological innovation, and economic growth provide countries with additional opportunities to address these gaps and expand and allocate resources for health more efficiently and equitably.

In order to design effective strategies for creating a strong health system, countries first must have access to critical information on the strengths and limitations of their system. An effective assessment tool must be flexible and participatory in order to respond to the context specific needs of each country. The tool must also be thorough and rigorous enough to provide solid evidence that will guide effective policy and decision-making. Since it was originally developed in 2004, the Health Systems Assessment Approach (HSAA) has been utilized in more than 24 countries, and has incorporated input from global experts across the field of health system strengthening. Since the first edition, the HSAA tool has evolved to respond to the changing requirements of systems strengthening efforts by incorporating elements that build greater local capacity; increase local stakeholder engagement; and increase the use of rigorous scientific methods while keeping the methodology as simple and user-friendly as possible. The result is a stronger HSAA Manual, Version 2.0, that facilitates a collaborative assessment process and provides a critical source of data to assist countries in developing effective strategies for strengthening their health system.

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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
AIS	AIDS Indicator Survey
ANC	Antenatal Care
ARV	Antretroviral
BBP	Basic Benefits Package
CBHI	Community-Based Health Insurance
CD	Compact Disc
CHW	Community Health Worker
DALY	Disability Adjusted Life Years
DHIRO	District Health Records and Information Officer
DHS	Demographic and Health Survey
DTC	Drug and Therapeutics Committee
DTP	Diphteria, tetanus, and pertussis
EPI	Expanded Programme on Immunization [WHO]
EU	European Union
FBO	Faith-Based Organization
GDP	Gross Domestic Product
HIS	Health Information System or Systems
HIV	Human Immunodeficiency Virus
HMN	Health Metrics Network
HR	Human Resources
HRH	Human Resources for Health
HRIS	Human Resources Information System
HRM	Human Resources Management
HSA	Health System Assessment
HSAA	Health System Assessment Approach
HSS	Health System Strengthening
IFC	International Finance Corporation
IMF	International Monetary Fund
INN	International Nonproprietary Name
IT	Information Technology
KAP	Knowledge, Attitude, Practices
km	Kilometer
LOE	Level of Effort
MDGs	Millennium Development Goals
mg	Milligram
ml	Milliliter
MOF	Ministry of Finance
MOH	Ministry of Health
MOU	Memorandum of Understanding

MSH	Management Sciences for Health
NDRA	National Drug Regulatory Authority
NEML	National Essential Medicines List
NGO	Nongovernmental Organization
NHA	National Health Accounts
NMP	National Medicines Policy
OOP	Out-of-Pocket
ORS	Oral Rehydration Solution
OSCE	Organization for Security and Cooperation In Europe
PAHO	Pan American Health Organization
PEPFAR	President's Emergency Plan for AIDS Relief
PHC	Primary Health Care
PHR*plus*	Partners for Health Reform*plus*
PMI	Private Medical Institution
PPP	Purchasing Power Parity
PRISM	Performance of Routine Information System Management
RHIS	Routine Health Information System
SD	Service Delivery
SHI	Social Health Insurance
SOP	Standard Operating Procedure
SOW	Scope of Work
SPA	Service Provision Assessment
STG	Standard Treatment Guideline
STI	Sexually Transmitted Infection
SWAp	Sector-Wide Approach
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TB	Tuberculosis
TB-DOTS	Tuberculosis – Direct Observation Treatment Short Course
THE	Total Health Expenditure
TOR	Terms of Reference
TPM	Team Planning Meeting
UN	United Nations
UNDP	United Nations Development Program
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

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Notes

Section I
Introduction to The Health System Assessment Approach and Manual

The following modules describe the technical grounding and methodological approach of the health system assessment.
They also provide information on the content and use of this manual.

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Module 1
Health System Strengthening and the Assessment Approach

This module describes the conceptual foundations of health system strengthening and the assessment methodology.

1.1 BACKGROUND

The HSA approach has been used to assess health systems and guide policymakers and program planners in many countries and regions (see Figure 1.1.1). Health system assessment (HSA) results have contributed to national strategic plans, PEPFAR partnership frameworks, and numerous other HSS and programmatic activities.

The HSAA manual represents the collective experience of application in 25 countries across Asia, Africa, Latin America and the Caribbean (see Figure 1.1.1) over the past six years. USAID and its partners have used the health system assessment (HSA) results to contribute to national strategic plans, PEPFAR partnership frameworks, grant applications, and numerous other HSS and programmatic activities. Throughout the application of the approach, the stakeholder engagement process has been emphasized to ensure buy-in to the HSA process and findings, and sustainability of follow-up. The private sector has also become a larger component of the HSAA in recognition of that sector's integral role in sustaining programs such as HIV/AIDS treatment with the decline of donor funds in this area over recent years. Throughout the implementation of the HSAs there has also been a concerted emphasis on capacity building for sustainability, both for country Ministry of Health (MOH) teams and for independent research institutions to serve as regional resources for ongoing technical assistance. The following country examples from Lesotho, St. Lucia, Senegal, Ukraine, and Vietnam illustrate a few of the successes that have come from using the HSA approach.

The goal of the HSA approach of this manual is to add value by assessing the interactions among the system functions, and the policies and regulations underpinning the functions to identify interventions that change the way the system works.

Lesotho

The Lesotho Ministry of Health and Social Welfare (MOHSW) used the HSA to inform the decentralization of primary health care (PHC). The HSA identified health system strengths and weaknesses to advise planning around the transfer of responsibility for (PHC) from the central government to local authorities.

Saint Lucia

In Saint Lucia, a new national hospital is being built with funding from the European Commission (EC). The 2011 HSA findings raised important concerns about the limited operational planning to date including the costs of operating this new hospital and how it would affect the rest of the health system. In particular, the findings highlighted the urgent need for detailed cost data to make informed funding decisions regarding the new hospital in the short term and seek efficiencies within the entire health system over the long run. Within six months of HSA completion, the MOH requested and received assistance from Health Systems 20/20 to cost current hospital services, in order to inform cost projections at the new hospital. The EC was encouraged by the Ministry's use of the HSA findings and its renewed commitment to the hospital project. As a result, the EC allocated an additional US$7.4 million from its headquarters in Brussels to assist with completing and equipping the new national hospital.

Figure 1.1.1 Health System Assessment Countries, 2005-2011

HSA performed in more than 25 countries

Senegal

In 2008, the HSA in Senegal assessed the implementation of the 10-year national health strategy, in order to provide input to the country's new 10-year strategic plan (2009-2018). This new plan incorporated nearly all of the major HSA recommendations, many of which the MOH is implementing. For example, in the area of governance, the MOH changed the design of the health system at the intermediate level by transforming the regional health offices to regional departments of health with more authority over human resources management, financial management, and service delivery.

Ukraine

In Ukraine, the HSA led to increased focus on the delivery of HIV/AIDS services in the context of health reform, which had been neglected from the reform process. A subsequent study and policy roundtable led by Health Systems 20/20 resulted in the establishment of a national working group to shepherd the process of HIV/AIDS service integration and a regional-level feasibility study for pilot testing reform of the delivery of these services.

Vietnam

Strengths and weaknesses identified during the eight provincial HSAs provided robust evidence that the Vietnam Health Strategy and Policy Institute (HSPI) used to advocate for reforms and policy changes. In the health system functions of service delivery and medical products, vaccines and technologies, for example, the HSA raised specific concerns regarding both the quality of care and rational drug use. In order to address these issues the MOH passed a new Law on Examination and Treatment which seeks to improve quality of care, as well as creating a nationally distributed Circular 23/2011 of guidance on use of medicines

in health facilities. Through a prioritization exercise, Health Information Systems (HIS) was identified during the HSA as the weakest health system function overall. As a result, it has received very high level attention. The Minister of Health himself is currently chairing a new national Health Management Information Systems (HMIS) project to improve HIS.

The HSA approach presented in this manual is a structured, indicator-based methodology for rapid, comprehensive assessment of a country's health system. The HSA approach synthesizes information – from document reviews, site visits, and in-country stakeholder interviews – to identify the strengths, weaknesses, opportunities, and threats (SWOT) of a wide range of health system components, and transform the findings into specific recommendations and strategies for action based on country priorities. In addition, the manual itself may serve as an educational and reference tool for persons wishing to familiarize themselves with the workings of a health system.

1.2 Key Concepts Used in the Health System Assessment Approach

Defining a Health System and Health System Strengthening

The conceptual framework for the HSA approach draws from the efforts of the past decade to define and understand health system functions and performance. Primary among these are the World Health Organization's (WHO's) *World Health Report 2000* (WHO 2000) and *Everybody's Business: Strengthening health systems to improve health outcomes* (WHO 2007).

In these publications, the WHO defined a **health system** as consisting of "all organizations, people and actions whose primary intent is to promote, restore or maintain health." It is much broader than the public health service delivery system that is often the focus of public health officials. It includes the full range of stakeholders in a health sector, for example, private for-profit and not-for-profit service providers, health insurance organizations, public safety legislation, community outreach workers, educators, researchers, patients, and consumers, as well as mothers caring for sick children.

WHO (2007) also defined **health system strengthening**, as:

> *…improving [the] six health system building blocks and managing their interactions in ways that achieve more equitable and sustained improvements across health services and health outcomes.*

The holistic approach in this HSAA manual responds to several aspects of the above definitions:

- **Equitable** improvement
- **Across health services** and public and private sectors, by
- Managing **interactions** and
- Leveraging all resources available – both public and private – **to sustain improvements**

There is growing recognition of the importance of HSS and universal health coverage as critical strategies for improving global health outcomes. In a 2005 World Health Assembly resolution, WHO member states committed to develop their health systems with the ultimate goal of ensuring that all people have access to health services, without being subject to financial hardship paying for them (WHO 2010).

The Health System Functions

As part of the HSS framework described above, WHO (2000) organized the health system into six functions, or building blocks:

1. Leadership and governance
2. Health financing
3. Service delivery
4. Human resources for health (HRH)
5. Medical products, vaccines and technologies
6. Health information systems (HIS)

This WHO enumeration of the building blocks has been adopted widely, and now provides a common terminology for discussing key health system functions. See Section 3 for in-depth descriptions of the six building blocks.

Nevertheless, other HSS approaches exist. They include the comprehensive framework for identifying areas for reform presented by Roberts, Hsiao, Berman, and Reich (2004), which describes five "control knobs," for influencing health sector performance: financing, payment, organization, regulation, and behavior. This approach emphasizes system-wide analysis of policies that affect health system performance, with an emphasis on realigning incentives to reward desired behavior. The HSA approach described in this manual draws from both of these frameworks.

Introduced by WHO in 2007, but emphasized in more recent WHO publications, is the importance of dynamic relationships among system components. Each building block by itself does not constitute a functioning health system; rather it is "the multiple relationships and interactions among the blocks–how one affects and influences the others, and is in turn affected by them–that convert these blocks into a system" (de Savigny and Adam, eds, 2009). Relations and interaction cut across not only the health system building blocks but also the different sectors and stakeholders that constitute the system. Further, not all functions are equal – some, such as leadership, pull the health system, while others, such as information systems, support the system in the delivery of services. Figure 1.4 illustrates the relationships among the building blocks.

Figure 1.1.2 Building Block Interactions

Health System Actors

An increasingly important aspect of the HSA approach is the concept of public-private mix. There is a growing body of literature on mixed health systems that recognizes the role of non-public stakeholders in the health sector and on approaches that leverage and harmonize private sector resources with those of the public sector. On the 25th anniversary of the Declaration of Alma-Ata[1], WHO acknowledged the growing trend in pluralistic financing and delivery of health services and products as governments seek to respond to "major modifications in the pattern of disease, in demographic profiles, in exposure to major risks and in the socioeconomic environment" (WHO 2003).

Many analysts have examined this public-private mix, but only in terms of service delivery. This ignores an important reality: private actors – from for-profit and not-for-profit providers and companies paying for health insurance, to civil society organizations representing consumer perspectives and many others – operate throughout the health system. Swanson, Bongiovanni, Bradley et al. (2010) stress the need for consensus on principles guiding HSS, recommending an integrated and holistic approach that "considers all system components, processes and relationships simultaneously" within the health sector and "develops long-term, equal, and respectful partnerships" between actors in the health sector.

The HSA approach identifies all relevant actors and stakeholders in each building block, as well as their roles and relationships (see Figure 1.1.3). Each stakeholder makes contributions that can be used to strengthen a specific building block and/or the overall health system.

[1] See WHO (1978) for a discussion of the declaration

FIGURE 1.1.3 RANGE OF PUBLIC AND PRIVATE SECTOR ACTORS THE HEALTH SYSTEM ORGANIZED BY THE SIX BUILDING BLOCKS

Therefore, each building block module contains indicators needed to assess the roles of relevant stakeholders in improving system performance. This HSAA manual looks at three major groups of health system actors: the public sector, the private sector, and communities and patients.

PUBLIC SECTOR

The public sector, also called the government sector, is a complex group of actors that includes Ministries of Health (MOHs), line ministries, and public servants. In most countries the MOH is ultimately responsible for carrying out the Essential Public Health Functions (EPHF). Although the specific EPHF can vary by country, according to a WHO study done in 41 countries (Bettcher, Sapirie, and Goon 1998) they generally include:

1. Monitoring, evaluation, and analysis of health status
2. Surveillance, research, and control of the risks and threats to public health

Figure 1.1.4 Structure of the Public Health Care System in Vietnam

Source: Oanh, Tien, Luong et al. (2009)

3. Health promotion
4. Social participation in health
5. Development of policies and institutional capacity for public health planning and management
6. Strengthening of public health regulation and enforcement capacity
7. Evaluation and promotion of equitable access to necessary health services
8. Human resources development and training in public health
9. Quality assurance in personal and population-based health services
10. Research in public health
11. Reduction of the impact of emergencies and disasters on health

Public health sectors may face many challenges in carrying out their essential functions. Some are internal, such as lack of financing, insufficient management skills, and insufficient controls against corruption. Others are environmental, such as changing epidemiologic and demographic trends and emerging diseases, new medical technology, and globalization (WHO 2003a).

Figure 1.1.4 shows the structure of Vietnam's public health sector as an example. The exact structure of the public health sector is different in each country, depending on factors such as political system, level of decentralization, and historical aspects. However, in most countries, as with Vietnam, the general structure includes a central level, a provincial/departmental level, and a district/municipal level, each with their associated functions.

PRIVATE SECTOR

Reliance on government health services alone is often insufficient for achieving improvements in health status indicators such as child mortality or the prevention of HIV/AIDS. The private sector is a key source of health services, and its coverage is rapidly expanding. In many developing countries, there is high utilization of the private sector for essential health services, even by those individuals in the lowest wealth quintiles (IFC 2007). Therefore, including the private health sector in the HSA promotes a complete and accurate understanding of a country's health sector.

The private health sector is typically described as comprising "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, Brugha, Hanson, et al. 2002). For the purposes of an HSA, the private health sector comprises both for-profit, commercial entities and not-for-profit organizations like nongovernmental organizations (NGOs) and faith-based organizations (FBOs) that engage in health care. Figure1.1.3 illustrates the range of prívate sector actors that may exist in a health system.

Private sector health care providers in developing countries deliver a variety of services in a variety of venues. Services may include those that are government and donor priorities, such as family planning, reproductive health, and treatment for HIV/AIDS, tuberculosis (TB), and malaria. Venues range from small to large: a practice might operate out of a single room in a provider's home or in a state-of-the-art clinic. Many larger companies, particularly those in mining, textiles, and agriculture, offer health care through workplace clinics. In most countries, the private pharmaceutical sector is the largest sub-group of private providers. In many developing countries, the not-for-profit private sector, such as FBOs, play an important role in providing essential services, particularly for the underserved populations such as impoverished and rural populations. Supporting these health care providers are services such as private laboratories and other diagnostic services, and pharmacies.

There is also a variety of private health workers. Formally trained and licensed private providers include doctors, nurses, midwives, and paramedical staff such as clinical officers and physician assistants. Private pharmacists and drug sellers are often the first-line providers in the formal health sector that serves people in poor and remote communities (WHO 2005a, IFC 2007). Often, the pharmaceutical market encompassing distributors, producers, and retailers is the largest subsector in the private health sector (O'Hanlon 2009).

The informal health sector consists of traditional healers, traditional birth attendants, indigenous systems medical providers, and market drug sellers. The informal sector is a significant, albeit not well documented, source of health care, particularly for rural and poor populations.

A substantial number of public sector health practitioners in developing countries also work for private clients during evenings and weekends. These providers constitute an important component that spans the public and private sectors, and their role could be an important consideration when assessing service delivery and human resources.

COMMUNITIES AND INDIVIDUALS

With their focus on the supply side of health care (service provision), the six building blocks do not always capture the importance of the demand side, which comprises communities and patients. Yet understanding the multiple roles of individuals and communities within the health system, as service providers and recipients, is important to understanding the system strengths and weaknesses. This section discusses the importance of demand-side actors, with the objective of encouraging HSA teams to consider these actors as they do the assessment and develop recommendations. To expedite this, community and patient inputs to the health system are examined in each of this manual's six building block modules; indicators are included to assess whether the role of communities and patients is effectively contributing to the performance of that building block.

The *World Health Report 2000* (WHO 2000) recognized the importance of people as financiers of care, as citizens with a role in health governance, as care providers, and as consumers, as illustrated in Figure 1.1.5.

FIGURE 1.1.5 MULTIPLE ROLES OF PEOPLE IN HEALTH SYSTEMS

Adapted from WHO (2000)

Communities and individuals can have roles both as service providers (community health workers, or CHWs) and as service recipients within a health system. The extent to which they are organized (as CHWs, patient advisory groups, professional associations, and so forth) and supported in those roles is closely interrelated to the performance of each building block and the overall health system. For example, promoting engagement of health care workers with patient advisory and civil society groups can contribute to higher-quality care, increased productivity, and lower attrition rates (Wellins, Bernthal, and Phelps 2005).

In its CHW Program Assessment and Improvement Matrix (AIM), USAID defines a CHW as "a health worker who performs a set of essential health services, who receives standardized training outside the formal nursing or medical curricula, and who has a defined role within the community and the larger health system" (Crigler L., K. Hill, R. Furth, et al. 2011).

For example, CHWs sometimes provide basic and immediate health services at the local level, but they also are trained to recognize serious health problems and when to advise community members to seeking health care, as well as to serve as patient educators and monitors. Their performance relies on well-designed training, effective supervision from periphery levels, and sufficient financing.

TIP

Community Health Worker

CHWs have many different titles and functions and can be effective in extending priority services.

An effective community mobilization strategy is equally important to engage target audiences to promote positive health practices and motivate them to use health services. Communities that are mobilized and organized are also better able to advocate for their priorities and needs as service recipients (Tedrow 2011). Community representation on village health boards or health center management committees can help to reinforce the accountability of the health system to the people it serves (USAID 2007). However, these objectives cannot be met if the structures are not functioning, or the community representatives are uninformed about health policies and issues. Even well-organized communities can become discouraged if it is not clear how to elevate problems beyond their dispensary or health center.

TIP

Community Mobilization

Community mobilization is a capacity-building process through which community members, groups, or organizations plan, carry out, and evaluate activities on a participatory and sustained basis to improve their health and other conditions, either in their own initiative or stimulated by others

Performance Criteria

While a basic understanding of the health system can be gained by examining the health system building blocks individually, a holistic view of the health system requires looking across the entire system, examining interrelationships and effects. One way of measuring overall system performance is by using the performance criteria suggested by WHO, listed in the text box and defined below.

Understanding the health policies of the national government, and its international partners, allows for informed development of advocacy for improved health care access, equity, and quality. The policies also affect the health workers' ability to deliver efficiently, thereby affecting the overall sustainability of the health system and its ability to function into the foreseeable future from a financial and organizational perspective. The overall outcomes of enhanced performance are improved health, responsiveness, and risk protection.

WHO Health System Performance Criteria

- Equity
- Efficiency
- Access, including coverage
- Quality, including safety
- Sustainability

Sources: WHO (2000, 2007)

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 to all services irrespective of provider 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 social health insurance 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 from all stakeholders and sectors used (or using the least resources to obtain a certain outcome). The two commonly used notions of efficiency are allocative and technical efficiency.

- **Technical efficiency** means producing the maximum possible output from a given set of inputs. It can be thought of as minimizing waste within a given approach – wasted time, money, or other inputs – or using new methods or technologies to combine the set of inputs in a more productive way.
- **Allocative efficiency** means allocating resources to the most cost-effective approaches and interventions – looking within and across programs – in a way that achieves the maximum possible overall benefit.

Access is a measure of the extent to which a population can reach the health services it needs delivered by either the public or private sector. 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 public or private health facility within a reasonable distance to a village is a 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, Hotchkiss, Bennett et al. 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.
- **Institutional sustainability** refers to the capacity of the system, if suitably financed, to assemble and manage the necessary resources to successfully carry on its normal activities in the future.

Notes

Module 2
About The Health System Assessment Approach Manual

This module describes the HSAA manual, its purpose and structure, and how to use the manual.

2.1 THE HEALTH SYSTEM ASSESSMENT APPROACH: A HOW-TO MANUAL

ABOUT VERSION 2.0

Since 2007, international interest in HSS has grown. This interest as well as the following developments are the reasons for updating the original HSAA manual:

- New tools, frameworks, and indicators have been developed and established within each of the health system building blocks.
- A broader audience is interested in assessing health systems and using the results.
- The use of the manual has generated lessons learned from application of the HSA approach in more than 25 countries.
- The users of the manual, those conducting the assessments themselves, have broadened to include a more diverse group.

Health Systems 20/20 has produced this Version 2.0 through a consultative process of reviewing the original manual, gathering expert opinions on the latest developments in HSS, compiling lessons learned from applications of the approach, and updating the text and formatting. The evolution of the HSAA manual since its inception is summarize in Figure 1.2.1 (See Annex 1.2.A for the full version).

FIGURE 1.2.1 THE EVOLUTION OF THE HSAA MANUAL

2005 2006 2007 2011 2012

Version 1.0	Version 1.5	Version 1.75
Angola Azerbaijan Benin Pakistan Yemen Malawi Ghana	S. Sudan Vietnam Namibia Nigeria West Bank Senegal Vietnam Cote d'Ivoire Lesotho Zimbabwe Angola Kenya Tanzania Guyana	Uganda Ukraine Mozambique Ethiopia St. Kitts and Nevis Antigua St. Vincent and the Grenadines Grenada Dominica St. Lucia Benin

At the same time, USAID is developing a similar approach to assess the private health sector called "Assessment to Action". These two efforts reflect not only a more holistic approach to health systems but a recognition that most developing countries' health systems consist of many actors, not only the MOH.

This HSAA manual, Version 2.0 serves to:

- Enable clients to assess a country's health system, possibly during development of a health program or sector plan; this assessment will diagnose the relative strengths and weaknesses of the health system among the different health actors, prioritize key areas for strengthening, and identify potential solutions or recommendations for interventions that build on the comparative advantages of both public and private health sectors
- Inform all stakeholders – both public and private – about the basic elements and functions of health systems
- Assist MOHs and international development partners to conceptualize key issues, and increase the use of health system interventions that involve all the relevant stakeholders in technical program design and implementation
- Inform MOHs, other public sector actors, private sector actors, and civil society entities on the relative strengths and weaknesses of the health system, priority issues, and potential solutions or recommendations for interventions and programs.

Version 2.0 of the HSAA manual incorporates:

- Lessons learned from application of the HSA approach in over 25 countries and private sector assessments in 17 countries
- Inclusion of health system actors from both the private not-for-profit and private for-profit sectors, in the HSA approach
- Inputs from subject matter experts, including new perspectives and tools for HSAs and HSS that have been developed in the past five years

The full manual and Health Systems Database can be accessed at http://www.healthsystems2020.org or http://www.healthsystemassessment.org.

ORGANIZATION OF THE MANUAL

The manual is organized according to the HSA approach process. There are four main sections:

1. Introduction to The Health System Assessment Approach and Manual: describes the HSA approach and how the manual is organized.
2. Conducting the Assessment: provides detailed description of each of the five steps in the assessment process. Templates, country examples, lessons learned, and references to relevant tools, all of which can be adapted for use in future assessments, are included in each module.
3. Guidance on Assessing Health System Building Blocks: describes the indicators that can be used to assess each of the health system building blocks. This section also includes country stories and templates.
4. Annexes: gives bibliography and supplementary material organized according to manual sections and modules.

The section modules can be downloaded separately at http://www.healthsystemassessment.org or http://www.healthsystems2020.org.

2.2 Using the Manual

The HSAA manual may be used in a number of different ways, depending on the goals of the user. The following describes how the manual might be used.

Users of the HSAA Manual

Funders of HSAs: This manual is a guide to what to expect from an HSA, in terms of methods and outputs, and describes how an assessment can be tailored to meet the funders' needs. It is recommended that funders review the manual in this order:

- Section 1: to obtain information on the underlying concepts and uses of an HSA
- Section 2, Modules 1 and 2: to learn about how to give direction to an HSA team, and the options available in the management and implementation of an assessment.
- Specific building block modules of interest (Section 3): to understand the level of detail and types of indicators the assessment team will review.
- Section 2, Module 4, and Section 3: to use the manual as a resource for the issues involved in the various health system building blocks, how the functions interact, and potential interventions to strengthen the system and address weaknesses that have broad impact on the functioning of the system.

Government organizations/MOHs: MOH staff can use this manual as a reference tool for understanding the health system components. They can also use the manual to judge whether an HSA will give them the type of information they are seeking. The manual explains the HSA approach and how it can be adapted to unique country circumstances (Section 2, Module 2). Illustrative examples of ideas for addressing common health system issues can also serve as starting point for strategic planning to address known health system issues (Section 2, Module 4).

HSA team leaders: HSA team leaders should read Sections 1 and 2 of the manual thoroughly. Section 1 describes how to use the manual and Section 2 details the steps in the HSA approach process; with this knowledge team leaders can best direct their team members to collect, analyze, and find cross-cutting health system issues. In addition, team leaders should make use of templates, guides, draft schedules, and guidance on issues to consider in planning and implementing the assessment, all found in Section 2 and in the annexes.

HSA team members: Team members should review all sections of the manual broadly to understand the HSA approach process and how the building blocks are related to one another. Team members should focus on the building block modules in Section 3 in particular and understand how to use them for data collection, building block analysis, cross-cutting analysis, and report writing. If team members are inexperienced with the analysis approach, then Section 2, Module 4, is critical.

FIGURE 1.2.2 STEPS IN THE HEALTH SYSTEM ASSESSMENT APPROACH

Source: O'Hanlon (2009)

Others interested in HSS methods, etc.: Anyone interested in HSS will find the HSAA manual bibliography a helpful resource; the indicator lists, references to other HSA tools, and HSS links found on the manual website (www.healthsystemassessment.org) are additional resources for those interested in HSS.

The HSA approach is flexible. Depending on client objectives, an assessment may encompass all modules for a comprehensive view of the health care system, or focus on selected modules. The HSA approach developed here will be most useful in countries where one or more of the following conditions apply:

- *The MOH and other stakeholders such as private and/or civil society actors are beginning a strategic planning process.* The assessment findings could contribute to or inform the country strategic plan.
- *The country is applying for grants or other funding.* The assessment findings could contribute to or inform their project's design, work plan, or both.
- *The country has not recently completed an HSA* (within the past two years). If a country has conducted a similar study recently, the need for another assessment is unlikely. If an assessment has not been conducted recently, then an assessment would be timely and useful.

Steps of the HSA Approach

The HSA approach includes a general description of the health system environment as a foundation, along with assessment of six health system functions (or building blocks) and general description of the private health sector using defined indicators and guiding questions. The HSA approach is summarized in Figure 1.2.2. The five steps of the HSA approach are described in detail in Section 2.

Developing a Health Systems' Country Overview (described in Section 3, Module 1) gives the assessment team an understanding of the country-specific contextual background; it should be completed before work begins on any of the remaining six technical chapters (described in Section 3, Modules 2 through 7). Each chapter is estimated to take three to four person-weeks to complete, depending on the information available for the assessment country. Multiple chapters can be completed simultaneously. The entire HSA can be accomplished in a concentrated period (10 weeks) or spread out over a longer period of more than six months.

It is important to involve in-country stakeholders in all steps of the assessment (see Figure 1.2.2) – from planning the work through conducting the assessment and disseminating and validating the findings and recommendations. (The full stakeholder participation guide, *Engaging Stakeholders in Health System Assessments: A Guide for HSA Teams* (Schalk-Zaitsev 2011), can be downloaded at http://www.healthsystemassessment.org.) A pre-assessment stakeholder meeting to define common objectives and identify specific areas of focus will maximize the use of the assessment outputs. Based on stakeholder interest, some health system functions, or elements within some functions, may require more or less attention. Section 2, provides detailed guidelines for planning and conducting the assessment.

Reading through all the modules of the manual before embarking on the assessment is recommended if possible. This step will facilitate understanding of the requirements necessary for appropriate assessment planning. It is important that all assessment team members read Section 2, Module 4, in addition to their own technical module(s) before starting the data collection and analysis. Section 2, Module 4, outlines the process of synthesizing findings, assessing strengths, weaknesses, and root causes, and prioritizing areas for action. It is important that the output of the assessment identify the key collective strengths and weaknesses of the health system, and not only the strengths and weaknesses of each individual system function.

2.3 TECHNICAL CHAPTERS

OVERVIEW OF HSA REPORT CHAPTERS

Implementing the HSA approach results in an assessment report, with chapters on each of the health system functions. Depending on the objectives of an individual assessment, all or some of the technical chapters may be used, although the overview chapter should always be used. Depending on the context, some areas within each technical chapter may be more important than others. Each technical chapter covers factors pertaining to both the public and private sectors of the health system. In addition, a chapter on the private sector may be included to highlight its role in the system. A brief description of each chapter is provided here. See Section 3 for more details.

- The **Country Overview** chapter covers basic socio-demographic and economic information for and an overview of the health system and the general health situation of the assessment 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.
- **Leadership and Governance** addresses the capacity of the government and other actors to formulate policies and provide oversight for the overall health system; stakeholder participation; and health system responsiveness, accountability, and regulation.
- **Health Financing** covers the collection of financial resources; the pooling and allocation of health funds, including government budget allocation and health insurance; and the process of purchasing and providing payments for health care.
- **Service Delivery** examines the factors that affect service delivery outputs and outcomes, including demand for services; development of service packages; organization of the provider network including public, private, and community-based providers; and management of health services including safety and quality, and the physical infrastructure and logistics of the system.
- **Human Resources for Health** covers systematic workforce planning, human resources policies and regulation, performance management, training/education, and incentives. This chapter also looks at the distribution of health personnel between the public and private sector and various subsectors.
- **Medical Products, Vaccines, and Technologies** evaluates the health system's pharmaceutical policy, laws, and regulations; selection of pharmaceuticals; procurement, storage, and distribution of pharmaceuticals; appropriate use and availability of

pharmaceuticals across sectors; access to quality pharmaceutical products and services in both the public and private sectors; and financing mechanisms for pharmaceuticals. Issues impacting the availability and quality of other medical supplies, equipment, and technology are assessed in this chapter.

- **Health Information Systems** 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.
- **Private Sector**. The role of the private sector should be woven into all of the previous chapters. Yet, it may be convenient and useful to discuss the role of the private sector across building blocks, including with a specific SWOT analysis, as a separate chapter so that users can access this information easily.

Building Block Chapter Components

Each building block technical chapter begins with a brief overview of that health system function that includes defining the functional responsibilities and key terminology, describing the relative role of public and private stakeholders in this building block, providing parameters to construct a profile of the subdimensions of the function, and highlighting key issues and recent global developments. This overview is followed by a description of the indicators used to assess various aspects of that technical function.

INDICATORS

To the extent possible, indicators are presented in a consistent format across modules. Each technical chapter is divided into topical areas, with common information presented first, followed by details for each indicator. Each of these chapters has one set of indicators based on readily available, internationally comparable data. This provides quick background information for the chapter. The data (with a listing of sources) are available online via the Health Systems Database, http://healthsystems2020.healthsystemsdatabase.org/.

In addition to the set of indicators based on internationally comparable data, there will be both quantitative and qualitative indicators (see Section 2, Module 4, and Section 3 for further details) organized by topical areas. This information is collected through country-level document review and stakeholder interviews. Subsections within each chapter provide an overview by topical area, along with suggestions of data sources and stakeholders to interview. Indicator tables are organized by topical area and include detailed description of each indicator, as well as key issues and questions related to that indicator.

The assessment combines a desk-based assessment of documents with stakeholder interviews to identify strengths and weaknesses in the technical area and relate them to health system performance. The stakeholder interviews complement the desk-based assessment, provide information on the health system performance indicators that cannot be obtained from document review, and explore possible recommendations.

2.4 OUTPUT OF THE ASSESSMENT

The output of this assessment should be:

1. An assessment report presenting key findings for each health system function, highlighting important strengths, critical cross-cutting health system weaknesses that limit performance, and recommendations for priority HSS interventions.

2. A stakeholder workshop for validating findings, identifying priorities, and discussing recommendations.

Recommendations should reflect priorities and objectives of key stakeholders, and should serve as the basis for a work plan for HSS. A supplementary guide to stakeholder engagement is available on the HSAA manual website (www.healthsystemassessment.org).

This step-by-step guide discusses how an HSA team can involve a wide range of health system stakeholders – government, nongovernmental and civil society groups, research and academia, and the private sector – throughout all phases of the HSA. It supplements the Health Systems Assessment Approach: A How-To Manual (Version 2.0), describing stakeholder engagement in greater detail than does the manual, and provides user-friendly job aids, tools, and guidance for each of the proposed methods of stakeholder engagement.

The HSA has been used by governments to create strategic plans, identify needed policy reforms, create improved health financing plans, and a host of other purposes. Donors and development partners have used the findings of the HSA to inform strategies, inform the design of HSS programs, and as a gauge to help monitor health system improvements over time. See Annex 2.1.A for a listing of documented uses of the HSA tool and outputs.

Section 2
Conducting the Assessment

The following modules describe a five-step process of conducting a health system assessment.

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Module 1
Step 1– Shape the Assessment

This module describes the conceptual foundations of health system strengthening and the assessment methodology.

FIGURE 2.1.1 STEPS IN THE HEALTH SYSTEM ASSESSMENT APPROACH

1.1 Identify Client Priorities

Typically, the MOH and/or a donor will request an HSA and will be the primary client(s) for the assessment. The first step in implementing the HSA is to shape the assessment through discussions with this client. This can be done by the team leader or by a senior manager if the team leader has not yet been identified. Discussions with the client should do the following:

1. **Define the specific purpose of each HSA and the kind of information it will provide the client.** The HSA tool is designed for a "generic" assessment – one that will accommodate any country. From there, a client and HSA organizers must collaborate on how an individual HSA will produce the information the client needs and modify the HSA approach to address these needs – while still couching them in the context of the overall health system. The client may have prepared a scope of work (SOW) document for the assessment or requested the assessment team to prepare one. Table 2.1.1 presents examples of assessment modifications. See also Annex 2.1.A, which shows country HSA objectives generally, and Annex 2.1.B. for options for HSA modifications that were presented in a specific country.

2. **Clarify how the HSA findings and recommendations will be used.** The HSA process has sometimes been done in conjunction with, and to inform, other activities in which the client is engaged (such as development of a health sector strategic and/or operational planning process), and/or as a baseline for HSS activities. These client needs should be identified and discussed early on in the HSA planning process to ensure that the structure and focus of the assessment reflect client priorities.

3. **Ensure that the MOH is aware and supportive of the HSA**. This is particularly important if the MOH did not request the HSA. MOH cooperation with and participation in the assessment process is essential for producing high-quality findings and recommendations that the government will accept and act on. Discussions between the MOH and assessment team should include topics such as the government's goals for the health sector and how the HSA might contribute to achieving these goals, the level of cooperation the HSA team will need from the MOH, and the types of outcomes the MOH expects. Even if the HSA's primary client is a donor, country ownership – as manifested in MOH support – increases the likelihood of recommended HSS interventions being funded and implemented.

4. **Identify recent country health sector studies** to ensure that this HSA does not duplicate those studies but rather adds value. The client may be able to inform the assessment team of such studies, or the team may identify them during its document review. It is important to agree with the client how the HSA will add value to any previous similar assessments.

TIP

Who's the Client?

The primary client is the organization that will use the HSA results. This may not be the organization that funds the assessment. It is critical to clarify and engage the client early in the HSA process so that the client can influence the needs and priorities of the assessment, and thus the design of the assessment and report.

Table 2.1.1: Sample Health System Assessment Variations and Rationales

Variations*	Rational
Variations in the level of application: • National level • Subnational level • Combination of levels	Most HSAs have been at the national level. A subnational-level assessment is appropriate in countries where the public health sector is very decentralized, where a national-level assessment has recently taken place (e.g., Nigeria, Vietnam), if there are areas of the country that require further investigation, if the country would like to investigate health disparities between regions, and/or if the country is considering programs in particular regions. See Annex 2.1.B for the HSA options presented to Kenya.
Variations in priorities • Health systems weaknesses • Service priorities	HSAs should be shaped to respond to client priorities and/or recognized areas of weakness in the health system, such as disease-specific areas. While HSAs can include these focus areas, findings should still consider how the broader health system influences these services and how disease- or service-specific issues impact the health system broadly. For example, the Ukraine HSA looked at HIV, TB, and family planning – within the context of the broader health system. The private sector is included in all HSAs, but in some cases, such as the HSAs done in six Eastern Caribbean nations, it has been given greater emphasis and consideration, including a separate summary chapter in the report.

Client involvement and stakeholder engagement:
• Variations in team compositions used:
  • consultant team (local and international)
  • mixed staffing structure (both consultants and clients)
  • client/target audience team (i.e., MOH team)
• Transfer of HSA skills to:
  • MOH staff
  • local organization
• Activities:
  • briefing meetings
  • stakeholder workshop
  • dissemination events
	Clients who are looking for an independent assessment or are unable to commit staff time to the assessment may prefer an all-external team. Some assessments, particularly those conducted for health partners outside the MOH, have benefited from teams of external consultants who are able to provide results quickly, ask probing questions, and provide objective recommendations. Clients looking to build the capacity of their staff to take on this type of assessment or monitor activities in the future may include their staff on the team and/or ask that their staff lead the assessment with the assistance of experienced consultants (e.g., Cote d'Ivoire, Guyana). See Table 2.1.2 for options for building local capacity to conduct HSAs.

Various methods used for stakeholder engagement: • Early identification and engagement of key stakeholders • Early consensus building on tools and process • Validation of findings and recommendations • Prioritization of recommendations	Different levels of stakeholder engagement (beyond inclusion in the assessment team) have been used in the planning, data collection, analysis, and dissemination phases. This can include identifying priorities and getting buy-in before the assessment begins, by involving stakeholders in the adaptation of the methodology, and through enhanced engagement during dissemination of results, prioritization of recommendations, and planning for implementation. See Section 2, Module 1, for a brief overview of stakeholder engagement in the HSA process.[a]
Variations in data collection methods and scope: • Key informant interviews • Focus group discussions • Surveys • Literature review: • Facility site visits • Stakeholder workshops	All the applications of the HSA methodology have included key informant interviews at the national level and most have included at least one or two targeted site visits to verify data collected at the national level. Some assessment teams have opted to do additional site visits or to vary the ways in which subnational data are collected, either by gathering additional information from stakeholders at the lower levels or by doing targeted data collection (e.g., Lesotho, Nigeria, and Vietnam). See Section 2, Module 3, for further guidance on subnational and facility visits.

Note:
[a] For a full description, see *Engaging stakeholders on Health System Assessments: A guide for HSA Teams* (SchalkiZaitsev 2011) at www.healthsystemassessment.org
* For the HSA reports referenced in this table, see www.healthsystems2020.org or www.healthsystemassessment.org.

5. **Define the structure and scope of the final assessment report.** The client and team should discuss and customize the structure and scope of the final assessment report. The draft report outline, incorporating the client's priorities, may be included in the assessment SOW. Note that among the technical chapters, the Country Overview is mandatory, although it may be customized to reflect client needs and the country situation. See Annex 2.1.C for a suggested outline for the final assessment report.

6. **Agree on deliverable timeline.** HSA report timelines have varied from submission of the first draft within the two-week data collection period to submission several weeks after the data collection period, the latter to accommodate additional data collection and analysis and/or stakeholder engagement. See Annex 2.1.D for a sample timeline (embedded in an SOW).

If the HSA team drafts the SOW, the client should do a final review of and approval of the document. Once it is approved, potential team members can be identified and the SOW shared with them so they know their role and tasks. See Annex 2.1.D for a sample SOW.

Explore Capacity Development Options

A common modification adaptation of the HSA approach is to add a capacity-building component to the implementation of an HSA. This is valuable, because when country stakeholders can regularly assess their health system, HSS is more sustainable. Table 2.1.2 presents options for developing the capacity of local stakeholders to conduct a HSA.

Table 2.1.2 Options for Developing Local Capacity in the HSA Approach

Option	Capacity Development Impact	MOH / Client Staff Time Commitment	Length of Time to Deliver Report[a]	HSA Example
1. External team only	Minimal. Exposure to HSA approach as a key informant and/or client	1-3 days each staff person for interviews and workshops	6 weeks	Angola
2. Joint external and local team conduct assessment	2 to 3 local team members will have some to full exposure	10-20 days each staff person	8+ weeks	Guyana
3. Local team trained by external experts and conduct assessment with minimal support	3+ local team members will have 1 full experience	20+ days each staff person	12+ weeks	Namibia
4. Local institution trained by external experts to conduct assessments with minimal support	Institution adopts HSA approach materials. 5+ staff trained and conduct at least one HSA	20+ days each staff person. Institutional leadership's commitment	12+ weeks	Vietnam

[a] Approximate number of weeks from the end of the country visit/data collection until delivery of the final report based on experiences of USAID's Health Systems 20/20 project (2006-2012).

For information on external support to conduct an HSA or to receive technical support to understand and implement the approach, contact Abt Associates Inc. at info@healthsystems2020.org.

1.2 Identify the Team Leader and Assemble the Assessment Team

HSA team members should be identified as early in the assessment process as possible. This can be done while discussions are ongoing with the client to clarify the priorities and scope of the assessment. Members of the assessment team should possess skills and knowledge that reflect the priorities of the client and objectives of the HSA. Table 2.1.3 summarizes the roles and responsibilities of assessment team members. It is recommended that a team comprise three technical experts in addition to the team leader, as well as an assessment coordinator (who may be one of the technical experts) and a local (in-country) logistics coordinator. At least one of the four technical team members should have private health sector expertise.

Once the team is assembled, the team leader assigns two modules to each technical team member based on his/her expertise and interest and taking into account the assessment's overall SOW. The team leader then prepares a SOW for each team member so that their roles are clear; the SOW covers their responsibilities for data collection, analysis, and report writing for their modules, as well as their participation in general team activities. See the Annex 2.2.B for a table that can be used to organize the team members' writing assignments.

TIP

Local Logistic Coordinator

Effective local (in-country) logistics coordinators play an important role in making an HSA successful. A good coordinator will save the team time in country by allowing the technical leads to focus on the technical aspects of their assignments, rather than on making appointments or arranging transportation. (See Annex 2.1.E. for Sample Logistic Coordinator SOW)

Table 2.1.3 Roles and Responsibilities of the Assessment Team

	Roles and Responsibilities	Tasks to Complete
Team leader	• Lead overall management of team activities, with clear performance expectations • Clarify the scope and timeline of HSA with client and team members • Ensure timely completion of the HSA within budget • Conduct data collection, analysis, and write 1-2 chapters of the assessment report • Lead team in synthesizing findings across modules • Review report drafts from individual team members and provide overall quality assurance for full report • Ensure external technical review of the report, and address comments from client • Deliver final report to client	• Identify team members, assign technical responsibilities, and lead team planning meetings, including meetings while in country • Prepare SOW for the assessment • Communicate regularly with client regarding scope, timeline, and progress including initial and final debriefings while in country • Establish protocols for interview note-taking, sharing notes among team members, and report format before in-country trip • Plan and conduct stakeholder workshop(s), with full team • Work closely with assessment coordinator and with in-country consultants to ensure smooth logistics throughout the process • Oversee production of report including editing, translation (if necessary), and layout and design
Technical team members*	• Conduct data collection, analysis, and write report section for 1-2 chapters within specified time • Ensure consistency of analysis, findings, and recommendations with other building block chapters and for overall health systems context in the country • Participate in all team meetings and stakeholder workshops • Support team leader as needed	• Review HSAA manual: Sections 1 and 2 and assigned modules in Section 3 • Review and analyze Health Systems Database <http://healthsystems2020.healthsystemsdatabase.org/> data for each chapter • Prepare for data collection: develop lists of documents, data needs, and potential interviewees for each chapter, based on information gaps • Review secondary sources before country visit; conduct in-country data collection and analysis, including travel within country as needed • Prepare zero draft of report chapter(s) before country visit; complete report chapter(s) during and immediately after country visit
Assessment team coordinator	• Support team leader in overall coordination of all team activities (as listed above) • Support HSA team to ensure timely completion of the HSA within budget • Could also be one of the technical experts on the team • Work closely with the local (in-country) coordinator	• Prepare the assessment logistics checklist and budget, and ensure team is following this (see Annex 2.2.4 for a sample logistics checklist) • Contract consultants and make travel plans • Work with team leader to arrange technical review (editing, translation (if necessary), and layout and design) of final report • Organize, with assistance of local in-country coordinator, any in-country dissemination events or stakeholder workshop (if needed)
Local (In-country) coordinator	• Support team leader in overall coordination of all team activities (as listed above) • Provide guidance to team on in-country protocols, including usual daily working hours (start, lunch, end), holidays, introductions, etc.	• Obtain documents and secondary data for team to prepare before country visit • Schedule key informant interviews, as specified by team leader with assistance from client, or in-country stakeholders • Contract local translator(s) to work with the team (if needed) • Make all local arrangements and transport for all in-country data collection and interviews • Make all local arrangements for stakeholder workshop(s) including invitations, venue, and meals
Technical reviewer	• As a health systems expert, provide an independent objective review of the draft assessment report	• Provide specific comments on the draft assessment report, so that authors can improve the quality of the report.

* Team members may include consultants and client or MOH staff with relevant technical expertise.

1.3 Agree on the Scope, Time Frame, and Dates of the Assessment

The final SOW will be influenced by the following considerations.

- *The number of assessment modules to be implemented* determines the overall level of effort (person days). It is recommended that all seven building block modules be covered (Section 3, Modules 1-7). Each will require 3–4 person-weeks to complete. This estimate is based on one week for preparatory work and report writing, two weeks for field work, and up to an additional week to finalize the chapter and participate in the analysis across modules and formulation of recommendations. It does not include travel time. Additional effort will be needed for editing, translation (if neecessary), and layout and design.

- *The number and capacity of people on the assessment team* influences the time required for the HSA, as does the expected level of engagement with stakeholders. If all seven building block modules will be implemented, a team of four is recommended, where the team leader covers one building block and each of the three team members covers two building blocks. Experience suggests that teams larger than four may need more time to complete the assessment and the report, given the additional coordination required. The expertise of the team members, availability of data, and type and level of final report requested will also influence the time frame. Finally, arrange editing, translation (if necessary), and layout and design, can add several weeks.

- *The level of client and/or stakeholder involvemen*t also influences the time line and budget. In several countries, the HSA included capacity building of local stakeholders to conduct this and similar assessments. Modifications like this increase both time and budgetary requirements.

- *The level of the assessment is another influencing* factor (see Table 2.1.1). In planning provincial- or district-level visits, the assessment team should consider site selection criteria in consultation with the client, an NGO, or other stakeholder; budgetary and time limitations; and additional preparation time to develop field questionnaires or discussion guides based on the building block chapters.

Based on the considerations listed above, the team leader will estimate the overall time frame and dates for implementation of all assessment steps and activities, including the team's organizational and logistical preparations, and each team member's preparation, field work, and post-field work activities.

1.4 Identify Relevant Topic Areas to Reflect Priorities of the Assessment

From the beginning, the team leader has been communicating with the client to identify the priorities, special needs, and specific areas of interest that will determine which building block modules and topic areas (within each building block module) require the most focus. It is generally recommended that the assessment include indicators from across all six building blocks to provide a comprehensive picture of the health system. However, the assessment can and should be tailored to the topic areas within each module that address the priorities and needs of the client. This early prioritization will focus the data collection and will provide more in-depth information for the indicators that are the most pertinent for the client.

1.5 Engage Stakeholders in the Health System Assessment Process[1]

Stakeholder involvement from all sectors in the HSA process from start to finish is critical to assessment accuracy and completeness, as well as use of its findings and recommendations for decisions and actions. Early on, the team should decide on the approach to stakeholder engagement that would be the most beneficial.

Who are the stakeholders?

- USAID in-country health team staff
- MOH: Minister, key officials, staff from planning, human resources, or other units
- Other ministries (e.g., local government, finance) or health-related bodies such as HIV/AIDS commissions
- Donors: World Bank, U.K. Department for International Development (DFID), Global Fund to Fight AIDS, Tuberculosis and Malaria, WHO and other U.N. agencies, others
- Coordinating bodies (e.g., Sector-Wide Approach, Country Coordinating Mechanism)
- Private sector commercial (for-profit) providers, multinationals or national corporations involved in health as funders or employers
- Professional associations, councils, and unions (e.g., for doctors, nurses)
- Licensing bodies and regulatory commissions
- Public service commission and regulatory agencies (e.g., for insurers, health professionals)
- NGOs, representatives of civil society, religious/faith-based organizations
- Academic or research organizations (e.g., schools of public health, institutes)

[1] See the supplementary guide *Engaging stakeholders on Health System Assessments: A guide for HSA Teams* (Schalk-Zaitsev 2011) at www.healthsystems2020.org or healthsystemassessment.org.

What are stakeholder roles on the HSA?

- Client, key decision maker, or user of the assessment findings
- Key informant to provide input into the assessment
- Partner or member of the assessment team
- Trainee to conduct future HSAs (see Table 2.1.2 on Capacity Development)

How can stakeholders be involved in the key steps of the HSA?

- Shaping the assessment: During this first step, reach agreement with the client on how stakeholders will be involved during the HSA process and document decisions in the SOW, the schedule of activities, and team composition.
- Mobilizing the technical team: The team may engage stakeholders during this step through conference calls or a pre-assessment visit to the country to determine how they would like to be engaged in the process.
- Collecting data: The team may conduct a launch workshop at the beginning of the field visit to give stakeholders an overview of the HSA approach and its outputs, and allow them to ask questions and suggest topics that they hope the HSA will address, which will guide the team's data collection. Local stakeholders may be included as team members, directly involved in data collection process. Members of the team who are local stakeholders can contribute to the team's discussions about the results of the HSA.
- Analyzing the data and developing findings: This step should begin while the team is still in country in order to involve key stakeholders directly in the analysis. A validation workshop can also be held to vet the findings and recommendations with stakeholders and revise them based on stakeholder feedback.
- Preparing and finalizing the report: Key stakeholders (MOH, USAID, others) are given time to review the draft report and provide input.
- Consultation: Establish working groups and/or forums for dialogue in order to involve all stakeholders in prioritizing recommendations and proposing next steps toward strengthening the health system.

Notes

Module 2
Step 2 – Mobilize Assessment Team

This module describes how the assessment team leader and team members initiate the implementation of the assessment.

FIGURE 2.2.1 STEPS IN THE HEALTH SYSTEM ASSESSMENT APPROACH

2.1 Customize the Logistics Checklist and Field Visit Calendar

A sample checklist of the preparatory tasks and logistical steps is presented in Annex 2.2.A. This checklist should be customized based on the priorities, resources, and time available for the assessment.

There may be only one field visit, during which data are collected, the assessment findings are presented, and the report is drafted. Alternatively, there could be up to three field visits: a pre-assessment visit, the data collection visit, and, weeks later, a third visit to present and discuss the report findings at a validation and prioritization workshop. Before field work begins, the team should consult with the client and others to identify the geographic focus of the assessment (if there is one) and/or the best locations for travel to gather provincial-level data. Clients, other contacts, and country reports may also provide information on key informants for the assessment. See Table 2.2.1 for an illustrative field visit schedule.

Table 2.2.1 Illustrative Schedule for the Field Data Collection (Including validation workshop during the current or a follow-up visit)

Sat	Sun	Mon	Tues	Wed	Thurs	Fri
6 AM: Arrival Team meeting with local consultant 1:00-5:00 to review interview schedule, documents collected, USAID meeting, get other guidance from local consultant	**7** Full-day team meeting to review zero drafts of chapters and prepare for data collection and/or launch workshop	**8** AM: Meeting with client to review schedule and prepare for data collection and workshops PM: National-level interviews AND/OR Launch workshop[a] Evening: Team check-in and write-ups	**9** Send invitations for stakeholders workshop National-level interviews including discussions with group of NGO representattives Evening: Team check-in and write-ups	**10** National-level interviews including discussions with group of private sector representatives Evening: Team check-in and write-ups	**11** National-level interviews Evening: Team check-in and write-ups	**12** Meeting with client re: info gaps and logistics for next week 2 team members do province visit and 2 team members continue national interviews Write-ups
13 Final drafts of each chapter by 5:00[b] OR Team meeting to review SWOTs, begin synthesizing findings across modules, and prepare for additional data collection	**14** Team meeting to synthesize findings across modules and distill conclusions and recommendations Write up options Send draft report to person doing quality review OR Additional national-level key informant interviews	**15** Team members split to visit 2 more provinces Evening: Team check-in and write-ups	**16** Conference call with person doing quality review to hear feedback on report Return from provincial visits	**17** AM: Team meeting to share info from provincial visits, revisit findings and recommendations Briefing for client on preliminary findings and recommendations for stakeholder validation workshop OR Additional national-level interviews	**18** Prepare for stakeholder validation workshop AND/OR Additional national-level interviews	**19** Stakeholder validation workshop OR Full-day final team meeting to formulate recommenda-tions and vali-date findings
20 • Write up results of workshop • Send latest draft of report to USAID mission within a week after departure				OR Finalize report after visit and return for validation and prioritization workshop		

[a] See Section 2.1.1 for more information on the types of and variations to stakeholder workshops used in the assessment process. If the HSA team decides a launch workshop would be appropriate and/or beneficial, the workshop invitation should go out at least a week before the workshop and official data collection should begin after the workshop.

[b] The second week in country will vary depending on client needs. Teams have typically either prepared and reviewed the first draft of the report to share with the client on the final day in country OR utilized the time to collect additional information and postponed validation for a second visit.

2.2 Prepare Assessment Budget

The budget should be estimated early in the planning process in order to balance assessment priorities with budget realities. Table 2.2.2 provides an assessment budget template. The team leader should track all expenditures to ensure that the HSA is completed within budget.

Table 2.2.2 Template Assessment Budget

Note: Additional lines and items can be added to this template as needed.

Line Item		Rate	Unit	Number of days (Level of Effort)	Total (Rate x Quantity)
Labor (add lines for as many people as needed)					
Name	Team Leader	$	/day	35 days	$
Name	Team Member	$	/day	30 days	$
Name	Team Member	$	/day	30 days	$
Name	Team Member	$	/day	30 days	$
Name	Team Coordinator	$	/day	10 days	$
Name	In-country consultant/ logistics coordinator	$	/day	15 days	$
Subtotal Labor					$ Subtotal
Travel					
Travel – airfare	Destination	$	/trip	4 fares at that rate	$
Per diem	Destination	$	/days	12 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)

2.3 Schedule and Conduct Team Planning Meetings

At the outset of the assessment, the team should meet to review the purpose of the assessment and the HSAA manual, and to assign responsibilities. SOWs for each team member should be reviewed. The assessment approach and the client's objectives should be discussed to make sure all team members have the same understanding of how the assessment is to be conducted and the purpose of the end product. See Annex 2.2.B for a sample team planning meeting (TPM) agenda.

By the first TPM, all team members should have done some research on their assigned chapter and/or building block. Each team member should have a good sense of the public documents and data that are available, and the documents/data that are still being sought, as well as a preliminary list of key institutions (if not individuals) at which to schedule interviews during the field work. At the TPM, the report outline, including writing assignments, internal deadlines for drafts, and numbers of pages per chapter should be decided.

A second TPM may be scheduled after the preparatory work has been completed and before field work. The focus of this meeting should be to review progress on compilation and review of documents, progress on writing the zero draft of each chapter, identification of information gaps, preliminary findings, and scheduling the field work. An early draft of the report should be prepared at this stage. See Annex 2.2.B for a sample report outline/table of report writing assignments.

TIP

Pre-departure Lessons Learned from Previous HSAs

- Communicate regularly (including phone calls) with client to build relationship and get country support for the HSA process.
- Establish a clear point of contact at the MOH for updates, information, and approval.
- Prepare as much background research as possible before reaching the country so that the team members arrive well-informed.
- Prepare a zero draft of the report. Zero drafts can help the team leader determine where the module leads are at in their preparation prior to departure. Sharing zero drafts among team members before departure encourages better overall understanding of the health system, understanding of knowledge/information gaps to be filled, as well as hypotheses to be tested, prior to arrival in country.
- Organize a team meeting four weeks in advance of field work for clarifying expectations and planning.
- Be careful to not underestimate the amount of LOE required particularly for the team leader, as he or she is responsible for the report in its entirety and may have to step in to produce missing pieces.

Module 3
Step 3 – Collect Data

This module describes how the assessment team collects data before and during the field work.

FIGURE 2.3.1 STEPS IN THE HEALTH SYSTEM ASSESSMENT APPROACH

3.1 Compile and Review Documents, and Create a Zero Draft

The HSA approach is a rapid assessment based on review of secondary data combined with interviews and discussions with key stakeholders. It does not include primary data collection.

COMPILE AND REVIEW DOCUMENTS

As early as Step 1, when the scope of the HSA is being shaped, the assessment team should begin to compile background information on the country, in particular all general health system documents they can find. (See an illustrative list in Annex 2.3.A.) Each of these documents must be properly cited in the bibliography of the assessment report so that the information contained is verifiable. The assessment coordinator should assist the team in overseeing the collection and distribution of resources by:

- Doing a literature search
- Requesting documents from the client and in-country contacts
- Saving and distributing files/resources to the team members by the first team meeting
- Preparing the reference list for the final report

In addition to helping collect the background documents, each technical team member is responsible for locating and reading documents relevant to his or her building blocks, and compiling a bibliography of all documents consulted. Based on this document review, the technical team members should complete a zero draft of their assigned chapters.

TIP

Resources to Consult

The HSAA manual building block modules in Section 3 describe the resources, indicators, and analysis involved in each of the six health system building block assessment report chapters. These manual modules can be downloaded at: http://www.healthsystemassessment.org

CREATE ZERO DRAFT

A "zero draft" is an early draft of a chapter or report. It can be as simple as an outline, with indications of the type of information that will be written under each subheading, or as "final" as a first draft that is only lacking some data and validation. In addition to helping guide the work of the technical team member who writes it, a zero draft is useful to the team leader and other team members, all of whom should review these drafts before the data collection field visit begins.

Zero drafts serve to:

- Identify, prior to the data collection field visit of the assessment team, information gaps and the types of key informants who can fill those gaps
- Highlight potential strengths, weaknesses, opportunities, and threats to be investigated in the field work
- Inform interview questionnaires, and the interview schedule itself if it is found that key information is needed that can only be located in country
- Update team members and the team leader on building block-specific information and issues
- Provide the team leader an early opportunity to assist and/or correct the course of a team member who may not be producing the product that the team leader expects
- Identify key informants. Based on information needs communicated by technical team members in advance of the field visit, the local logistics coordinator, perhaps with help from the client or key stakeholders, can identify and schedule the most appropriate persons to interview.

TIP

Key Informants

The generic titles of likely key informants are listed in the individual building block modules in Section 3; for example, information on health governance might be sought from:

- MOH leadership, staff from MOH planning and regulatory departments, Ministry of Local Government staff
- Senior public health facility staff (e.g., chief medical officer, head public health nurse, hospital administrator, district health manager)
- Staff of MOH schools of medicine, nursing, and public health
- Civil society

For a full list, see the "Stakeholders to Interview" subsection of each module in Section 3.

Country Story: Eastern Caribbean Countries

The eastern Caribbean island countries are all so small that the yellow pages have fairly comprehensive listings of the entire government and private health sector. By downloading the yellow pages from the Internet, external assessment team members were able to help the local logistics coordinator identify the right departments and individuals for interviews. Such an approach is not possible in a larger country like Nigeria or India! There, the team is much more reliant on the knowledge and contacts of the local coordinator.

3.2 Prepare a Contact List and Interview Guides and Conduct interviews

CENTRAL-LEVEL KEY INFORMANT INTERVIEWS

Central-level interviews focus on collecting information on the national health system. See Annex 2.3.B for an illustrative central-level contact list/interview schedule; it indicates the interviewee's position, and organization, the ideal interviewer(s), and the report chapters that the interview will inform.

As part of pre-field visit interview planning, team members should identify and prioritize the questions that are relevant for the persons they would like to interview. These should be outlined as formal discussion guides. (See Annex 2.3.C for a sample subnational discussion guide.) Such coordination among team members will help avoid duplicate questions being asked to the same individual and ensure that the sequence of the questions asked will be logical.

The HSA team members should do their best to accommodate interviewee schedule requests and be mindful of the interviewee's time constraints. Interviews should be limited to an hour in length to the extent possible. In no case should the team expect a single interviewee to sit for multiple interview sessions. Consolidating all the needed interviews into a single list prior to the field visit will enable the HSA team to identify overlapping information (and therefore interview) needs and to schedule interviews so that multiple technical team members will be able to attend the same interview. Alternatively, if multiple team members need information from the same individual but scheduling conflicts prevent all of them from attending, one team member can collect information on behalf of the other(s) and report the information collected back to the team.

This HSA manual assumes that the assessment team members have relevant field-based research experience, including interviewing skills. Nevertheless, Annex 2.3.D provides some basic points of interview techniques and etiquette for conducting a successful interview.

TIP

Use a Discussion Guide during an Interview

Discussion guides help you to

- Be courteous, keep interview length to under an hour
- Ask only about relevant issues
- Group questions by type of site/ interviewee
- Prioritize the questions
- Be flexible

See sample discussion guide in Annex 2.3.C

SUBNATIONAL FIELD VISITS

Subnational-level key informant interviews are intended to validate findings from the central level.

Subnational-level interviews follow much the same protocol as the central-level interviews: the local coordinator can help identify interviewees and schedule interviews with them, and team members should develop interview guides for the meetings.

TIP

DOING A SUBNATIONAL INTERVIEW

- Contact regional offices in advance of a site visit.
- Travel with a letter of authorization from the ministry.
- Plan the interview approach
  - Team members could separate to conduct interviews at more facilities
  - Interviews may be individual or group interviews
- Team members who travel to visit sites could collect data for the whole team.
- Diversify the type of facilities visited according to assessment priorities, such as: national, regional, and local; primary, secondary, and tertiary service providers; urban and rural; laboratories, pharmacies, medical facilities, etc.

Discussion guides for the subnational level are generally finalized after national-level key informant interviews take place (but prior to the site visits). This enables teams to identify key issues for further exploration and maximize their limited time with the informants.

DOING SUCCESSFUL INTERVIEWS

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 you to independently evaluate of the contents of the document and 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. *Different parties may perceive the same situation differently, and an individual informant may not perceive it accurately, for many reasons. For example, some informants may not be privy to what is actually happening, or may only feel comfortable speaking about the ideal, or the way things should be. For this reason, it is important to verify the same "facts" in multiple interviews.*

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, Feeley, Averbug et al. (2005)

Discussion guides should be site-specific. Annex 2.3.C contains, for example, discussion guides for interviews with a provincial or district health office and a health facility.

The HSA team should consider the following factors when planning site visits to regions:

1. Which and how many subnational (state, province, or district) representatives[1] should the team interview? Consider the size and geographic diversity of the country.

2. What is consider the locus of power/authority in the health system (provincial, district, or municipal level)? Subnational health authorities play a role in health system performance, even in the most centralized health systems. Based on the overall HSA objectives and the data gaps identified in the document review, what are the priority questions that the team is looking to answer through the interviews with subnational representatives?

[1] Depending on the organization of the health system, these representatives could include health facility directors, clinic managers, district health department chairmen, health facility staff, clinic staff, laboratory technicians, pharmacists, patient advisory groups, etc.

3. Which and how many health facilities should the team visit?[2] Consider the diversity of the country's health service providers (e.g., use Demographic and Health Survey [DHS] data on source of services) to determine the mix of public and private (NGO, religious, or for-profit) health facilities to be visited.[3]

4. Based on the overall objectives of the HSA and the data gaps identified in the document review, what are the priority questions that the team is looking to answer through interviews with facility representatives?

Table 2.3.1 shows the number of subnational locations and facilities visited during several past assessments, to give a sense of the range.

Table 2.3.1 Number of Sites Visited in Select Health System Assessments

USAID's Health System Assessment Approach				
Country	**Year**	**Audience**	**Objective**	**No. of subnational and facility visits**
Angola	2005	USAID	Inform health sector programming	3 provinces 6 facilities
Vietnam	2008-9	MOH, USAID	Provincial-level assessment for MOH policy reform and PEPFAR planning	2 pilot provinces 6 PEPFAR provinces 48 district and commune facilities
Cote d'Ivoire	2009	PEPFAR	Input for country action plan	None. Central-level MOH staff drafted technical chapters in writing workshops.
Kenya	2010	MOMS, MOPHS, USAID	Input for Annual Operational Plan and health policy reviews	3 provinces, 25 management teams/ facilities
Lesotho	2010	PEPFAR, MOHSW	Input for USAID PEPFAR planning and the MOHSW HSS plan	10 districts, 52 facilities
Guyana	2010	MOH	Input for ministerial and Global Fund HSS intervention planning	Capital plus 2 regions, 19 facilities
Ukraine	2011	USAID, Government of Ukraine	Inform U.S. Government programming	3 regions, 1 district, 1 city, 15 facilities

Note: MOMS=Ministry of Medical Services, MOPHS=Ministry of Public Health and Sanitation, MOHSW= Ministry of Health and Social Welfare

[2] The term "facility" can refer to medical centers, retail and public pharmacies, warehouses, laboratories, and other places where health services or products are delivered or handled.

[3] Note that the HSA approach methodology employs a qualitative approach to data collection through facility/ site visits. If the client or country stakeholders want a representative facility survey in order to obtain data for a quantitative assessment, there are well-known survey methodologies for this purpose, such as the Service Provision Assessment.

3.3 Organize a Stakeholder Workshop(s)

HSA teams should meet with stakeholders prior to and after the assessment is carried out, to inform and solicit their support and participation. The HSA approach recommends working with these stakeholders through three main types of stakeholder workshops, shown in Table 2.3.2. The team leader and client should decide on the number and type of stakeholder workshops that would be the most useful. A sample agenda for the launch workshop is included in Annex 2.3.E and is detailed in the supplementary *Engaging Stakeholders in the Health System Assessment: A Guide for HSA Teams* (Schalk-Zaitsev 2011) (http://www.healthsystemassessment.org). The validation and prioritization workshops listed in Table 2.3.2 are discussed further in Section 2, Module 5.

Planning the workshop(s) is the responsibility of the team leader, who should meet with the client before the workshop to review workshop objectives, agenda, draft findings, participant list, and logistics.

Table 2.3.2 Options for Stakeholder Workshops

Type of Workshop	Description	Attendees	When Held
Pre-data collection stakeholder workshop	• Small meeting that serves to orient local team members, who have not been intimately involved in the preparation stages, to the assessment methodology, roles and responsibilities, in-country data collection process, and (in some cases) the technical content being discussed. • May be a formal workshop, or simply a meeting of key individuals and the assessment team.	• Primary stakeholders, local team members and, potentially, individuals from the client organization who will be participating actively in the assessment.	• Before the field work is conducted.
Launch workshop	• Larger workshop used to orient key stakeholders who are external to the HSA team to the HSA approach. • Intended to introduce the assessment approach to a larger group of health system stakeholders, solicit input on the health system constraints and priorities, and ensure buy-in from local key informants.	• Key stakeholders who are external to the HSA team.	• At the outset of data collection field work.
HSA validation and prioritization workshops	• Used to (1) validate findings and recommendations after the report has been written, reviewed by in-country counterparts, and revised for formal dissemination to external audiences and (2) prioritize the recommendations for action. • Critical steps in moving assessment recommendations from suggestions to action • HSAs may include either a validation workshop alone or a prioritization workshop or both.	• Client and local stakeholders	• Can happen before HSA team leaves the country, following data collection, or during a second trip, after the report has been drafted or completed. • Generally occur after the report has been read by key ministry stakeholders and is approved for wider discussion.

TIP

Field Assessment Tips from HSA Approach Manual Users

- Identify an experienced team leader, who has read and understands the HSA approach, and who can do a good job providing guidance and facilitating group discussions.
- Hold regular debriefing meetings, as a team. Move beyond logistics discussions and get people linking ideas and sharing thoughts together early in the field work.
- Write up interview notes regularly (every 1-2 nights) and share with the team.
- Engage proactive and organized local coordinators and local technical experts.
- Present initial building block technical findings (SWOT) after the first week in-country in a team meeting.
- Hold regular debriefing meetings with local stakeholders (both formal and informal). Validate preliminary results and, later, hold dissemination event for the final report.
- Time is short – try to make appointments ahead of the field visit and give priority to the most essential interviews. This often entails holding meetings with national-level health authorities early in the assessment, then subnational, and other stakeholders.
- Don't leave the country without having gathered all supporting documents from local stakeholders. It is much easier to get them in person than through later emails.
- Celebrate your accomplishments together as a team, such as with a team dinner!

Notes

Module 4
Step 4 – Analyze Findings and Develop Recommendations

This module describes how data obtained in the assessment are analyzed within and across the health sector building blocks to develop key findings and recommendations to strengthen the health system.

FIGURE 2.4.1 STEPS IN THE HEALTH SYSTEM ASSESSMENT APPROACH

4.1 The Health System Assessment Approach Analysis Method

Most researchers are familiar with the databases used to enter and analyze quantitative data. HSA data, however, are largely qualitative and the methods used to analyze them may be less familiar. There are many qualitative data analysis methods; most include the following basic steps:

- Cleaning and organizing the data
- Coding the data
- Using various (electronic or manual) methods to look for patterns, clusters, categories, numbers of references to a particular issue, etc.
- Hypothesizing based on the patterns observed
- Validating results

What is Data Analysis?

Data analysis is a process that leads to evidence-based conclusions. It has been defined as follows:

"A breaking up, separating, or disassembling of research materials into pieces, parts, elements, or units. With facts broken down into manageable pieces, the researcher sorts and sifts them, searching for types, classes, sequences, processes, patterns or wholes. The aim of this process is to assemble or reconstruct the data in a meaningful or comprehensible fashion."

Jorgensen (1989: 107)

The HSA approach to data analysis is illustrated in Figure 2.4.2

FIGURE 2.4.2 HSA APPROACH TO ANALYZING FINDINGS

4.2 Review Existing Data and Code Information

The HSA analysis starts with the technical team members or other researchers gathering an enormous amount of information from secondary sources to inform the desktop review. This is best initiated by downloading the general country indicators and information sheets from the Health System Database (http://healthsystems2020.healthsystemsdatabase.org/).

Next, the researchers should gather data on the current status and functionality of the health system building block(s) to create building block(s) profiles. Section 3 includes detailed instructions for what sources and types of information to include in the building block profiles. In addition, each building block module contains specific suggestions on other types of documents the HSA team should look for. References in these documents will suggest still other relevant sources of information. Some information will not be available via the internet or other published sources and will need to be gathered directly during interviews with in-country counterparts.

What is Coding?

Coding is a systematic way in which to divide datasets into smaller, more "digestible" and analyzable units through the creation of categories and concepts derived from the data.

"At first the data may appear to be a mass of confusing, unrelated, accounts. But by studying and coding (often I code the same materials several times just after collecting them), the researcher begins to create order."

Charmaz (1983: 114)

Even as data collection continues, data "coding," or categorizing, needs to begin, as it will help to make sense of the extensive amount of information collected (Lockyer 2004). Coding facilitates the organization, retrieval, and interpretation of data, and it leads to conclusions and the development of theories based on that interpretation. One way to organize the data is by health system strengths, weaknesses, opportunities, and threats, as will be discussed below. Verbal interview data can be converted into variables and categories of variables using numbers, so that the data can be entered into spreadsheets for analysis.

The data collected about the health system/building block(s) being assessed will likely make reference to, or at least imply, strengths and weaknesses. Identifying strengths and weaknesses is the first step of a SWOT analysis – a SWOT analysis identifies strengths and weaknesses that are internal to a system and opportunities and threats from the external environment. Figure 2.4.3 describes each quadrant of the SWOT tool. This is Output 2 in Figure 2.4.2 above.

FIGURE 2.4.3. DESCRIPTION OF A SWOT ANALYSIS

	[Building Block]	
	Strengths	**Weaknesses**
INTERNAL	• Strengths are elements of the health system that work well, contributing to the achievement of system objectives and thereby to good system performance. • Examples are the existence of training programs to improve human resource capacity or strong facility-level data collection and reporting capacity. • Recommendations should build on the strengths of the system.	• Weaknesses are attributes of the health system that prevent achievement of system objectives and hinder good system performance. • Examples are lack of public health sector partnerships with the private sector, health worker dissatisfaction with salaries, or extensive staff turnover. • Recommendations should suggest how to resolve system weaknesses.
	Opportunities	**Threats**
EXTERNAL	• Opportunities are conditions external to the health system that can facilitate the achievement of system objectives. • Examples are planned increases in donor funding or the existence of a vibrant private health sector with which to form partnerships. • These factors can be leveraged when planning interventions.	• Threats are external conditions that can hinder achievement of health system objectives. • Examples are inadequate budget allocations to health or a currency devaluation that will depress health worker income. • Recommendations should suggest how to overcome these threats.

4.3 Triangulate SWOT and Identify Common Patterns and Themes

During the desk research phase, HSA researchers should flag issues that are mentioned repeatedly across data sources for each health system building block. Then, through "triangulation" and categorization, they should narrow and group their findings into strengths, weaknesses, opportunities, and threats – a SWOT analysis – that affect a building block's functioning. Figure 2.4.4, taken from a recent HSA report, lists 15 SWOT themes within the HIS building block. This is Output 3 in Figure 2.4.2 above.

Triangulation helps you narrow your analytic focus to a short list of predominant issue causes and results. Figure 2.4.4, taken from a recent HSA report, suggests as many as 15 SWOTs or themes be identified within each building block simply as an illustration of the narrowing of the researchers' focus to a smaller more succinct number of issues. This is Output 3 in Figure 2.4.2 above.

What is Triangulation?

Triangulation is a "method of cross-checking data from multiple sources to search for regularities in the research data." (O'Donoghue and Punch 2003:78)

Triangulation works because: "Just like multiple viewpoints allow for greater accuracy in geometry, (organizational) researchers can create more accurate hypotheses by examining relevant data from many different sources." (Kohlbacker 2006)

Figure 2.4.4 Sample SWOT on Health Information Systems, St. Lucia

Strengths	Weaknesses
• Electronic HMIS system has been purchased • Strong project management team leading efforts to roll out electronic HMIS • Routine reporting taking place across public health facilities, generating data • Good technical infrastructure in place across health facilities to support a new HIS hospital	• Limited staff to support needs of a nationally implemented electronic HMIS • Absence of unique patient identifier nationally limits capacity of HIS to track patients • Poor timeliness of data consolidation and dissemination limits effectiveness of data driven decision policy making • Limited funding to complete all projected phases of HIS roll-out
Opportunities	**Threats**
• Leverage the E-GRIP work plans and team to move the dialogue on a national identifier forward • Timely data from health facilities using the HIS increases the ability to drive demand for data • Leveraging fledgling telemedicine efforts at Tapion hospital promotes broader health improvement (internal and external to Saint Lucia)	• Weak functional specifications process at early stages of HIS acquisition limits ability to match functions to needs • Delayed focus on reporting capacity of the HIS may lead to further delays in consolidating data • Unknown data quality may weaken value of HIS rollout • Technical support requirements of the HIS will be beyond the manpower capacity of the HMIS unit

Source: Rodriguez, O'Hanlon, Vogus, et al. (2012)

4.4 Dig Deeper: Conduct Targeted Stakeholder Interviews

The processes of creating a zero draft and interviewing stakeholders were discussed above, in Module 3. As noted, filling information gaps in the draft was one purpose of interviews.

Interviews also can be used to advance the triangulation process and verify SWOT themes identified through triangulation. Interviewers should note different perspectives and attitudes that government, private sector, and civil society representatives may have about SWOT issues, and probe the reasons for those differences. In addition, interview discussions may yield new SWOT points, especially around issues that often are not documented, such as informal payments, governance, and new or changing strategies.

SWOT issues should be narrowed to those that local stakeholders feel strongly about or that seem to be having the most impact across all parts of the health sector. The result should be approximately 10 specific and verified SWOT points for each building block. Figure 2.4.5 shows an example of a SWOT table for the financing building block. It merges strengths and opportunities, and weaknesses and threats, as the two groups are interrelated. This is Output 4 in Figure 2.4.2 above.

Figure 2.4.5 Sample: Verified SWOT for Financing Building Block

Strengths and Opportunities	Weaknesses and Threats
• Availability of HCF strategic plan, legal, and operational frameworks • Implementation of HCF reforms • Initiation of risk pooling mechanisms • Ownership and commitment of government on Health Care Financing	• HCF strategy is outdated (1998) • Role of private sector in HCF not clear • Scaling up of CBHI and financial sustainability of risk pooling mechanisms is an issue • Absence of institutionalization of resource tracking mechanisms • Waiver is not effectively implemented in all region

Source: Unpublished PPT from North African HSA Debriefing Meeting

4.5 Team Meeting: Comparing Building Block Issues to Discover Cross-cutting Themes

Analyzing findings across building blocks assessed works best as a team exercise. This is a major task that results in:

- Compilation of the most important findings obtained from the individual building blocks
- Synthesis of the results in a way that can be communicated clearly to others
- Identification of potential recommendations for action or intervention

Cross-cutting building block analysis should begin after all team members have collected at least enough data to arrive at preliminary SWOT issues for their building blocks, about halfway through the team's in-country trip.[1] Starting the analysis mid-way through the visit enables team members to use the remaining week to fill any new information gaps, validate initial conclusions and recommendations with stakeholders, and receive feedback – as well as complete their originally planned tasks – before leaving country.

Table 2.4.1 provides an example of how the 2010 Guyana HSA captured cross-cutting issues. The table identifies the issues by technical area and organizes them by where the challenge originates and intersects with other health system building blocks. That is, each row summarizes the cross-cutting findings for a specific building block. The columns identify how these issues impact other building blocks. For example, in the governance component (first row), one issue is that regional health spending may not be aligned to the health budget. This is first a governance issue in that regional structures allow spending to be allocated away from health; because the issue manifests in health spending (or lack thereof), it intersects with health finance (second column).

[1] This timeline assumes that the assessment is conducted by an international team that makes one in-country trip of about two weeks. If the assessment is conducted by a local team or the assessment team agrees to produce the report after the in-country data collection, the same sequence can be stretched over a longer period.

TABLE 2.4.1 KEY ISSUES AFFECTING THE BUILDING BLOCKS FROM GUYANA HSA 2010

Source of Issues by Building Block	Key Issues Affecting the Building Blocks					
	Governance	Financing	Service Delivery (SD)	Human Resources for Health (HRH)	Pharmaceutical Management	Health Info System (HIS)
Governance		Spending on health in regions may not be fully aligned to the health budget and resources for health may be appropriated for other uses (4.3.1)	Service agreements do not always ensure accountability (8.2.1; 3.4.2)	Management capacity at the regional level is weak (5.4.5)	Lack of data on availability of medicines and medical products across facilities/ regions affects informed planning (6.7)	Limited use of existing health surveillance data for planning and policy making (7.12)
Financing	Limited coordination among key stakeholders affects resource allocation across regions and disease-specific programs (3.3.2)		Free services imply no revenues at facility level, making needs-based budgeting and financing important (8.5)	Lack of trained staff and management capacity means that budgets are not always based on needs analysis (4.3.1)	Donor-supported medical products and medical supplies may require government resources for distribution (6.5)	Limited use of HIS in budgeting and financial planning (7.12)
Service Delivery	Relevant policies are in place but not fully implemented (3.6)	Significant funding for HIV/ AIDS, relative to other disease priorities, supports improved service delivery Little or no financial incentives at facility level to improve quality of service delivery (4.4)		HRH shortage hinders the full implementation of the PPGHS, particularly in rural areas and at the primary health care level (5.2.5)	Transportation and general infrastructure challenges limit access to supplies and medicines, particularly in rural and hinterland areas (6.6)	Limited availability of data to monitor quality, efficiency, and use of services (7.12; 8.5)
Human Resources for Health	Training, staff allocation, and hiring are inadequately coordinated across the range of stakeholders involved (3.3.2)	Little or no financial incentives for health workers to serve in country after training or to serve in rural areas (4.4)	Worker motivation is adversely affected by working conditions, including poor incentives and infrastructure (5.2.2)			No comprehensive HRIS – limited use of data in planning for and allocating HRH (5.2.3)
Pharmaceutical Management	Coordination among key stakeholders is needed to develop systems to effectively allocate medical supplies across regions and diseases (3.3.2)	Lack of needs-based budgeting and financing for drugs and medical supplies across regions and diseases (4.3.1)	Prescribing practices are not standardized and comprehensive standard treatment guidelines are not finalized (6.4; 8.7)	Shortage of pharmacists can lead to unqualified personnel dispensing medications (6.8)		Electronic records maintenance is weakened by a lack of computers at public facilities (7.9.1)
Health Information Systems	Lack of coordination among key stakeholders affects development of HIS structures (3.3.2)	Funding for HIS is insufficient, including for data collection and analysis, especially at regional levels (7.3)	Data capture is driven by vertical programs (8.4.5; 7.12)	Poor HRH capacity to collect, compile, and analyze data, particularly in rural and hinterland areas (7.12)	Data on supplies and availability of medicines and medical products is not consistently available from all levels (6.7)	

Source: Health Systems 20/20 and Guyana Ministry of Health (2011)

Root Cause Analysis

HSA team members should think through the underlying causes of the SWOT points of each building block. This root cause analysis helps to generate hypotheses about what is causing the health system problems and how they relate to one another; such analysis also helps to broaden the thinking about issues and look beyond a single cause. Root causes are best defined as problems that can be addressed through specific and feasible interventions. For example, "insufficient supervision" or "lack of training on topic X" might be a root cause (say, of poor health worker performance), whereas "poverty" is not.

There are many techniques for doing root cause analysis, as discussed in Massoud, Askov, Reinke, et al. (2001). One technique is doing a "cause and effect" or "fishbone" diagram. At a minimum, team members should consider for each weakness, "Why does it exist," and then for each reason, "Why does that situation exist?"

TIP

Cause and Effect Analyses

For more information on root cause and other cause and effect analyses see the Health Care Improvement Project Website:

http://www.hciproject.org/improvement_tools/improvement_methods/analytical_tools/cause_effect_analysis

Figure 2.4.6 Root Cause Analysis Using a Fishbone Diagram

Source: Health Care Improvement Project: http://www.hciproject.org/improvement_tools/improvement_methods/analytical_tools/cause_effect_analysis

The next step is to begin to formulate overall recommendations based on the SWOT and cross-cutting analyses. The results of the donor mapping exercise (Chapter 1 of assessment report) should also be considered when identifying gaps and opportunities. Some recommendations may apply to a single health system building block; others may cut across components.

Each building block-specific recommendation should:

- Link directly to a health outcome or result and client objectives and/or country sector strategy[2]
- State whether it applies to the national or regional level
- Describe whether they are for immediate- or long-term action

[2] If the MOH is the primary audience, for the HSA, recommendations should be linked to objectives and strategies outlined in MOH policy documents.

- Where possible, provide an actionable example or two on how to implement the recommendation

Cross-cutting recommendations should:

- Include specific action items delineated by building block so that specific MOH departments and/or other stakeholders will take ownership of recommendations
- Address the client's priorities
- Include a short explanation of the challenges underlying the issue being addressed by the recommendation
- Describe how this recommendation could create broad, effective, and sustainable results

Suggested Team Meeting Plans

The tasks described below constitute a format of a half-day to a full-day HSA team meeting for discussing initial findings among team members and synthesizing conclusions across building blocks. This meeting ideally occurs at the end of the first week of in-country data collection.

TIP

Synthesizing Cross-cutting Issues

Intense focus on completing individual building blocks can make it a challenge to move quickly to integrating and synthesizing across building blocks. 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 findings of issues and problems

Task 1: Each team member should report out for 10–15 minutes on findings for each of his or her building blocks while other team members capture their ideas electronically and/or on a flip chart. Each team member's report-out should include:

- Main findings regarding the current status of the building block area(s), including 10–15 SWOT issues and their impact on health system functioning overall
- Initial thoughts on the underlying causes of the SWOT
- Initial thoughts on recommendations and their rationale
- Discussion at the performance criteria level: how do the SWOT issues identified contribute or detract from achieving better performance for each of the performance criteria? One approach used by HSA teams in the past is to re-group SWOT issues according to their impact each of the health system performance criteria:
    - Equity
    - Access
    - Efficiency
    - Quality
    - Sustainability

Task 2: Based on the building block-specific conclusions presented during the report-out, the team identifies and summarizes the cross-cutting areas with the other building blocks to determine whether or how these problems are connected and how they affect health systems performance.

Task 3: Generation of building block-specific and cross-cutting recommendations is preliminary at this time, but ideas should be discussed as a group and organized in a summary document that can later be presented to stakeholders for validation. Examples of recommendations can be found in each building block module (3.2-3.7) in the table labeled "Illustrative Recommendations for Strengthening [specify building block]." Examples of actual impacts resulting from country interventions are listed in Annex 2.4.B.

Task 4: After the team discussion of preliminary recommendations, members should make a list of additional information, validation, or discussion needs and assign team members to address these needs before the end of data collection.

After collecting the additional information, the team should meet again. During this important second meeting each team member should update the team on his or her conclusions and recommendations for each report chapter. Using the new information, the team should review the preliminary health system conclusions and recommendations, and discuss and analyze potential implications of the final findings and recommendations. In particular, they should note any political sensitivities and think about how best to address these in the report, stakeholder workshop, or other debriefings.

TIP

Team Analysis Exercise

Working as a team to fill out a blank version of Table 2.4.1 can be a good exercise for organizing and examining cross-cutting health systems issues.

Notes

Module 5
Step 5 – Prepare the Assessment Report

This module describes the process of preparing, vetting, and finalizing the assessment report.

FIGURE 2.5.1 STEPS IN THE HEALTH SYSTEM ASSESSMENT APPROACH

5.1 Draft the Full Assessment Report

The HSA team lead will need to provide the technical team members with guidance on the structure of the assessment report and the date by which the first drafts of the chapters should be completed. It is important to ensure consistency in the structure of the building block chapters. For example, including a SWOT analysis summary box and a short list of topic-specific recommendations at the end of each building block chapter is useful. Step 1 provides a sample report outline (see Annex 2.1.C) that details all the sections that the person compiling the report (generally the assessment coordinator) should be aware of.

Some HSA teams choose to revise and update the zero drafts of chapters into first drafts while in country so that they can present preliminary findings at a stakeholder validation workshop immediately following the in-country data collection process. Other teams use all the time in country for data collection and draft the report after the trip, in which case a representative of the team returns to do the validation workshop at a later date. If the assessment team does not complete the first draft while in country, the team leader should ensure that all draft chapters are completed and submitted for compilation into the full report within two weeks of finishing data collection.

After the in-country data collection process and pre-departure debriefings of stakeholders, the team should hold a final team meeting to incorporate feedback from the debriefings into the draft assessment conclusions and recommendations. Team members must judge which feedback to incorporate, weighing the feedback against (1) client priorities, (2) historical information, (3) reliability of stakeholders' data sources, and (4) other evidence.

Once the first draft is completed, the HSA team should ask a technical reviewer external to the team to review the draft. This person may be from the same organization as the team or from another organization (such as a another international development partner), but should be a health systems expert who can do an independent, objective review from another perspective, providing comments that will allow the report authors to improve the quality of the report content. The external technical review (and author response) is done before the the team shares the report with the MOH, the client (if different from the MOH), and other key stakeholders involved in review and approval. (See also Table 2.5.1 for an overview of the review process.)

The entire first-draft review (including writers' response to review comments) process will likely take 4–6 weeks. The report can then be edited before its submission to the client for approval and dissemination. However, as discussed in the next step, it may be preferable to keep the report in draft form until after the validation workshop.

TIP

Report Findings Should Be Balanced

An overly negative tone is counterproductive. When drafting the report, team members should take care to discuss strengths and opportunities as well as weaknesses and threats. In addition, local political will and sensitivities should be considered to ensure that the assessment findings and recommendations will be useful to inform policy making and implementation.

5.2 Validate Findings and Conclusions with Local Stakeholders

Validation of findings is necessary to ensure broad ownership of and action on the report findings and recommendations. For this reason, it is recommended that teams hold a formal validation workshop with stakeholders, either at the end of data collection or during a post-assessment visit, depending on client needs, scope of the assessment, and/or budgetary constraints. It may also be useful for the team to debrief and discuss the findings and preliminary recommendations with key individuals, either with donor groups or in the MOH, or other key partners such as professional medical associations or private sector leaders, while in country for the data collection process.

The specific objectives of the validation workshop are:

- Review the assessment findings and recommendations
- Create opportunities for dialogue and collaboration among stakeholders from diverse sectors (both public and private)
- Identify the synergies between recommendations in different building blocks and between sectors
- Revise the recommendations based on feedback from stakeholders

The target audience for the validation workshop should be public and private sector stakeholders who participated in the development of the assessment findings, stakeholders who will lead implementation of the recommendations, and donors that are likely to fund recommended interventions.[1] Participants are asked to determine if the recommendations are consistent with the findings and if any recommendations need to be revised or added. Annex 2.5.A contains a suggested workshop agenda.

It should be noted that while there will be a brief presentation of findings and recommendations at the beginning of the workshop, most of the workshop time will be devoted to discussion of the recommendations. Therefore, each workshop invitee should receive a copy of the HSA report beforehand and should arrive at the workshop familiar with the report contents.

[1] Stakeholders are likely to come from the MOH, other ministries, the private sector, commercial entities, professional organizations, NGOs, and USAID and other donors.

5.3 Finalize Report and Recommendations

The report finalization process varies from country to country depending on client needs. When the assessment team leader returns to the country for a formal validation workshop, generally the MOH would like to review and approve the draft report before the workshop. It is suggested that the report remain in draft format until after the workshop, so that workshop comments can be incorporated. The report should then be finalized and disseminated.

Country Story: An East African Country

The HSA went very smoothly, with strong leadership and hardworking, responsive consultants. The team wrote the report and review was completed in an unusually short time. A large validation event was planned, in anticipation of which the draft report was disseminated to many stakeholders. Inadvertently, the news media obtained copies. The publication of preliminary findings elicited political sensitivities that forced postponement of the validation event until the government could review and approve the findings. In the end, report findings and recommendations were accepted by stakeholders and clients alike.

In highlighting the strengths and weaknesses of a health system, an HSA report may touch upon sensitive issues. Therefore, it is important for the team to recognize early on the politics involved and build in enough time for the team lead to discuss findings with political authorities and deal with the political sensitivities before the report is released.

5.4 Prioritize Recommendations with Local Stakeholders

In addition to validating recommendations, stakeholders may be engaged to prioritize the recommendations. The benefits of a prioritization exercise is to provide for:

- An agreed-upon priority of recommended interventions developed by those who know the health environment best
- Commitment and buy-in of key stakeholders to proposed interventions based on the HSA research results
- Agreement on a process for moving forward

The exercise is most frequently combined with the validation exercise. The country context and the preferences of the MOH and other key stakeholders may dictate that prioritization is not necessary or beneficial for the country at the time the HSA finishes.

The proposed prioritization method is based on key criteria that are practical in nature and include importance, feasibility, risk, affordability, duration, and impact of proposed interventions. Annex 2.5.A provides a sample agenda and plan from a validation and prioritization workshop that was held in a sub-Saharan African country. Additional tools for conducting validation and prioritization workshops can be found in a separate guide for stakeholder engagement (http://www.healthsystems2020.org/content/resource/detail/82437/), which includes detailed designs for the facilitating the workshops. The Private Sector Assessment Guide *Assessment to Action* (www.shopsproject.org) is also an excellent resource for information on a participatory assessment approach.

5.5 Conclusion

Table 2.5.1 provides an overview of the HSA report preparation and review process.

Table 2.5.1 HSA Report Review and Revision Process

HSA Team incorporates relevant findings and reviewer feedback to create[a]:	Due Date	This reviewer provides feedback:
Draft 0: Building block chapters; chapter on cross-cutting findings	Pre-field assessment	Team leader
Draft 1: Building block chapters; chapter on cross-cutting findings	Immediately post-data collection	Team leader
Draft 2: Building block chapters; chapter on cross-cutting findings; executive summary; conclusions and recommendations	Approximately 2 weeks post-data collection	Team leader (and optional stakeholder validation workshop)
Draft 3: All sections drafted and organized; including front matter, references, and attachments	2 weeks after draft 2	Technical reviewer[b]
Draft 4: All sections consolidated	1 week after draft 3	Editor and team leader (may include several rounds of editing/discussions/ Q&A)
Final Draft #1	1-2 weeks after draft 4	Client and local government stakeholders
Final Draft #2	TBD	Editor and team leader (may include several rounds of editing/discussions/ Q&A)
Final HSA Report - Complete	TBD	

Note: Q&A=question and answer

[a] Individual assessment team members address and/or incorporate feedback and comments into their respective chapters. The assessment coordinator consolidates chapters into one draft report and provides support to the team members and leader throughout this process.

[b] The technical reviewer (and other team member) roles and responsibilities are described in Section 2, Module 1, Table 2.1.3.

Notes

Section 3: Guidance on Assessing Health System Building Blocks

The modules in this section describe the indicators that can be used to assess each of the health system building blocks.

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Module 1: Country and Health System Overview

This module describes the country-specific background information that is included in the overview chapter of the Health System Assessment report.

FIGURE 3.1.1 IMPACT OF BUILDING BLOCK INTERACTIONS

Introduction

This module helps the team leader and assessment coordinator understand which background information to gather about the HSA country and its health system.

The Country and Health System Overview is the background or foundational chapter of the assessment report. Ideally, the team leader will write or assign someone to draft this chapter before the in-country visit. All technical members of the HSA team should read the chapter so they understand the overall health system context, before starting for their individual building block analyses.

This module looks at how the HSA approaches the country and health system overview:

- Subsection 1.1 defines issues affecting the health system.
- Subsection 1.2 examines general health conditions in the research country.
- Subsection 1.3 describes assessment indicators.
- Subsection 1.4 describes strategic planning.
- Subsection 1.5 explores key issues related to donor support to health system strengthening.
- Subsection 1.6 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

1.1 ISSUES AFFECTING THE HEALTH SYSTEM

The overview should include a discussion of the key opportunities and challenges facing the health system. Most countries discuss these challenges in their MOH statistical bulletin, health system strategy, or other planning documents, so the HSA team can identify the challenges during the desktop review of secondary source materials.

The issues generally can be grouped into the following categories:

- Health issues
- Systemic issues
- Political/policy issues

HEALTH ISSUES

To understand the general health status in the study country, the HSA team should identify the following:

- Major causes of mortality and morbidity: List the 5-10 main causes of mortality and morbidity for the country. (As noted above, these can usually be found in MOH documents.) See Table 3.1.1 for an illustrative list, from the Guyana HSA report.

TABLE 3.1.1 MAJOR CAUSES OF MORTALITY IN GUYANA, 2008

Cause of Death	Rank	Total	Rate (per 1,000 population)
Ischemic heart diseases	1	631	0.8
Cerebrovascular diseases	2	567	0.7
Neoplasms	3	469	0.6
Diabetes mellitus	4	426	0.6
Hypertensive diseases	5	309	0.4
HIV disease (AIDS)	6	239	0.3
Intentional self-harm (suicide)	7	169	0.2
Heart failure	8	165	0.2
Acute respiratory infections	9	161	0.2
Cirrhosis and other chronic diseases of the liver	10	132	0.2
Land transport accidents	11	125	0.2
Assault (homicide)	12	118	0.2

Source: Health Systems 20/20 and Guyana Ministry of Health (2011), using data from the MOH 2008 Statistics Bulletin

- Diseases that have the highest disability adjusted life years (DALY).[1] List the 5-10 diseases that have the highest DALY rates. If you want to compare the rates with those of other countries, use the age-standardized DALY rates.

Patterns in the burden of disease also can be noted, so that the team can begin to identify priorities for research and affected populations, especially for HIV/AIDS, malaria, reproductive health, and child health. It can be helpful to extend the data analysis by sex and age groups, and by rural versus urban areas. The accompanying text box shows an analysis done by the HSA team in Benin.

Knowing the main causes of mortality and morbidity is important for developing and prioritizing HSA recommendations. While the HSA approach does not have a disease-specific focus, it may be necessary to address such issues, based on client priorities. For example, the Guyana HSA showed that chronic diseases are a particular reason for concern, and this led to a recommendation to extend clinic hours to serve patients better.

[1] 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.

Benin HSA: Main Causes of Morbidity and Mortality

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: Systeme National d'Information et de Gestion Sanitaire (SNIGS) des etablissements du secteur public et de certains etablissements prives 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	Diarrhea	Malaria
Injuries	Cancer	Malaria	Cardiovascular diseases
HIV/AIDS	Malaria	Injuries	Diarrhea
Cardiovascular diseases	Injuries	Diarrhea	Injuries
Neuropsychiatric conditions	HIV/AIDS	Perinatal conditions	HIV/AIDS
Diarrhea	Diarrhea	HIV/AIDS	Cancer
		Neuropsychiatric conditions	

Source: Translated from Adeya et al. (2006)

Systemic Issues

Systemic issues are country specific and affect the whole health system. Systems constraints include the following:

- The degree to which the business environment enables private sector enterprises and service providers to operate
- The capacities of public, private, and civil society organizations to strengthen the health system
- The adequacy of human resources in the health system
- The prevalence of informal payments and/or corruption

The first two of these systemic issues are discussed below. Adequacy of human resources and issues like informal payments are discussed in later modules. See Annex 2.4.C for specific examples of systems constraints.

ENABLING BUSINESS ENVIRONMENT

The HSA team should identify systemic issues that affect sustaining and expanding the overall private sector, such as barriers to private investment and enterprise growth. Research indicates that in many countries, private for-profit health providers are an effective alternative to public sector facilities that lack trained health personnel, essential medicines, or equipment and supplies; in such settings, there is high utilization of the private sector for essential health services. In addition, businesses may provide health services for employees directly or by contributing to health insurance or other financing mechanisms. An environment that is conducive to private sector development can facilitate the expansion of private health service delivery.

The World Bank/ International Finance Corporation (IFC) Enterprise Survey and Doing Business websites offer information on the business climate in 183 economies, in particular the ease of starting, running, and exiting a business. More specifically, Enterprise Survey reports (http://www.enterprisesurveys.org/) give a snapshot of the investment climate of individual countries and comprehensive economy-specific reports. Doing Business reports (http://doingbusiness.org/) rank the economies on the ease of doing business there.

A review of these reports will enable the team to identify the major barriers to doing business, which ultimately may be limiting the private delivery of health services. The team can confirm the barriers during in-country interviews with private health sector actors such as the following:

- Private companies and health care providers
- Chambers of commerce
- Business associations

- Bank managers (specializing in small and medium enterprises)
- NGOs and FBOs (for informal sector and community organizations)
- IFC representative
- Economic Growth Division of the USAID mission in the HSA country

HSS CAPACITIES OF PUBLIC, PRIVATE, AND CIVIL SOCIETY ORGANIZATIONS

The success of HSS activities depends to an extent on the capacity of the organizations that might contribute to strengthening the health system – and not just in terms of providing health care. Without local capacity, HSS efforts will rely on international sources of assistance, which are more costly and lack the same degree of local ownership. The information collected for this section will inform how fast interventions can be implemented and suggest interventions aimed at strengthening capacity.

Table 3.1.2 provides a framework for assessing availability of country capacity to guide and strengthen the health system.

Table 3.1.2 Framework for Assessing Availability of Capacity to Guide and Strengthen the Health System

Role and Function	Organization
Leadership to set direction, align stakeholders with the direction, mobilize resources, set standards, and monitor implementation	MOH (e.g., planning department)
Research to provide the evidence for health system changes	Research institutions (e.g., universities, think tanks)
Technical assistance to address specific problems	Consulting firms, NGOs, and universities
Training to develop professionals with expertise in strengthening health systems	Training institutions (e.g., universities)
Advocacy organizations to build support and hold government accountable	NGOs, professional organizations, private sector associations
Standard setting	Professional organizations, MOH

A rapid assessment of the individual staff and organizational capacities of these institutions will provide an overall picture of the degree to which the country can take responsibility for HSS.

Key questions to ask include the following:

- Does the MOH have an unit with overall responsibility for HSS such as a policy and planning department?
  - Does it have high-level support within the ministry?
  - Does it have the mandate, staff, and resources to carry out its functions?

- Are there research institutions with the capacity to provide the evidence needed to inform HSS and health policy reform?
  - How capable are the institutions of carrying out research and studies?
  - Are they able to present the results of the research effectively to policymakers?
- Are there capable consulting firms and NGOs that can be contracted to provide technical assistance in issues related to the six building blocks?
- Is there sufficient capacity in country to train public health leaders in HSS?
  - Where is this capacity – schools of higher education?
  - What specific degrees do they presently offer?
- Is there organizational capacity to advocate for HSS improvements?
  - Where is this capacity within the government?
  - Where is this capacity outside the government?
- Are there organizations that have the capacity to provide norms and standards for health workers and quality of care?

The overall intent of this part of the assessment is to determine if HSS capacity, not just the capacity to deliver health care, exists in the country. If not, it can be included as an area of intervention, albeit over the longer term.

Political and Macroeconomic Issues

This section provides a picture of the macro-level decision-making processes for country policy and programs, the level of resources available in a country, and who controls the resources. It also indicates the opportunities for private sector strengthening and expansion and for innovative financing mechanisms.

This section first describes the political structure of the country, Key issues include:

- How is the head of government elected? Popular vote? Are elections held on a regular basis?
- Is there separation of powers within the government? For example, are the legislative and executive branches independent of each other?
- What is the level of political stability within the country? For example, is the situation calm, or is the country experiencing civil discord or violence?

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

Reliable Resources for Economic Indicators

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

http://www.imf.org

http://www.doingbusiness.org/report.

It is also important to provide an overview of the macroeconomic environment. The following questions can serve as a guide:

- Does the country have a market economy? Is it in transition (e.g., from a command to a 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 growth of the gross domestic product (GDP))?
- What is the role of the private sector in the country?
  - Does the government support private sector activity?
  - What is the role of the private sector in health care provision?
  - Does the legal and regulatory framework of the country support the private provision of health care services?
- What is the estimated size of the informal economic sector (usually given 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, the overview should describe the country's general infrastructure: roads, transportation, electricity, and telecommunications.

[2] Informal sector workers are individuals earning income outside of formal employment such as sole entrepreneurs or those 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.

1.2 Description of the Health System

The general description of the health system should include information about who participates in the system, where services are provided, and how the system is managed.

Government, Private, and Civil Society Actors

A key to understanding the overall functioning of a health care system is to understand the structure and interaction of the main governmental ministries and private organizations involved in the design and delivery of health services. These are, for example, the MOH, the Ministry of Finance (MOF), other key line ministries, the social security program, health maintenance organizations, private insurance companies, private commercial providers, NGOs involved in service delivery, and other key actors. (See Figure 1.1.3, in Section 1, Module 1, for the range of health system actors.) This analysis will help the HSA team to identify the appropriate stakeholders to consult for this assessment.

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

- Which agencies and organizations (public and private) have mandates that affect the health system?
  - How are the primary sectors of the health system – public, private (both commercial for-profit and NGO/FBO) organized? Is civil society active?
- Which agencies and organizations are in charge of the following functions of the health system: financing, planning, human resource management, service delivery, project implementation, insurance, leadership and governance, information and statistics management, and regulation?
- Try to disaggregate the agencies and organizations responsible for each health system function by the department or division that is responsible for each of these functions. Who heads each of these divisions?
- Who are the executive teams or individuals within these agencies and organizations?

An organogram is a useful way to graphically present the structure of an organization to understand reporting structures, major units/divisions, functions, and levels of accountability. Figure 3.1.1 is an organogram that depicts the structure and relationships of the Ugandan MOH. A report on the Uganda HSA (Ministry of Health, Health Systems 20/20 and Makerere University School of Public Health 2012) is accessible at www.healthsystemassessment.org.

FIGURE 3.1.2 ORGANOGRAM OF THE MINISTRY OF HEALTH OF UGANDA

Source: Ministry of Health, Health Systems 20/20, and Makerere University School of Public Health (February 2012)

Proposed sources of information for this topic should include:

- Ministries' or private organizations' offices. Also consult their websites and publications, if available.
- WHO's International Digest of Health Legislation (WHO 2009b, (http://apps.who.int/idhl-rils/frame.cfm?language=english). The digest and accompanying web-based database describe the MOH organizational structure for selected countries, and where available, provide links to websites that contain the legislation that sets out the structure.

Health Facilities and Services

The service delivery function is a health care system's ability to provide quality services. This section of the overview should 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 Module 4, Service Delivery.

For the HSA team to get a complete picture of the health system's service delivery system, the team leader or coordinator should complete Table 3.1.3, using the most recent information available on the number of health facilities and human resources. Sources of information include health facility or health provider surveys, UN agencies in country, the MOH, and associations of private providers. The table may be customized to suit the country-specific terminology for facilities and workers.

Table 3.1.3 Template: Country's Service Delivery System: Facilities and Human Resources

Setting	Public	Private				Total
		For-profit	Not-for-profit or NGO	FBO	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						

It should be noted that most developing countries do not have data on utilization of private health services (such as outpatient visits and hospital admissions per capita) or supply of services (quantity of providers, market share of each, and composition). For this information, the team leader will have to contact private provider associations to find out how the sector is organized, who its members are, and its role and experiences in partnering with the government or donors. In addition, in many emerging economies, 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. Partnering with informal health providers can be an effective way to reach some target populations and to change behaviors.

Many countries do have 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 show the percentage of total health financing that goes to private sector providers. Utilization data 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 or source of HIV testing). Typically, MOH utilization data cover only public sector providers.

System Management: Level of 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 of a country. It is critical to understand this aspect of the country's health system before starting the assessment, because it shows how the health system is organized and therefore where, that is from which level, different types of data can be collected.

The assessment team's objective will be to identify the responsibilities of the different levels of government with regard to health system functions, which include the following:

- Financing the health system
- Managing human resources in the health system
- Organizing health service delivery
- Implementing programs and projects related to health
- Procuring and distributing pharmaceuticals
- Managing HIS 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, typically in offices in the capital city.

In countries that are more decentralized, responsibilities are devolved, delegated, or divested to provinces, districts, or other agencies. In these cases, the assessment team should focus on obtaining information at the appropriate level of government or other agencies depending on the form of decentralization guiding the health system.

One method that can be used to evaluate the extent of decentralization is to identify for each function the level of responsibility each level of government has for it. The table in Annex 3.1.A can be used as a template to present the results of such an analysis. The rows show the degree of responsibility (that each level of government has for the function. The table can by modified by adding or deleting rows and columns, according to the needs of the assessment or the country's governmental structure.

Annex 3.1.B is an example of a completed table, modified to show the health system responsibilities at the district level in Zambia. It shows that the districts have no power to determine salaries, but have sole responsibility for contracting nonpermanent staff. This means that information on how salaries and benefits are determined would be obtained at the national, or central, level and information about the contracting of health personnel would probably have to come from the district level.

This table can be filled out prior to the in-country data collection phase of the assessment, using information from the secondary source review, and then verified during the meetings with in-country stakeholders. Each building block module provides specific guidance on assessing decentralization.

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. They include 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 other 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.*

1.3 Assessment Indicators

This subsection focuses on overall health in the country – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and, in the "Interpretation" subsection, shows how to work with them. All the indicators found in this module can be easily downloaded from the Health System Database (http://healthsystems2020.healthsystemsdatabase.org/) as described below.

Topical Areas

The indicators for this module are grouped into nine topical areas (see Table 3.1.4), which include basic health outcomes as well as socio-economic data. The indicators have been chosen to provide background information on the health situation in the assessment country.

Table 3.1.4 Indicator and Topic Map for Health System Overview Module

Topic Area	Indicator Numbers
A. Population dynamics	1–5
B. Income and inequity	6–11
C. Education	12
D. Reproductive health	13–17
E. Mortality	18–21
F. Water and sanitation	22–26
G. Nutrition	27–28
H. HIV, TB, malaria	29–36
I. Immunizations	37–38

Data on all of the indicators, as well as definitions of each, are available from the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/). The data for these indicators are drawn from publicly available databases of WHO and other UN agencies, the World Bank, and MEASURE DHS. A list of databases from which the Health System Database draws data is in Annex 3.1.C and an example of the type of country data downloadable from the Health System Database in Annex 3.1.D.

Complete indicator lists for the overview chapter and each subsequent chapter of the report can be accessed via the Health System Assessment website: http://www.healthsystemassessment.com/

Accessing the Health System Database

1. *Using your web browser, go to: http://healthsystems2020.healthsystemsdatabase.org/*
2. *Click on the box titled "Data Sets."*
3. *In the three bulleted links at the bottom of the screen, click the first one: Key Health System Indicators by Country and Corresponding Peer Groups.*
4. *Use the drop-down list to select your country of interest.*
5. *Check on or un-check the boxes next to each set of indicators, to create the data set that you want to see.*
6. *Then click on the box titled "get table."*
7. *A table of indicators selected will appear below.*
8. *Select Excel or Word file format to download the file.*

The technical team should examine overall health system performance data for this and subsequent modules before reviewing other secondary sources. This is particularly important if the HSA team is assessing only selected building blocks, because the data provide background information relevant to all areas of the health care system.

The Health System Database also can be used to compare the health system performance and health status of the study country to that of its regional and income-level peers.

Table 3.1.5 presents a complete list of the indicators to include in this section. This table provides the indicator as well as a description of how to interpret and present the indicator data.

TIP

Definitions of health terminology can be found in the following:

- World Bank Health Systems Development: Glossary (World Bank 2010a)
- World Health Organization Terminology Information System: Glossary (WHO 2010b)

Table 3.1.5 Health System Overview Indicators

Indicator	Definition and Interpretation
A. Population Dynamics	
1. Population total	This indicator is indicative of the magnitude of general health care needs of a country.
2. Population growth (annual %)	Rapid population growth – which dramatically increases the need for food, health care, education, houses, land, jobs, and energy – can inhibit a country's ability to raise the standard of living, especially if government revenues do not increase at a rate that will finance the needs.
3. Rural population (% of total) and urban population (% of total)	The distribution of the population between rural and urban areas is one indicator of a country's level of urbanization. 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.
4. Population ages 0-14 (% of total)	Indicators 4 and 5 generally indicate whether the population is "young" or "old," and therefore the dependence ratio or level, because people in these age groups generally don't participate in the labor force or produce goods or services for the society.
5.Population ages 65 and above (% of total)	
B. Income and Inequality	
6. GDP per capita (constant USD 2,000)	This indicator is a measure of the overall economic wealth of a country (but is 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.
7. GDP growth (annual %)	GDP growth compared to population growth provides a rough indication of whether the resources potentially available for health are increasing or decreasing.
8. Per capita total expenditure on health at international dollar rate	Higher total health expenditure per capita is generally (but not always) associated with better availability and quality of health care.
9. Private expenditure on health as % of total expenditure on health	Private expenditure on health comprises the outlays of insurers and third-party payers other than social security, mandated employer health services and other enterprise-provided health services, nonprofit institutions and NGO-financed health care, private investments in medical care facilities, and household out-of-pocket spending.
10. Out-of-pocket expenditure as % of private expenditure on health	This indicator provides information on the burden of health care financing on households and the level of financial protection prevailing in the country. In most transitioning and 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, access, and efficiency.
11. GINI index	This is a measurement of the income distribution of a country's residents and helps to define the gap between the rich and poor. 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.
C. Education	
12. Adult literacy rate (%)	Adult literacy rate is the percentage of people ages 15 and above who can, with understanding, read and write a short, simple statement on their everyday life. This indicator demonstrates the level of basic education among average citizens and whether they can understand health literature.

Indicator	Definition and Interpretation
D. Reproductive Health	
13. Contraceptive prevalence (% of women aged 15-49)	These indicators show the utilization of reproductive health services for women; availability and accessibility are key components. Low antenatal care (ANC) rates implies limited access to services because services are not available or are not promoted, or require high out-of-pocket expenditures (the last limiting the access to low-income households). Low utilization levels may also reflect weak demand for ANC.
14. Unmet need for family planning	
15. Fertility rate, total (births per woman)	
16. Pregnant women who received 1+ antenatal care visits (%)	
17.Pregnant women who received 4+ antenatal care visits (%)	
E. Mortality	
18. Life expectancy at birth, total (years)	This is a common indicator of the quality of the health system; countries with low life expectancy generally are perceived as having weaker health systems than those with longer life expectancies.
19. Mortality rate, infant (per 1,000 live births)	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.
20. Mortality rate, under age five (per 1,000)	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.
21. Maternal mortality ratio (per 100,000 live births)	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.
F. Water and Sanitation	
22. Population with sustainable access to improved drinking water sources (% of total)	Almost half the people in the developing world have one or more of the main diseases or infections associated with inadequate water supply and sanitation: diarrhea, intestinal helminth infections, dracunculiasis, schistosomiasis, and trachoma. "88% of diarrhoeal disease—the second leading cause of death in children younger than five years after respiratory illnesses—is attributed to unsafe drinking water, inadequate sanitation, and poor hygiene. Diarrhoea morbidity is reduced by around 21% through improved water supply and by around 37% through improved sanitation" (Bartram et al. 2005).
23. Diarrhea prevalence of children under five years old (%)	
24. Diarrhea treatment (%)	
25. Improved water sources (%)	
26. Proportion of population with access to improved sanitation	
G. Nutrition	
27.Percentage of children under age five with low height for age (stunting)	In poor countries, maternal and child under-nutrition is the underlying cause of more than one-third (3.5 million) of all deaths of children under the age of 5 years; many of these deaths are preventable through effective nutrition interventions operating at scale. "Pregnancy to age 24 months is the critical window of opportunity for the delivery of nutrition interventions. If proper nutrition interventions are not delivered to children before the age of 24 months, they could suffer irreversible damage into their adult life and to the subsequent generations" (The Lancet n.d.) http://tc.iaea.org/tcweb/abouttc/tcseminar/Sem6-ExeSum.pdf)
28. Percentage of children under age five with low weight for age (underweight)	

Indicator	Definition and Interpretation
H. HIV, TB, and Malaria	
29. Prevalence of HIV, total (% of population age 15-49)	A high prevalence of HIV/AIDS or TB indicates a high burden on the health care system (in terms of infrastructure, staff, financing needs, and other factors).
30. HIV prevalence among pregnant women age 15-24*[a]	
31. Pregnant women tested for HIV during ANC visit (%)	
32. Antiretroviral therapy coverage among people with advanced HIV infection	
33. TB prevalence, all forms (per 100,000 population)	
34. Proportion of TB cases detected and cured under DOTS*	
35. Prevalence and death rates associated with malaria*	
36. Children under five sleeping under insecticide-treated bed nets	The team may want to consider the percentage of pregnant women who sleep under treated bed nets as well
I. Immunizations	
37. Measles coverage (proportion of one-year-old children immunized against measles)	More than 95% of measles deaths occur in low-income countries. Measles vaccination resulted in a 78% drop in measles deaths worldwide between 2000 and 2008. http://www.who.org
38. DTP3 immunization coverage: one-year-olds immunized with three doses of diphtheria, tetanus toxoid (DTP3) and pertussis (%)	Rates of immunizations for DPT3 are an indicator for primary care service availability and coverage.

[a] Indicators marked with asterisk (*) are not yet available on the Health Systems Database, but are recommended by the UN Development Group (2003).

1.4 Health Strategies in the Research Country

An element critical to the success of an HSA is understanding how the findings and recommendations fit into the research country's existing national health strategy and implementation plans as well as its strategies for each of the health system building block areas.

One way to examine the health system's strengths and weaknesses is to compare the HSA data to the goals set out in the national health strategy. Questions to ask include:

- Have all the elements of the country strategy been implemented?
- Is the country meeting goals for improving health system outcomes? Why or why not?
- Is there political will to achieve the strategy and desired goals?
- How has the private sector been engaged?

1.5 Donor Support for Health System Strengthening

Donor support for HSS can be examined by asking two key questions:

- Are donors providing sufficient support in the most needed areas to address the research country's HSS challenges?
- Are donors working together and harmonizing their resources?

These two questions can be addressed by mapping current donors and their respective roles and then looking at their level of coordination.

Donor Mapping

Donor mapping is essential to identifying the different actors and their involvement and responsibilities in the health care systems and to recommending priority interventions at the end of the assessment. Donors can play a major role in the health system financing, advocacy, technical support, or delivery of services and goods. Table 3.1.6 is an example of a donor mapping matrix.

Doing donor mapping can be time consuming, so assessment teams should ask if a recent donor mapping of the health system support is available. If so, and the information is still current, the team need not do their own mapping.

Table 3.1.6 Donor Mapping Matrix, Angola (2005)

Donor	Field of Intervention and Activities	Timeline and Duration	Amount of Commitment	Project Location	Counterpart
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),	National level	MOH
European Union	At the national level, strengthening blood bank system	2004–2007	USD 28 million (approved)	Luanda, Benguela, Huila, Huambo, Bie	
	At the provincial level, support national rehabilitation program	2003–2007	Euro 14 million	Provinces	

Source: Connor, Rajkotia, Lin, et al. (2005)
Note: This example is shortened for training purposes. It does not include all donors.

In completing the donor mapping matrix, follow these steps:

1. List the donors involved in the health system 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, mission, 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 to 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)
- Grant applications: A donor mapping analysis is part of the application process for a PEPFAR or Global Fund grant. If the country being assessed has received a grant, the team can consult the country's application proposal, obtainable from the following websites:
  - PEPFAR: http://www.pepfar.gov/budget/partners/index.htm
  - Global Fund: http://www.theglobalfund.org/en

The donor mapping will also be useful for comparing donor-to-government interventions, particularly in identifying gaps and overlaps in health care interventions and financing or in determining if donor funding is in line with the MOH's strategies and interventions.

Table 3.1.7 continues the example of Angola. It 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 3.1.7 COMPARISON OF DONOR AND GOVERNMENT INTERVENTIONS IN THE HEALTH CARE SYSTEM IN ANGOLA (2005)

Interventions	Donors				MOH	
	WHO	UNICEF	EU	Global Fund (UNDP)	Strategic Plan for the Accelerated Reduction of MMR and IMR	Sector Develop-ment Plan 2002–2005
National health policy and strategy	X		X	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.	X	X
Norms and protocols	X	X	X			
Increase integration and coordination between the vertical public health and the provincial health directorates		X	X		X	
Basic or financial management training or both		X	X		X	
Clinical training	X	X			X	
Provincial supervision of municipalities		X			X	
Mapping all health facilities in the municipalities		X	X		X	
Health profile of municipal population					X	

Source: Connor, Rajkotia, Lin, et al. (2005)
Note: EU = European Union; UNDP = United Nations Development Programme; MMR = maternal mortality ratio; IMR = infant mortality rate

DONOR COORDINATION

Once donors are identified, the HSA team should assess the level of coordination among the donors (in the form of joint monitoring teams, joint high-level meetings, donor coordination bodies, and so forth) and between donors and local governments. Inconsistent donor policies and practices impose burdens on partners, whereas coordination can enhance the effectiveness of aid, and ultimately 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.

To assess the level of coordination and alignment between the government and donor, the team needs to get answers to the following questions:

- 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.
- To what extent is the private sector included in coordination efforts?
- Is the government or any other organization engaged in leadership of the consultative institutions, by organizing and chairing consultative groups, meetings, and working groups, and by providing a secretariat? If the government is leading this process, it requires adequate staffing, resources, and an appropriate location within the government structure. Who is financing these structures, if they exist?
- Is there a SWAp among the government and development partners? A 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 system 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

To assess the level of coordination among donors themselves, the team needs to get answers to the following questions:

- Do donors share information on activities 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 donors, and among donors.

1.6 Assessment Report Checklist: Country and Health System Overview

❒ Overview of the Health System and the Country Context

A. Health issues (can include):

1. Major causes of mortality and morbidity
2. Diseases that have the highest disability adjusted life years (DALY)
3. Burden of disease (HIV/AIDS, malaria, reproductive health, and child health)
4. Sex and age groups
5. Urban vs. rural

B. Systemic issues (can include):

1. Enabling business environment
2. Capacities of public/private, and civil society organizations to strengthen the health system

C. Political and macro-economic Issues

❒ The Management Structure of the Health System

A. Government, private, and civil society actors

B. Health facilities and services

Table – Facilities and Human Resources Sample Table

C. Structure of system

D. Health conditions in research country

E. Health system overview indicators

F. Health strategies

❒ Donor Support for Health System Strengthening

A. Donor mapping

B. Table Donor map

C. Donor coordination

Notes

Module 2: Leadership and Governance

This module defines leadership and governance of the health sector, and offers an approach to identify what information is needed to assess governance as well as methods and sources for collecting this information.

Figure 3.2.1 Impact of Building Block Interactions

Introduction

Evidence shows a positive relationship between governance indices and measures of health performance and outcomes (Lewis 2006); that is, effective health system governance – engaging and regulating both public and private sector actors – is crucial for achieving broader health objectives (Lagomarisino, Nachuk, and Singh Kundra 2009). The World Bank has led data collection and reporting on governance, and the indicators it developed are the basis for the HSA approach to the leadership and governance building block.

This module presents the leadership and governance components of the HSAA manual.

- Subsection 2.1 defines leadership and governance and its key dimensions, and summarizes an operational model for leadership and governance in the health sector.
- Subsection 2.2 provides guidelines on assessing leadership and governance for the country of interest.
- Subsection 2.3 presents the indicator-based part of the assessment, including suggested assessment questions.
- Subsection 2.4 guides the technical team member in how to summarize findings and develop recommendations.
- Subsection 2.5 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

The indicators in this module differ from those in other building block modules in that they are mostly qualitative and descriptive rather than quantitative and measurable.

2.1 What is Leadership and Governance?

International donor partners and entities that work to improve health status recognize the importance of effective health governance. In 2000, WHO introduced the concept of health sector "stewardship," which is closely related to leadership and governance. It defined stewardship as "the careful and responsible management of the well-being of the population." WHO later refined its thinking on this building block, stating that leadership and governance "involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system-design and accountability" (WHO 2007).

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" (USAID 2006).

The quality of overall governance in a country–broadly defined as the set of rules and institutions by which authority is exercised–directly affects the environment in which the health system operates, as well as the ability of health officials to exercise their responsibilities and health providers to deliver quality services. 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 linkages, formal and informal, among citizens, private organizations, and the state that influence the interactions among them and the outcomes of those interactions.

Measures of overall governance are relatively well developed. As noted in the opening to this module, the World Bank has led data collection and reporting on governance, employing indicators on voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann, Kraay, and Mastruzzi 2006). The HSA approach uses these indicators as a foundation for assessing the governance building block of the health system. Effective governance should engage and regulate both the public and private sector. Mixed (public and private) health system stewardship mechanisms – including regulation, risk pooling, and purchasing–can offer incentives that align private health actors with public health system goals.

Health Governance: An Operational Model

Following from the definition of governance given above, health governance concerns the rules and institutions that shape policies, programs, and activities related to achieving health sector objectives. These rules and institutions determine which societal actors play which roles, with what set of responsibilities, related to reaching these objectives.

Health governance involves three sets of actors. The first set is state actors, which includes politicians, policymakers, and other government officials. The public sector health

bureaucracy –comprising the health ministry, health and social insurance agencies, public pharmaceutical procurement and distribution entities, and so forth –is central, but non-health public sector actors also play a role. These include parliamentary health committees, regulatory bodies, the finance ministry, various oversight and accountability entities, and the judicial system. The second set of actors is health service providers. This set comprises public, private, and not-for-profit individuals and groups that deliver health services, and organizations that support service provision: medical training institutions, health insurance agencies, the pharmaceutical industry, and equipment manufacturers and suppliers. The third set of actors contains beneficiaries, health service users, and the general public. This set can be categorized in a variety of ways; for example, by income (poor vs non-poor), by location (rural vs urban), by service (maternal and child health, reproductive health, geriatric care), and by disease or condition (HIV/AIDS, TB, malaria, etc.).

The linkages among these three categories of actors constitute the operational core of health governance. Figure 3.2.2 characterizes the key relationships among the various health system actors. These linkages exist at multiple levels in the system, depending upon the system's structure (see the discussion of decentralization in Subsection 2.2).

The particular features of these linkages –for example, their strength, effectiveness, and quality– influence the ability of the health system to meet the performance criteria elaborated in Section 1: equity, efficiency, access, quality, and sustainability.

Figure 3.2.2 Health Governance Model

Source: Brinkerhoff and Bossert (2008)

2.2 Developing a Profile of Leadership and Governance

TIP

Conducting the Assessment

- Select ONLY indicators that apply to the specific country situation.
- Conduct a thorough desk review of all available secondary data sources before arriving in country.
- In stakeholder interviews, focus on filling information gaps and clarifying issues.
- Coordinate stakeholder interviews with team members so all six modules are covered and avoid interviewing the same stakeholder twice.
- Look at all health actors – public, for-profit, and not-for-profit – involved in delivering health services.
- Tailor assessment questions to reflect the level of decentralization so the questions are relevant to the interviewee.
- Schedule team discussions in country to discuss cross-cutting issues and interactions.
- Finalize an outline for the assessment report early on so sections can be written in country.

Because there are few standardized, quantitative indicators to measure governance in the health sector, much of the information for this module will be qualitative and gleaned from both secondary sources and interviews. As the international community increasingly recognizes the importance of health governance, more quantitative survey-based information will likely become available over time, similar to the data generated for the general governance indicators used in the first six indicators of this module.

Because of the sensitivity of leadership and governance issues such as corruption, accountability, inclusiveness of all health actors, and system responsiveness, the HSA team must take considerable care in conducting interviews, in attributing information to sources, and in documenting results from the data collected. The technical team member in charge of governance will need to weigh the importance of documenting, sometimes for the first time, problems of patronage or corruption against repercussions that publication of such information could have on informants; often team members will need to ensure the anonymity for information sources and key informants.

Another potentially sensitive topic is the government's perspective and attitudes in working with non-state actors in the health system. Limited interaction between the public and private sectors and lack of understanding of what motivates private sector stakeholders, particularly the commercial's sector's need to earn a profit, creates suspicion and mistrust between the sectors. A key area to examine is the relationship between the public and private sectors, how willing the government is to working with the private health sector, and how inclusive the government is in policy and planning for the health sector.

Leadership and Governance and Decentralization

The extent of decentralization of the health sector will have a direct impact on the exercise of governance at various levels within the sector. If authority and responsibility are centralized, then subnational and local officials will not have the "decision space" to function as stewards with policy-making power (Bossert 2008). Nevertheless, they still have a positive role to play in improving leadership and governance through better management of resources, client-responsive services, or collection of quality health data. These actions contribute to making the linkages in Figure 3.2.2 functional and effective. In countries where the health sector is more decentralized, the HSA technical team member will need to assess the authority and responsibilities that exist at all levels – subnational and local levels as well as national – to ascertain whether programmatic resources to support stewardship in health should be directed at multiple levels.

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 NGO, 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)

TIP

Legal and Regulatory

Reviewing the legal and policy framework for health is a key component for understanding not only governance but also possible barriers in the other health system modules. Therefore, it is critical that the HSA team gather as many health laws, policies, acts, regulations, and guidelines as possible.

To facilitate this, the in-country logistics coordinator should visit the MOH Department of Policy and Planning and/or chief medical officer as well as all the MOH councils (e.g., physician and dentist, nurse, laboratories, pharmacists). The department and/or the chief medical officer will have all the guidelines for standards of care, facility licensing, health insurance, and so forth. The councils are particularly important because they can provide the health law or act, and regulations governing the respective health cadres.

TIP

Prioritizing Indicators

Team members constrained by limited time or resources should prioritize as follows:

- First, assess Indicators 1–6. Data for them are readily available from the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org).
- Second, assess the key Indicators 8, 9, 12, 20, and 21.
- Third, if possible, assess all remaining indicators to get a more comprehensive picture of health system leadership and governance.

2.3 Assessment Indicators

This section focuses on governance indicators – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and shows how to work with the indicators. Finally, the section identifies key indicators to which the HSA technical team member can limit their work, if time precludes their measuring all indicators.

Topical Areas

The indicators for this module are grouped into seven topical areas (see Table 3.2.1). The topical areas are based on Health Systems 20/20's health governance framework, which outlines the relationships between three sets of health system actors, the state, clients, and providers (Figure 3.2.2).

Table 3.2.1 Indicator Map–Leadership and Governance

Topical Areas	Indicators
A. Overall governance	1–6
B. Government responsiveness	7–8
C. Voice: Preference aggregation	9–10
D. Client power	11–13
E. Service delivery	14–17
F. Information, reporting, and lobbying	18–19
G. Compact: Directives, oversight, and resources	20–23

Data Sources

There are many sources from which the technical team member assigned to the governance chapter can gather data that will allow them to assess and analyze leadership and governance. The sources are organized into three main categories:

1. **Standard indicators:** Data are drawn mainly from existing and publicly available international databases. Data regarding Topical Area A (indicators 1–6) are available through the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/). Further information is available on the following websites:
   - The World Bank, http://info.worldbank.org/governance
   - Transparency International, www.transparency.org

2. **Secondary sources:** Information for Topical Areas B–G should be gathered to the extent possible through desk review of health-related research and policy documents prior to travelling to the country (see box above for a definition of the different terms and types of relevant policies). Here is a suggested list of secondary sources that may be readily available.
   - Health laws and policies, health acts, and regulations governing scopes of practice, financing, professional and facility licensing, standards of care, and hospital autonomy
   - Safety and sanitary guidelines, for the safety and efficacy of pharmaceuticals, medical devices and equipment, quality of health provision (provider licensure and certification, facility accreditation), and dispensing of pharmaceuticals
   - Health sector planning and strategy documents and interviews with people who participated in their development
   - Reports on civil society engagement in policy formulation and legislation
   - Media reports of the policy development process, to identify organizations that influence health policy
   - Advocacy organizations' stated objectives, to determine which organizations publish their objectives, policy positions, and/or policy research
   - The MOH, for information on what the ministry and donors are doing to improve client feedback to providers
   - Project and ministry reports on client feedback mechanisms
   - Citizen scorecard reports, where they exist, for information on client power
3. **Stakeholder interviews:** Unlike the other technical modules, most information for governance indicators will be collected through discussions and interviews with key informants and other stakeholders. A key planning challenge is to balance the number of interviewees between the three health system actors – government, service providers, and client/consumers. Moreover, it will be important to get the private sector perspective from both the service delivery side and the consumer side.
   - MOH leadership, MOH planning and regulatory departments, Ministry of Local Government
   - Representatives of grassroots 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
   - Key public health facility staff (e.g., chief medical officer, head public health nurse, hospital administrator, district health manager)
   - Parliamentary health committee members, and other parliamentarians with an interest in health issues

- Representatives of the MOH staff of schools of medicine, nursing, and public health
- Representatives of the private health sector, starting with any sector-wide association representing all facets of the private health sector (e.g., Kenya Health Federation, Association of Private Health Facilities in Tanzania) and professional associations representing a range of health cadres (physicians, pharmacists, nurses/midwives, laboratory technicians). If these representative bodies do not exist, a selection of individual private health care business owners/managers could substitute
- Client-provider committee members and/or consumer groups
- Media outlets (TV, radio, newspaper)
- International donors active in the health sector
- Data users, including government policymakers, NGOs, private sector advocacy groups, and major health sector donors, particularly WHO, which typically assists with health data, infectious disease surveillance, and immunization

For each indicator the manual offers below illustrative questions and issues to explore – through information gathered using the above data sources – so that the team can assess the quality of the governance linkage. Because the questions seek qualitative information (rather than more measurable, quantitative data) the responses they elicit require careful analysis. The qualitative nature and lack of a clear means of benchmarking also makes it difficult to compare the HSA country "scores" with other countries unless the governance expert has experience with countries in the region or at a similar level of development. (The interviewer may be able to get a feel for this comparison by probing other donor representatives.)

Many of the other technical HSA modules also touch upon issues of leadership and governance. Table 3.2.2 lists how leadership and governance might overlap with the other modules. Depending on number of technical team members, the time available for data collection, and the specific interview schedule, potential overlaps can be handled in one of two ways: First, the governance expert could join his or her team member in some or all of the other technical module interviews, particularly with the leaders and directors in that health system area. Alternatively, the other team member could be asked to cover governance topics on behalf of the governance expert. In the latter case, the governance expert should provide the other team member the specific governance and leadership questions to ask, to ensure this information is captured.

Table 3.2.2 Overlapping Topics between Governance and Other Health System Technical Modules

Module	Areas of Overlap with Governance
Health financing	• Consistency of public sector resource allocation with stated health strategic plan • Administration of social insurance funds • Management of provider payment systems aimed at increasing accountability and transparency • Existence (or not) of informal payments,
Service delivery	• Clear, transparent, and equitable enforcement of facility accreditation • Updated and/or new standards of care • Feasible standards of care (e.g., task shifting to address human shortage, facility licensing linked to scopes of practice to address access issues, affordability for the government) • Government capacity (staff, resources, authority) to consistently and equitably enforce regulations
HRH	• Updated and/or recent health professions act (for each profession) • Absenteeism and other motivation issues associated with public sector health workers • Impact of dual practice on public health services • Unambiguous scopes of practice for key health professions consistent between public and private sectors • Consistent and enforced professional certification procedures • Existence of re-licensure policies and procedures for all health professions • Accreditation of private medical institutions
Medical products, vaccines, and technology	• Regulation of medicines especially importation of drugs, compliance of retail pharmacies, control of black market, counterfeit and expired medicines • Compliance or possible corruption in pharmaceutical procurement
HIS	• Complement of the "Information, Reporting, and Lobbying" topical area • Exchange and sharing of information between public and private health sectors

Detailed Indicator Descriptions

This section provides an overview of each topical area and then a table that gives a definition and interpretation of each indicator.

Topical Area A: Overall Governance

Overview

The scores for the six indicators in the Overall Governance topical area reflect the aggregate status of governance in the country, whereas the information collected for the six ensuing topical areas focuses on how governance relates specifically to the health sector. A high score on an Overall Governance indicator is not necessarily matched by positive findings for a corresponding indicator in the later areas. For example, the voice and accountability indicator as measured by the Worldwide Governance Indicators looks at the degree of political freedom and respect for rights and the rule of law, whereas voice and accountability in the health sector looks at stakeholder engagement and checks and balances directly related to health services and products. The ratings on the six Worldwide Governance Indicators characterize the institutional environment within which health governance is situated.

TIP

Helpful Resource!

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/

Overall Governance

Source for information on Indicators 1–6:
World Bank Governance Indicators, http://www.worldbank.org/wbi/governance/govdata/
The Health Systems Database includes both a point estimate and a percentile rank from the World Bank's Governance Indicators.

Indicator	Definition and Interpretation
1. Voice and accountability	Voice and accountability 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. Thus, it is a measure of political, civil, and human rights. The topics included in this indicator are civil liberties, political rights and representation, and fairness of elections. For more information see Topical Area C: Voice: Preference aggregation.
2. Political stability	Political stability and absence of violence measures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism. Another indicator of political stability is the smooth transition between governments after an election. The political stability of a country has a direct impact on its ability to provide, manage, and fund health services.
3. Government effectiveness	Government effectiveness measures the quality of public and privately provided services, the quality of the civil service and the degree of its 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 administrative and technical skills of the civil service, transparency and openness, government stability, trust in government, and policy consistency. The effectiveness and quality of linkages between state, citizens, and providers, influences the ability of the health system to meet the performance criteria elaborated in Section 1: equity, efficiency, access, quality, and sustainability. See Indicator 8 (for example): The national government is transparent with regards to health sector goals, planning, budgeting, expenditures, and data. It regularly communicates with stakeholders in the health sector.
4. Rule of law	Rule of law measures the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. The existence of the rule of law creates an environment in which basic public health provisions can be enforced and regulated. This includes things like public safety, protection against hazardous waste disposal, safety regulations for workers, and traffic laws. See also Indicator 22: Health sector regulations are known and enforced in both public and private training institutions and health facilities.
5. Regulatory quality	Regulatory quality measures the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Topics included in this indicator are, for example, business regulations, taxation, trade and competition policy, and government market intervention. Regulatory quality can influence the frequency of malpractice occurring in a country as well as the licensing and accreditation of public and private practitioners. See also Indicator 20: The government provides overall direction to the health system through clear legislation, policies, and regulations.
6. Control of corruption	Control of corruption 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. See Indicator 23: Procedures exist for reporting, investigating, and adjudicating misallocation or misuse of resources.

The Worldwide Governance Indicators database "reflects the statistical compilation of responses on the quality of governance given by a large number of enterprise, citizen, and expert survey respondents in industrialized and developing countries" (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 all indicators are unlikely to exhibit high-quality linkages among the actors in the health system (see Figure 3.2.2 above).

Topical Area B: Government Responsiveness to Stakeholders

Overview

This topic encompasses the organization and leadership necessary to convene and facilitate collaboration between government, private actors, 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 multi-sectoral stakeholders.

Issues to Explore

In countries with little or no history of civil society participation in governing, government may be reluctant to include civil society stakeholders in the policy process. In these cases, civil society interviewees may be very passive and have low expectations, while government interviewees may be dismissive of the role that civil society can, does, or should play in the policy process or how responsive government should be to the recommendations of civil society.

In countries with heightened awareness of civil rights and increased citizen participation experience, however, both civil and government interviewees may have exaggerated demands and expectations for the space that the policy process allows for civil society input. The assessment team member in charge of researching governance will have to weigh information from all sides to formulate a balanced assessment of the state of government responsiveness to civil society concerns. Ask about recent elections – was health an issue and how was it handled?

Government Responsiveness

Indicator	Definition and Interpretation
7. What mechanisms are in place to ensure the participation of key stakeholders in the health policy agenda? Which groups are represented during these discussions?	Government and health provider organizations regularly solicit input from the public and concerned stakeholders (vulnerable groups, groups with particular health issues, etc.) about priorities, services, and resources. This indicator is complementary to Indicator 11 but focuses on the strength of consumer voice. It is necessary to determine whether key stakeholders are, either deliberately or inadvertently, being excluded from discussions on the health policy agenda. Additionally, decentralized structures may also have separate mechanisms for soliciting feedback from stakeholders that should be included in this indicator. Clear and frequent communication of objectives, performance targets, and financing are needed to evaluate progress and performance and for the MOH to be held accountable. It also is necessary to determine whether or not the government is responsive to external stakeholder input, and to look at how well stakeholder input has been included into the decision-making process and whether that input has been part of a participatory and inclusive process. Examples of possible mechanisms for tracking responsiveness include independent reviews of decision-making processes, and the presence of public input in national policy. Unless health officials incorporate citizen feedback into their planning and policy formulation, social participation has little meaning.
8. Mechanisms and strategies used by the government to engage all health stakeholders in policy and planning include workshops to discuss policies and develop strategic plans, and widespread distribution of policies and plans to all major health entities.	The national government is transparent with regards to health sector goals, planning, budgeting, expenditures, and data. It regularly communicates with stakeholders in the health sector. Not only look for the different types of mechanisms and strategies, but also assess how effective and inclusive these approaches are. Look for: number of mechanisms/strategies, frequency, and representativeness of participants. If there are established, active, and multiple forums and strategies that reach public, not-for-profit, and private sector, then the government is very inclusive and effectively engages the entire health sector. Another form of evidence is to review strategies and plans to determine if they include other sector perspectives and define roles and responsibilities for public and private actors.

Topical Area C: Voice: Preference Aggregation

Overview

This topic encompasses the ability of civil society, experts, and citizens to act as credible partners with government in improving health services: analyzing data from a variety of sources (including citizen feedback) and presenting that feedback to policymakers in ways that positively influence policy decisions. While Topical Area B, Responsiveness, deals with the actions of government in obtaining and responding to civil society input, this section considers the sophistication of external stakeholders in providing input into health policy.

This topic also examines the opportunities available to external stakeholders for influencing health policy. Whether non-state health providers are involved in policy and planning is the most important issue to explore. The media's influence on health policy through routine reporting, features, debate coverage, and opinion articles is also important in analyzing this component of leadership and governance.

Issues to Explore

Countries without a history of civil society participation are likely to have few or no organizations that are capable, or even willing, to perform an advocacy role. It is also possible that organizations in this context may be conducting limited advocacy, through participation in working groups or other mechanisms, without necessarily recognizing their actions as having an effect on health policy or legislation. It is important for assessment team members to ask about these avenues for including citizen voice into health policy.

Additionally, media outlets have a role in reporting and analyzing health policy debates so as to inform the public about ongoing debates, as well as reporting on public or civil society reaction to health policy. Media reporting, in this context, is voice, providing context and information to citizen and policymakers on the policy process.

Voice: Preference Aggregation

Indicator	Definition and Interpretation
9. The public and concerned stakeholders have the capacity and opportunity to advocate for health issues important to them and to participate effectively with public officials in the establishment of policies, plans, and budgets for health services.	Civil society organizations, private institutions, and other external stakeholders have an important role to play in the health system by advocating for the rights of their members. Individual citizens are able to petition their government, without the assistance of a formal organization. Additionally, the role of the media in reporting on health issues, policy debates, and activities is an important aspect of this indicator. Inclusion of civil society ideas into policy development shows both the strength of civil society in being a reliable source of information for government as well as government willingness to listen to civil society concerns. In order to address this indicator, interviews with a wide range of civil society, media, MOH, and private institutions, such as hospitals, insurance companies, or pharmacies, is necessary. Presenting this data will most likely require examples of how external stakeholders have affected policy, the types of tools they have used to do so, how sophisticated their analyses are, and their long-term experience with advocacy; therefore, it is important to obtain examples from interviewees.
10. Willingness of the public and concerned stakeholders to participate in governance and advocate for health issues.	This indicator can be measured by looking at the number of members of patient groups that are active, the amount of active participation of provider groups in lobbying government, and the number and sizes of health NGOs acting as watchdogs. Willingness to participate shows whether people feel empowered to advocate for certain issue and answers the question of how well evolved and how well supported civil society is in the country.

Topical Area D: Client Power: Technical Input and Oversight

Overview

Client Power is the ability of citizens, citizen groups, and watchdog organizations to monitor and oversee the actions of health providers, ensuring that health services are high quality, transparent, and follow accepted norms. The relationship between clients and providers can be strengthened through collective action, such as through facility-based health committees or civil society organizations that provide voice to otherwise marginalized clients. Participation in joint forums by both citizens and providers can also improve the voice that citizens are able to exercise. Additionally, markets may allow citizens to exercise power by providing choice and competition, improving provider accountability.

Issues to Explore

Structures, both community- and health facility-based, that allow or encourage providers to communicate with clients regarding issues of service quality, delivery, and transparency should be explored. Transparency of service utilization, available resources, and budgets are all key considerations as well. In countries with user fees or a strong private sector, transparency issues around user fees should be examined. Structures that allow clients to give direct feedback to providers should be examined and reported. Providers should have some knowledge of these structures, but it is also important to ask policymakers in the MOH what they are doing, on a national level, to improve how clients interact with health providers.

Client Power: Technical Input and Oversight

Indicator	Definition and Interpretation
11. Civil society organizations oversee health providers and provider organizations in the way they deliver and finance health services.	The existence and ability of non-state organizations to provide oversight of facility management, regardless of whether or not those facilities are private or public, is measured by talking to civil society organization that perform these roles, if any exist. Media often cultivate sources among these watchdog organizations and have a role in publicizing issues. Assessment team members need to examine if professional organizations, specialized health related NGOs, and the media exist and are capable of assessing if providers – public or private – follow protocols, standards, and codes of conduct in regard to medical malpractice, unfair pricing patterns, discrimination against clients, etc. Civil society organizations can be powerful watchdogs to supplement government oversight.
12. The public or concerned stakeholders (e.g., community members) have regular opportunities to meet with health care providers about service efficiency or quality.	This indicator measures the access that individual citizens have to health managers (directors) of health service organizations (hospitals, health centers, clinics) to raise issues. Interviews with citizen groups and facility-level staff are vital to understanding this indicator. The existence of client-provider committees or similar mechanisms is the first step toward ensuring that citizens have input into service delivery issues at the facility level. Second, these committees must help citizens play an active role in the management of their health facilities through facilitating interaction between citizens, facility managers, and providers.
13. There are procedures and institutions that clients, civil society, and other concerned stakeholders can use to fight bias and inequity in accessing health services.	This indicator is measured on two levels. The first is whether or not organizations that advocate for patients' rights and defend patients exist and what the capabilities of those organizations are. The second level measures the existence of an independent judiciary that adjudicates malpractice or discrimination claims without bias or undue influence. Key informant interviews with civil society groups and government are important to this indicator. The involvement of law enforcement and the judiciary in punishing bias and inequity in health services plays an important role in encouraging citizens to speak out and civil society to encourage whistle-blowing on malpractice.

Topical Area E: Service Delivery

Overview

This area examines the relationship and dynamics between health care providers and their clients in terms of transparency, incentives, and results-based services. In contrast, the Service Delivery module assesses the organization of health delivery services, the way that services are delivered, and the roles and responsibilities of each actor in the health system across the public and private sectors. Of particular importance to leadership and governance is the issue of continuity of care, understanding the health system from the perspective of patients accessing points of care at different places and times, and potentially moving between the public and private sectors.

As with the linkage from clients to providers, service delivery often contends with information asymmetries and power imbalances. Clients often view health providers as the ultimate health authority, and clients are unlikely to raise questions about quality. The ability of health care providers to bridge these gaps through transparent services and pricing, as well as positive communication with clients is a key issue in understanding and analyzing this linkage.

Issues to Explore

Structures, both community- and health facility-based, that allow or encourage providers to communicate with clients regarding issues of service quality, delivery, and transparency should be explored. Transparency of service utilization, available resources, and budgets are all key considerations as well. In countries with user fees or a strong private sector, transparency issues around user fees should be examined.

Structures that allow clients to give direct feedback to providers should be examined and reported. Providers should have some knowledge of these structures, but it is also important to ask policymakers in the MOH what they are doing, on a national level, to improve how clients interact with health providers.

Service Delivery

Indicator	Definition and Interpretation
14. Health services are organized and financed in ways that offer incentives to public, NGO, and private providers to improve performance in the delivery of health services.	Resource transparency is difficult to foster, as the health system may not have disaggregated information at the facility level, where people actually receive services. Government regulations such as licensing and accreditation regulate quality at the point of entry, but do not incentivize quality service provision over the long term. Some countries require registration at regular intervals (yearly, bi-annually) including interviews with a medical board or professional association. Continuing education and recertification requirements are also ways that government can regulate the quality of health service provision. The other important element of incentivizing good performance is to enforce the standards and regulations set out in government policies.
15. Information on allocation and use of resources and results is available for review by the public and concerned stakeholders.	Resource transparency is difficult to foster, as the health system may not have disaggregated information at the facility level, where people actually receive services. Without detailed information on resources, citizens are unable to judge if they have been used well. In contrast, strong data that are shared with multiple stakeholders can lead to improved outcomes as more viewpoints and data are brought into the decision-making process. In order to understand the quality of health system information that is made available to the public, it is necessary to talk to the people in media and civil society who would use that information, as well as to the people who are making the data available, such as the MOH or facility managers.
16. Information about the quality and cost of health services is publicly available to help clients select their health providers or health facilities.	Civil society may have details about the level of knowledge that exists in the general population about user fees, while health providers should be able to provide anecdotal information on whether or not they have posted a fee schedule. Information on service quality can be more difficult to obtain, but it could come in the form of mortality data in the maternity ward of a hospital, malaria cases treated in the last month, or HIV counseling and testing uptake. The media also has a role in publicizing quality and cost information and could be a major player in ensuring that this indicator is met. One of the most basic pieces of information that can aid health system transparency is that clients understand the cost of the services they are purchasing. This simple step can reduce graft and corruption solely by giving citizens information.
17. Service providers use evidence on program results, patient satisfaction, and other health-related information to improve the services they deliver.	Do public and private providers have mechanisms in place to measure client satisfaction and do they use this to inform how they deliver services? The key question to answer in relationship to this indicator is how facility-specific activities are determined. For example, do they use surveillance data to track outbreaks and design activities to counter those outbreaks? Or are data not used when determining how to allocate resources? Other sources of information could be patient satisfaction surveys or program reports. In most cases, the private sector is very sensitive to client perception and therefore uses a wide array of tools to stay abreast of consumer behavior.

Topical Area F: Information, Reporting, and Lobbying

Overview

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 to ensure an accountable health system, so that policymakers can assess health system performance and formulate appropriate policies. Information reported from health providers is critical if health policymakers are to formulate evidence-based health policy. This area also encompasses the influence that providers exert on health policy, including advocacy and other efforts. More in depth information on reporting systems can be found in the HIS module.

Issues to Explore

Talking to data producers is important, particularly at the facility level, where redundancies can occur. Data collection requirements for multiple vertical programs may affect the quality and timeliness of reporting and reveal a lot about the structure of routine information systems. Also necessary is to probe policymakers regarding their understanding of what information they should expect or demand and to what extent their expectations are met, including information from the private health sector.

Another important issue to investigate is information asymmetry. Service providers will always know more about health services than policymakers do. These providers have incentives to maintain and use these asymmetries for lobbying or other purposes. Lobbying activities from health providers to government may reflect this reality.

Another issue affecting the state actor-provider governance link is that of attribution. In a complex, multi-stakeholder health system, it is difficult to assess whose contributions made a difference, or whose efforts fell short. Health outcomes are the result of numerous factors, many of which are outside of the control or influence of providers or health ministries.

Country Story: Eastern Caribbean Countries

Poor relations between the public and private sectors can impede health sector reform. In several Eastern Caribbean countries, mistrust and tension has resulted in complete breakdown in communications and interactions between the sectors, making it nearly impossible for the MOH to lead efforts to strengthen health systems and/or pass reform policies with the support of all major stakeholders. In these cases, one of the Health Systems and Private Sector Assessments' principal recommendations is to resume dialogue, work out the grievances, and focus on the health system priorities.

Information, Reporting, and Lobbying

Indicator	Definition and Interpretation
18. Public and private sector providers report information to the government.	This indicator looks at the quality of the data provided by health facilities to the MOH, as well as the use of that data and if they are used to formulate policy, plan health direction, and monitor health system performance. Examine what type of data are reported by which – public or private – providers to the government. While the HIS module goes into more depth in terms of the systems used to move information, the Leadership and Governance module studies information reporting, dissemination, and use in policy, planning and monitoring performance. Issues to examine are timeliness of reports, quality, and ease of use by policymakers. Also examine if the data and reports present data on the entire health sector, including non-state providers, to create a comprehensive picture of overall trends and performance.
19. Service providers use evidence to influence and lobby government officials for policy, program, and/or procedural changes.	This indicator measures the effect that providers and provider organizations, such as medical and nurses' associations, have on the policy process and planning processes. This indicator examines how providers engage and interact with the government in policy and planning processes. Providers often have access to information, knowledge, and power that citizens' groups do not; as a result, their lobbying efforts can be more influential than that other civil society organizations. It is also important to note that while citizens' and providers' interests often overlap, they do not always have common goals and purpose. Providers often have interests relating to reimbursement mechanisms, working conditions, facility licensing, and registration requirements that clients may not. Conversely, clients, especially in countries with significant user fees, are often concerned about pricing in a way that providers may not be.

Topical Area G: Compact: Directives, Oversight, and Resources

Overview

This dimension includes the process by which laws, policies, and regulations that govern the health sector are formulated. It also 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. Compact also examines the ability of government to monitor health system performance and provide direction and guidance to the overall health system.

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.

How does the government provide direction to the health system? Is there a statutory framework for these activities? Is there an MOH unit that is directly involved with health planning and monitoring? Does the MOH engage all health system actors? Consistently? Or on an ad hoc basis? How willing is the MOH to work with non-state service providers?

Compact: Directives, Oversight, Resources

Indicator	Definition and Interpretation
20. The government provides overall direction to the health system through clear legislation, policies, and regulations.	This indicator is very broad in that in covers the main pieces of legislation that affect the health system, the regulations developed to guide the implementation of the legislation, and the most recent national strategies developed by the MOH to outline the strategy for enacting the goals of the legislation. In order to stay focused, try to identify the 3-4 main pieces of legislation that affect the health system, give a brief explanation of each, followed by a discussion of the national plan. How old are the laws (they can be upwards of 50 years old)? Are there serious contradictions between some laws or serious ambiguities? Such contradictions often happen when laws are passed to decentralize the health system. Does the national plan support the implementation of the legislation? How does implementation look in facilities? Does legislation define how health facilities, health providers, and other health system actors will be governed? Is there a clear inclusion of private actors in regulatory requirements in terms of reporting, service delivery, and/or facility management? Be sure to determine how health providers are licensed and accredited.
21. Government officials rely on evidence in policy and planning.	Formulating policies and regulations and planning health interventions that are based on evidence is a key function of the MOH. Strategic plans are normally produced every five years and describe priority area for health interventions and ways of achieving them. Operational plans address the specific activities for improving those priority areas. Does the MOH or other government agency review, evaluate, and propose revisions of laws, regulations, and policies to ensure that they reflect current scientific knowledge and best practices for achieving compliance? If they do not, they cannot serve as the basis for sound regulation of health sector actors. Interviewees at the MOH should be able to explain the process of creating these plans. Does the MOH include all key stakeholders – public, not-for-profit, commercial – in the analysis and design of polices and plans?
22. Health sector regulations are known and enforced in both public and private training institutions and health facilities.	This indicator is characterized by authorities with the capacity and mandate to enforce regulations (protocols, standards, codes of conduct, and certification procedures) through inspections, deterrents, and oversight. Possible constraints on this indicator are the lack of health sector regulations and poor enforcement due to capacity constraints. Additionally, service providers may not abide by the regulations, either due to the perceived lack of legitimacy of the regulations or because they are unaware of the regulations. Also, enforcement may not be consistent between the sectors (e.g., stricter enforcement in the private sector than in the public), or, as is often the case, non-existent for the private sector. Therefore, understanding how all providers respond to health system regulations is important to knowing how they are enforced. Each of these issues can be uncovered through interviews with service providers, regulatory authorities, and MOH officials. Important questions include: Do governmental regulatory agencies have the necessary resources (human, technical, financial) to enforce existing legislation and regulations? What attempts has the government made to support compliance with regulations? To what extent have these attempts been effective?
23. Procedures exist for reporting, investigating, and adjudicating misallocation or misuse of resources.	This indicator looks at the government regulations on corruption and malpractice in the health sector and how they are enforced. What are the policies in place for dealing with mismanagement? What opportunities exist for concerned citizens or health workers to report resource allocation problems, malpractice, counterfeit drugs? Is an impartial ombudsman available for investigating them? What laws exist to deal with mismanagement of health funds?

Key Indicators Table

Table 3.2.3 lists five key indicators for the health governance module. These indicators address the main components of the linkages in the health governance framework between different health system actors, with special emphasis on the role of citizens in providing feedback to the state and health providers and the methods by which government develops national policies and regulations that affect the health sector. The indicators are particularly useful to: (1) monitor service delivery improvements over time; and (2) guide a team with severe time constraints to focus on the most important measures of governance. Depending on the scope and time and resources available for a particular assessment, this list of key indicators can be modified.

Table 3.2.3 Key Indicators Table

No.	Indicator
8.	The national government is transparent with regard to health sector goals, planning, budgeting, expenditures, and data. It regularly communicates with stakeholders in the health sector.
9.	The public and concerned stakeholders have the capacity and opportunity to advocate for health issues important to them and to participate effectively with public officials in the establishment of policies, plans, and budgets for health services.
12.	Public and private sector actors, civil society organizations and other concerned stakeholders (e.g., community members) have regular opportunities to meet with managers (directors) of health service organizations (hospitals, health centers, clinics) to raise issues about service efficiency or quality.
21.	Government officials rely on research and evaluation studies and existing HIS when they formulate laws, policies, strategic and operational plans, regulations, procedures, resource allocation decisions and standards for the health sector.
22.	Health sector regulations (protocols, standards, codes of conduct, and certification procedures) are known and enforced in training institutions and health facilities.

2.4 Summarizing Findings and Developing Recommendations

Section 2, Module 4, describes the process that the HSA 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 in the assessment report (see Annex 2.1.C for a suggested outline for the report). This process is iteractive; 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.

Analyzing Data and Summarizing Findings

Analysis should take place in three steps. First, the desk-based review should give the interviewer some idea of the main issues of health governance, and guide interview questions. Second, interviews should clarify the issues uncovered in the desk review and give the interviewer more viewpoints to consider. Third, common themes that were evident between interviewees should be identified and findings should be developed based on these themes. The steps are discussed in more detail in the following paragraphs.

Documents such as the national health strategy, relevant legislation, and other health assessments are useful in determining governance challenges in the country, and informing the interviewer's questions. As has been mentioned above, because the leadership and governance module relies much more on qualitative data than do the other technical modules, the in-country interviews are particularly important in clarifying issues and refining findings – in addition to possibly leading to new issues and findings. By asking similar questions of a range of public and private sector health system actors, the interviewer gets multiple viewpoints and a broad understanding of the health system. For example, a public health provider may have a different perspective on facility licensing requirements than a private health care provider.

Table 3.2.4 provides an easy way to summarize and group findings. (This process is part of Step 4 for summarizing findings as described in Section 2, Module 4.) It organizes each building block module by topical area. Rows can be added to the table if additional areas are needed to accommodate the HSA country context. In anticipation of working with other team members to put findings in the SWOT framework, each technical team member can label each finding as a strength, weakness, opportunity, or threat. (See Section 2, Module 4. for additional explanation on the SWOT framework.) The "Comments" column is used to highlight links to other modules and possible impact on health system performance in terms of equity, efficiency, access, quality, and sustainability. Examples of system impacts on performance criteria are summarized in Annex 2.4.B. Additional guidance on which indicators address each of the WHO performance criteria is included in Table 3.2.6.

Table 3.2.4 Template Summary of Findings–Leadership and 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] List impact with respect to the five health systems performance criteria (equity, efficiency, access, quality, and sustainability) and list any links to other chapters.

Table 3.2.5 shows the completed Leadership and Governance SWOT table from the Guyana HSA 2011.

Table 3.2.5 Guyana HSA Leadership and Governance SWOT 2011

	Equity	Access	Efficiency	Quality	Sustainability
Strengths and opportunities	• Civil society is strongly represented in the CCM, involved in activities relating to HIV, and it offers some strong voices on other health issues.	• The MOH has a good relationship with the media and uses them effectively to convey strong health promotion messages to the public.	• Flexibility of GPHC and Region 6 to innovate, including task shifting and incentive programs.	• Existence of health management committees in Region 6 that provide feedback on service quality issues. • Momentum behind the formation and continued strengthening of RHAs.	• Strong political and senior-level ministerial leadership on health systems issues.
Weaknesses and threats	• Few CSOs have the capacity to advocate on non-HIV-related health issues. Only rarely is a variety of viewpoints expressed relating to other health issues.	• Disease-specific forums such as the CCM and National AIDS Committee offer CSOs limited ability to provide input into broader health policy.	• Few forums exist for the MOH and other stakeholders, including regions, development partners, other ministries, and NIS to discuss specific topics of common concern. • Inflexibility of government processes, including the hiring system, funding, and task shifting.	• Health management committees do not exist outside of Region 6.	• Continued reliance of the RHA on RDC funding in Region 6, and for RHDs in all other regions.

Source: Health Systems 20/20 and Guyana Ministry of Health (2011)

After obtaining this stakeholder input, the HSA governance expert must analyze the information to identify common themes. These themes often involve relationships between and coordination of public and private stakeholders, enforcement of policies and regulations across sectors, and degree of decentralization. They can cut across the linkages found in the health governance framework, or even across modules. The common governance themes should be woven throughout the assessment report, where appropriate, in order to understand how issues relate to one another. For example, poor coordination at the subnational level could negatively impact reporting, service quality, facility oversight, and citizen involvement in health decisions. All impacts must be explained in their respective modules. As discussed in Section 1, WHO's health system performance criteria can also be used to examine the strengths and weaknesses of the health system. Table 3.2.6 summarizes the leadership and governance indicators that address each of the five WHO key performance criteria: equity, efficiency, access, quality, and sustainability (WHO 2000).

Table 3.2.6. Suggested Leadership and Governance Indicators Addressing the Key Health System Performance Criteria

Performance Criterion	Suggested Leadership and Governance Indicator
Equity	7. Government and health provider organizations regularly solicit input from the public and concerned stakeholders (vulnerable groups, groups with particular health issue, etc.) about priorities, services, and resources. The government is responsive to external stakeholder input.
Efficiency	11. Private associations and/or civil society organizations (including professional organizations, specialized health-related NGOs, the media) oversee health providers and provider organizations in the way they deliver and finance health services, and follow protocols, standards, and codes of conduct in regard to medical malpractice, unfair pricing patterns, discrimination against clients, and so forth.
Access (including coverage)	16. Information about the quality and cost of health services is publicly available to help clients select their health providers or health facilities.
Quality (including safety)	21. Health sector regulations (protocols, standards, codes of conduct, and certification procedures) are known and enforced in training institutions and health facilities.
Sustainability	14. Health services are organized and financed in ways that offer incentives to public, NGO, and private providers to improve performance in the delivery of health services.

Source: Health Systems 20/20 and Guyana Ministry of Health (2011)

Developing Recommendations

Finally, recommendations that address the findings should be developed. Just as findings often link to other modules, so do recommendations. Section 2 Module 4 suggests an approach for doing this in general. This section focuses on common governance challenges and possible solutions. Table 3.2.7 lists typical governance recommendations that an HSA team might be able to use or adapt to its context.

The governance recommendations must be discussed with the other technical team members to make sure they align with the other modules; no recommendation should be repeated. For example, a recommendation for poor coordination at the subnational level could include setting up regular stakeholder meetings where representatives from providers, citizens, civil society, and government can discuss ways to improve service quality or reporting standards.

Table 3.2.7 Illustrative Recommendations for Governance Issues

Health System Gap	Possible Interventions
MOH planning capacity is weak.	Build policy and planning capacity through 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 training of key planning personnel.
Coordination or communication between the different health actors, including other government agencies, executive branch and the legislature, and non-state providers is weak or nonexistent.	Create an ad hoc intergovernmental committee with strong leadership to establish dialogue among branches of government, private sector representatives, and other key stakeholders. 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.
Donor coordination is weak.	Help establish a donor coordination committee and provide support for setting up and helping the committee to function effectively for an initial period, until it is generally recognized as being useful and therefore becomes self-sustainable. Ensure donor funding aligns with government health priorities.
Government has limited capacity to engage non-state actors in policy and planning.	Build MOH private sector capacity through structural changes in the MOH (e.g., creation of a public-private partnership unit or private sector adviser) and training of MOH staff.
Coordination and dialogue with the private sector is weak or sporadic.	Establish committees or consultative working groups to bring private sector representatives together for purpose of soliciting inputs on their concerns, such as regulations, taxation, business opportunities, and potential barriers to private participation in the health sector.
Conflicting legislation exists.	Provide technical assistance to pinpoint inconsistencies and formulate clarifications. Ensure private sector participation in process to clarify legislation.
Regulatory agencies lack resources to enforce legislation or regulations.	Identify funding sources, beginning with reallocation of MOH resources, to ensure proper enforcement of safety and quality standards.
No system exists for accrediting health professionals.	Provide technical assistance to develop accreditation bodies, standards, and processes. Ensure private sector participation in the process.
Public documents are not being published or disseminated.	Bring this problem to the attention of policymakers to help identify sources of funding to ensure that information regarding patient rights, fee schedules, health entitlements, and other issues are made available to the general public. Provide funding to produce and disseminate widely changes in policies and reform to all actors, particularly private sector providers.

Health System Gap	Possible Interventions
Government officials are less responsive to citizen concerns and ideas, once voiced.	Set up independent mechanisms for tracking decision-making processes and the level of public input into policies can be set up.
There is lack of citizen participation in the definition of health needs and services.	Encourage citizen participation through civil society participation in health planning forums, town halls, or workshops.
Civil society participation is weak or absent.	Assist 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.
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.	Introduce special provisions, such as 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).
The press is not covering important health policy issues	Train media and establish media liaisons in key positions.
Oversight or regulation of health services is weak.	Set up or strengthen independent oversight boards or citizen groups to provide clients with feedback mechanisms for health providers. These structures would need a mandate to fight bias and inequity, unfair pricing patterns, and discrimination, and to help providers to follow existing protocols and standards.
Citizens have no opportunity to meet with health providers.	Organize client provider committees that represent the voices of clients. Additionally, joint forums that include citizens, providers, civil society, and local government provide an opportunity for client power to be exercised.
Health facilities are not actively communicating health financing or service information, such as resource allocation or utilization, to citizen's groups.	Set up committees or forums that facilitate communication. If facilities are not transparent with regard to user fees, or pricing structures are unfair, publically posting user fee schedules could alleviate this problem. Recommend this area be coordinated with those under the Service Delivery module.

2.5 Assessment Report Checklist: Leadership and Governance

- **Profile of Country Leadership and Governance**

  A. Overview of Leadership and Governance (can include):

  a. Look at quality of leadership and governance

  b. Understand the operational model of governance

  B. Level of decentralization:

  a. Examine whether linkages in Figure 3.2.2 are functional and effective

  b. Assess the authority and responsibilities that exist at the national, subnational, and local levels

- **Leadership and Governance Assessment Indicators**

  A. Overall governance

  B. Government responsiveness

  C. Voice: Preference aggregation

  D. Client power

  E. Service delivery

  F. Information, reporting, and lobbying

  G. Compact: Directives, oversight, and resources

- **Summary of Findings and Recommendations**

  A. Presentation of findings

  B. Recommendations

Notes

Module 3
Health Financing

This module describes the components of health financing and provides standard indicators to measure in order to understand the strengths and weaknesses of a country's level and structure of health financing.

FIGURE 3.3.1 IMPACT OF BUILDING BLOCK INTERACTIONS

Introduction

Most health systems in the developing world are characterized by mixed public and private financing and delivery of care. For a health system to perform well – that is, to provide needed, good-quality health services to all who need the services – public and private financing agents need to generate an appropriate amount of revenue from all sources relative to what is possible in the country; pool risk effectively; create appropriate incentives for quality service provision from all providers including public, private, and not-for-profit; and allocate resources to the most effective, efficient, and equitable interventions and services irrespective of the sector. These functions should be managed efficiently, minimizing administrative costs. Health expenditure data show that, although the public-private mix varies significantly by country, more than half of total health spending is private out-of-pocket in at least 19 countries in Asia and 15 countries in Africa, including many of the world's most populous nations (China, Bangladesh, India, Nigeria, Pakistan). Governments can also nurture pro-poor health care financing and service delivery programs that show promise to improve health and ensure financial safety of the most vulnerable.

This module looks at how the HSA approaches the health financing building block.

- Subsection 3.1 defines health financing and its key components and describes the process of resource flows – public and private – in a health system.
- Subsection 3.2 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.
- Subsection 3.3 presents the indicators on which this part of the assessment is based.
- Subsection 3.4 provides guidance on how to synthesize findings and presents suggestions for possible solutions to the most common problems in health system financing.
- Subsection 3.5 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

TIP

Conducting the Assessment

- Select only indicators that apply to the specific country situation.
- Conduct a thorough desk review of all available secondary data sources before arriving in country.
- Stakeholder interviews should focus on filling information gaps and clarifying issues.
- Coordinate stakeholder interviews with team members so all six modules are covered and avoid interviewing the same stakeholder twice.
- Look at all health actors – public, for-profit and not-for-profit, involved in delivering health services.
- Tailor assessment questions to reflect the level of decentralization so the questions are relevant to the interviewee.
- Schedule team discussions in country to discuss cross-cutting issues and interactions.
- Finalize an outline for the assessment report early on so sections can be written in country.

3.1 What Is Health Financing?

In 2000, WHO defined 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"; 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). In 2007, it expanded on the definition: "A good health financing system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient" (WHO 2007).

Based on these WHO definitions, this module discusses health financing – its functions, payment systems, the effect of health system decentralization on financing, indicators by which to assess it, and how to synthesize assessment findings with those of the other building blocks. The module draws from a Partnerships for Health Reform Primer for Policymakers on provider payment methods (Wouters 1999) and a discussion of funding health care by Mossialos and Dixon (2002).

Health financing has three key functions: 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 some way 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 the funds and purchase health care services from providers) could be government or independent public agencies (such as a social security agency), private insurance funds, or public and private health care providers.

- **Pooling of resources,** 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" health care, by charging more than the cost of production for a service or a group so that less than the cost of production can be charged for another service or to another group.
- **Purchasing of health services** is the mechanism by which those who hold financial resources allocate them to those who produce health services. 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 is also the agent that pools the financial resources. Purchasers of health services are typically the MOH, social security agency, district health boards, insurance organizations, and individuals or households (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.

3.2 DEVELOPING A PROFILE OF HEALTH FINANCING

Figure 3.3.2 shows a generic model of the flow of health care resources from sources of funds to health service providers. The assessment technical team member should redraw the flowchart to reflect country-specific characteristics of the health financing process. The payment mechanisms presented by the arrows that connect the various levels of health financing assessed are in Subsection 3.3 below, on indicators. Customizing this flowchart will facilitate the process of synthesizing the findings from this module (Subsection 3.4). Reports on HSAs that were done using this HSAA manual contain examples of how the flowchart may be structured.[1]

FIGURE 3.3.2 HEALTH FINANCING FLOW

Note: OOP=Out-of-Pocket

[1] See the Health Systems 20/20 project website, http://www.healthsystems2020.org/content/resource/detail/528/ or healthsystemassessment.org

Collection and Pooling

The MOF is typically the central revenue collector of funds for the public health care system. The MOF receives funds from foreign donors (in the form of grants or loans) and from private firms and individuals (in the form of taxes). Foreign donor funds for health can be in the form of general budget support or earmarked for a specific sector (such as health). The pooling of resources, the next step in health financing, is conducted by intermediaries and revenue managers, which could be the MOH and other central 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) or regional governments, social insurance and sickness funds, community-based insurance schemes, and private insurance entities.

The MOH receives government budget funds allocated for health from the MOF; the level of government decentralization dictates whether all or only part of the government health budget goes directly to MOH. (See below and the Country and Health System Overview Module 3.1 for a more detailed discussion of decentralization issues.) The MOH may receive donor funds through a health SWAp arrangement, whereby external donors pool aid resources and decide jointly with the MOH on their allocation. The MOH often receives a large share of donor contributions for health earmarked for specific disease programs and as in-kind contributions (e.g., vaccines, medicines, and technical experts).

Other ministries and 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 organizations also receive government funds, either as direct subsidies (usually when the 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 social health insurance contributions (usually children, the elderly, military recruits, civil servants, or the indigent or unemployed). NGOs working in the health sector receive direct contributions from private donors and multilateral organizations, often for disease-specific programs.

Payment Methods

All intermediaries and revenue managers as well as individuals and 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; allocations typically depend on the type of facility, its historical budget, number of beds (for hospitals), per capita rates, or utilization rates for past years.
- Capitation allocates a predetermined amount of funds per year for each person enrolled with a given provider (usually a primary care provider, such as a 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 such schemes.
- Case-based payment is the estimated cost of all interventions typically prescribed for the treatment of a given condition. It pays the provider for each patient treatment episode, according to a predetermined payment schedule.
- 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 hospital department.
- Fee for service is the out-of-pocket payment that patients make for each health care service at the point and time of use (also known as a user fee in the public sector), or payment by other entities (such as a health insurance organization) to providers for individual health services provided to beneficiaries.

TIP

Prioritizing Indicators

When constrained by limited time or resources prioritize as follows:

- First, assess Indicators 1-6, because data for them are readily available from the Health Systems Database (http://healthsystems 2020.healthsystems database.org).
- Second, assess Indicators 7, 10, 11, 13, 14, 15, and 19.
- Third, if possible, assess all remaining indicators to get a more comprehensive picture of health system financing in the country.

Country Story: St. Kitts and Nevis

HSA interviewees were passionate about finance issues. Favorite topics were: (1) government not having enough funds to do what people knew was needed; (2) frustration with lack of donor coordination and wasted donor resources; (3) equity issues – either people with ability to pay receiving exemptions from user fees, or poor people not being able to get the advanced care they needed.

Financing shortages – due to both the global economic crisis and the rise of chronic and noncommunicable diseases, which are very expensive to manage – are a concern for the MOH. The HSA team recommended that the government estimate future health sector costs and develop a national insurance system to ensure sustainable financing; stakeholders defined "develop sustainable financing mechanism for health" as a key priority recommendation at the dissemination meeting.

Health Financing in Decentralized Systems

The level of decentralization of the public health care sector and the government overall can influence how resources flow through the health system, as well as issues such as service provision (allocation of resources across programs, budget categories, etc.) and incentives that encourage providers to deliver high-quality services.

Under general government decentralization, a portion of government funds allocated to the public health care sector are distributed by the MOF to the MOH, for the general programs the MOH administers. The MOF also allocates block grants to decentralized political units (such as provincial, district, or local government administrations or district councils), typically based on criteria such as share of total population or burden of disease. These 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 MOF might pay certain recurrent costs such as the salaries of employees of public health facilities; here, funds flow directly from the MOF to MOH providers, and local governments do not have discretion over them. In many decentralized systems, local governments at different levels collect taxes and have authority to allocate local tax revenues among health and other sectors; they often fund a large share of the public health administrative unit.

In systems with only MOH decentralization, government funds for public health care flow to providers through a hierarchy of MOH administrative units, though the MOF still sometimes pays salaries directly. When government funds for health are allocated within the public 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 MOF.

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.

An assessment of the level of financial decentralization (as discussed in Annex 3.1.A) provides some context for the examination of health financing in the assessed country.

3.3 Assessment Indicators

This section focuses on health finance indicators – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and, in the "Interpretation" and "Issues to Explore" subsections, shows how to work with indicators. Finally, the section identifies key indicators to which the HSA technical team member can limit their work, if time precludes their measuring all indicators.

Topical Areas

The indicators for this module are grouped into four topical areas (see Table 3.3.1), which cut across the three main functions of health financing that were illustrated in Figure 3.3.2 (revenue collection, pooling of resources, and purchasing).

Table 3.3.1 Indicator Map—Health Financing

Topical Area	Health Financing Function	Indicator Numbers
A. Amount and sources of financial resources	Revenue collection	1–6
B. MOH budget and expenditures	Pooling and allocation of resources Purchasing	7–14
C. Health insurance	Pooling and allocation of resources Purchasing	15–19
D. Out-of-pocket payments (user fees and fee-for-service/product	Purchasing	20–22

Data Sources

There are many sources to help the technical team member assess and analyze the health financing system. They are organized into three categories:

1. **Standard indicators:** Data are drawn mainly from existing and publicly available international databases.
   - Data on information products available in the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/)
   - Other surveys that contain a wealth of information, and that can provide more nuanced analysis of access, equity, efficiency, and quality of health services in a specific country include:
     - Demographic Health Surveys (DHS)
     - AIDS Indicator Survey (AIS)
     - Household health expenditure survey
     - National Health Accounts (NHA)
     - Living Standards Measurement Survey (LSMS)

2. **Secondary sources:** Indicators should be gathered to the extent possible through desk review of reports and other documents.
   - National health financing policy document (if available)
   - MOH budgets; central and local government budget data
   - Public expenditure reviews (if available)
   - Public expenditure tracking surveys if available
   - Data, reports, and presentations on health insurance in the country (as available)
   - Special studies on user fees and unofficial payments
3. **Stakeholder interviews:** The document reviews should be complemented, and any information gaps completed, during discussions and interviews with key informants and local stakeholders. (See also, Summary of issues to explore in Stakeholders Interviews in Annex 3.3.A)
   - MOH, MOF, and Ministry of Local Government officials
   - Local government officials
   - Local health administrative units
   - Staff involved in NHA if available
   - Representatives of donor agencies, NGOs, and consumer advocacy organizations
   - Users of health services (through focus group discussions)
   - Medical and nursing professional associations
   - Health facility managers (both public and private); private clinicians and support personnel, and/or representatives of NGOs and other private providers receiving government or donor (e.g., MOH or social security) funds for service delivery.
   - Social security officials
   - Representatives of health insurance bodies and organizations

TIP

Ensure Exchange Rate Consistency

Use the exchange rates given by the World DataBank to convert indicator measures from local currency in USD (Word Bank 2010b). For cross-country comparisons, ensure that all amounts are in international USD (i.e., adjusted for purchasing power parity [PPP]).

For comparisons over time, ensure that figures are adjusted for inflation. Inflation rate data are available from the IMFs World Economic Outlook Database (IMF 2010).

Data sources for health financing indicators may not be readily available. The technical team member will be responsible for organizing and developing a process for the review of records, documents, and key informants' and stakeholders' interview responses to obtain information necessary to make judgments on the indicators listed.

While the health financing topic has many indicators, it is not essential to measure all of them, especially if they are not relevant in the assessment country. This manual has filters to guide the selection of critical indicators; the "screening questions" placed throughout this section are a guide to those indicators that may be skipped. If time limitations prevent examination of all relevant indicators, the box above, on priority indicators, provides guidance on how to prioritize the work. Further guidance on a short-list of key indicators can be found in the next subsection.

Answering a screening question "no" may indicate that the country is missing an important aspect of health financing. In such cases, the technical team member should consider investigating the reasons why and defining potential recommendations or interventions to address this problem. For example, if the country has no private health insurance market, a possible recommendation is that donors assist the country to develop private insurance.

Detailed Indicator Descriptions

This section provides an overview of each topical area and then a table that gives a definition and interpretation of each indicator.

Topical Area A: Amount and Sources of Financial Resources

Overview

This group of indicators measures 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. For all indicators in this group, the technical team member should do regional comparisons and look at trends over time in the country. The Health Systems Database has automated functions for producing such comparisons in table and chart formats. Regional comparisons are often used to suggest where a country fits in relation to neighboring countries or countries in the same region with similar economic and population profiles. Regional comparisons, however, are not necessarily good benchmarks when the HSA country has important differences from its regional neighbors in, for example, standards of living, per capita incomes, health system structure, and extent of donor contributions.

Amount and Sources of Financial Resources

Indicators	Definition and Interpretation
1. Total expenditure on health (THE) as % of GDP	Level of THE expressed as a percentage of GDP. THE is the sum of all outlays for health maintenance, restoration or enhancement paid for in cash or supplied in kind. It is the sum of General Government Expenditure on Health and Private Expenditure on Health (WHO 2008). The percentage of 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/or 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: Country and Health System Overview Chapter, Indicators 6 (GDP per capita) and 8 (total health expenditures per capita)

Amount and Sources of Financial Resources cont...

Indicators	Definition and Interpretation
2. Per capita THE at international dollar rate	Per capita THE expressed in purchasing power parity (PPP) terms or international dollars. International dollar rate or PPP: A hypothetical currency unit that takes into account differences in relative purchasing power among countries (WHO 2008). This indicator reflects the average amount of resources spent on health per person, measured in international USD (i.e., adjusted for PPP across countries). It is another standard measure that can indicate whether spending on health is adequate to achieve appropriate access and quality. There is no universal benchmark for the minimum amount of per capita THE. According to the Commission on Macroeconomics and Health (WHO 2001), providing a package of essential health interventions (including HIV/AIDS treatment) in low-income countries in sub-Saharan Africa would require between USD 34 and USD 38 per capita per year over the period 2007–2015; the corresponding estimate for countries in the South and East Asia region is USD 29–USD 32 (WHO 2001; UNESCAP 2007). Countries with relatively low per capita spending (e.g., below USD 30 per capita) are likely to have poor access, low-quality health care, or both. Module link: Country and Health System Overview Chapter, Indicator 8 (THE per capita)
3. General government expenditure on health as percentage of total government expenditure	Level of general government health expenditure (GGHE) expressed as a percentage of total government expenditure. GGHE: The sum of health outlays paid for in cash or supplied in kind by government entities, such as the MOH, other ministries, parastatal organizations, or social security agencies (without double counting government transfers to social security and extrabudgetary funds). It includes all expenditure made by these entities, regardless of the source, and so includes any donor funding passing through them; transfer payments to households to offset medical care costs and extrabudgetary funds to finance health services and goods; and current and capital expenditure (WHO 2008). This indicator illustrates the commitment of government to the health sector relative to other commitments reflected in the total government budget. The allocation of the 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. For example, the Abuja Declaration of African Heads of State includes a target of allocating 15 percent for government budgets to the improvement of the health sector. 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. 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. General government expenditure on health as a percentage of total health expenditure	Level of GGHE expressed as a percentage of THE (WHO 2008). This indicator is a measure of the relative contribution of central and local government, relative to THE. 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), and/or (3) reliance on substantial donor assistance. A low value for this indicator also means that the government has limited ability to act to address equity issues. Trends over time are a more reliable measure of the reliability of government spending on health as a share of THE than any single year.

Amount and Sources of Financial Resources, cont.

Indicators	Definition and Interpretation
5. External resources for health as a percentage of total health spending	External resources for health expressed as a percentage of THE (WHO 2008). The share of a country's THE financed by external sources measures the contribution of international agencies and foreign governments to THE. A very high external contribution (e.g., above 10 percent) is a concern for financial and possibly institutional sustainability if the external contributions are withdrawn. Compare this indicator to government health spending as a percentage of THE (Indicator 4 above) to assess the sustainability implications of the share of donor spending. Very high external source health spending suggests that the government would have to increase its health spending by a large proportion to replace external source contributions, should they be withdrawn, to avoid placing the burden on private spending. Because external 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. Also, because external 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 external sources on health (and of the country's dependence on external sources), than any single year. Consider also exploring the distribution of total external sources among key external sources. A high share of external contributions coming from one or a few sources may indicate high potential risk for sustainability of external funding. Assess whether the share of total external funding that is allocated for specific diseases corresponds to their share of the disease burden in the country.
6. Out-of-pocket expenditure as a percentage of total expenditure on health.	The expenditure on health by households and individuals as direct payments to health care providers irrespective of sector. It should be netted from reimbursements from health insurance. This indicator represents the expenditures that households make out of pocket at the time of using health care services and purchasing medicines, relative to THE. Out-of-pocket expenditures exclude payment of insurance premiums, but include nonreimbursable insurance deductibles, co-payments, and fees for service. If out-of-pocket spending represents a large share of THE (e.g., above 60 percent), pooling of private resources is limited and/or government spending on health is low. It means that households usually 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 often represents a high share of THE. Look at special studies or data that might be available on the incidence of catastrophic out-of-pocket health expenditures by households, including variations across income groups (see Alva, Kleinau, Pomeroy, et. al 2009 for review of available resources on this topic). Module link: Country and Health System Overview Chapter, Indicator 10 (out-of-pocket expenditures as percent of private expenditures); Health Service Delivery Module, Indicator 9 (Financial access)

Topical Area B: Ministry of Health Budget and Expenditures

Overview

The indicators in this group are related to 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. This section looks at the types of purchasing mechanisms used by the MOH, such as performance contracts that may be made between MOH and public or private providers and vouchers for health services.

In most countries, multiple government ministries have health-related responsibilities (e.g., Ministry of Education for medical education, Ministry of Defense for military health) and therefore funding for health services or activities are included in their budgets. For purposes of the rapid assessment, the following indicators 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 the box, "Definition of Reccurent and Investment Budget" on this page for definitions.

TIP

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.

Ministry of Health Budget and Expenditures

Indicators	Definition and Interpretation
7. Trends in MOH planned and realized expenditures	Planned (or authorized) expenditures represent the approved budget amount for a given time period; realized expenditures are the actual expenditures that have occurred at the end of the budget period. The four questions are commonly used to measure whether an MOH budget is a sustainable source of funding for the health sector. Use the template provided in Table 3.3.2 to summarize the data collected for these indicators for the past several years (depending on data availability). a. Do MOH expenditures keep pace with inflation[a] and with population growth? 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. The MOH funding cannot provide the same level of services to people that it provided to them in the previous year(s). b. Does the country have any mandated level of public spending on health as a percentage of total public spending? If not, is the MOH share of the total government recurrent budget increasing or decreasing? If the MOH share of the total government budget is decreasing, this trend indicates a decrease over the years in commitment of the government to fund health. c. What percentage of the total public health budget is for capital investments? Capital investment is investment made in assets such as physical infrastructure and medical equipment. Capital expenditures can be as high as 40–50 percent of the total public health care budget in low-income countries where the infrastructure is being created or restored after years of conflict. Knowing how much capital spending is occurring relative to recurrent spending is important to ensure that capital spending is not wasted or is not siphoning off funds needed for other inputs; for example, once a health facility is built, are there funds to stock it with health workers and medicines? d. What is the trend in difference between the authorized budget and actual expenditures? If actual expenditure is less than what is planned or authorized, then the budget is unreliable and unpredictable as a source of funds for health. In such cases, 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). In countries with SWAp funding from donors, the funds are often channeled through the MOH budget. In this is happening in the HSA country, the technical team member should examine changes in SWAp funding amounts when assessing MOH budget increases or decreases.

[a] Inflation (measured by the consumer price index) and rate of population growth are indicators in the Country and Health System Overview chapter.

Table 3.3.2 Template; MOH Budget Trends: Authorized or Planned and Actual Expenditures

Budget	(Year)				
	Authorized or Planned Expenditure		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					

Ministry of Health Budget and Expenditures cont...

Indicators	Definition and Interpretation
8. Process of MOH budget formulation	This indicator examines the method used by national and subnational health management to estimate projected expenditures for the following fiscal year. a. Are MOH budgets developed based on last year's budget or historical budget totals, or are they based on estimates of resources required to meet the population's health needs? When budgets are historically based, they usually allocate funds based on the number of hospital beds or health workers without regard to the hospital occupancy rate; they simply repeat the amount of funding budgeted for the previous year, with perhaps an 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 as well as needs for public health prevention; disease control; information, education, and communication; and other programs according to epidemiological and health profiles in the various areas of the country. Over time, historical budgeting does not reflect changing health care funding requirements. This leads to inefficiency in the health system, with more funding than needed allocated to some functions and less than needed to other functions. 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 where they are needed. Such budgeting can point to underused facilities that can be closed or consolidated. 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)? 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 MOF. Bottom-up budgets, if written, approved, and executed well, are more likely than top-down budgets to reflect actual health funding needs. They are more likely to allocate funds effectively and to be sustainable. Although the bottom-up budget preparation approach may exist as policy, examining the practice to see if local input actually influences central MOH decision making is important. c. Does the MOH have the technical and organizational capacity to provide direction and oversight of health financing activities? This indicator speaks to the capacity of the MOH to provide overall guidance and direction to health financing. Typically, there is an MOH unit, often within the policy or planning department, with an explicit mandate for health financing (e.g., Health Economics Unit). Assess if such unit exists, if it has a clear mandate/role within the MOH, and if it is staffed by an adequate number of technically qualified staff; if it has access to necessary information and institutional resources (such as IT infrastructure); and if it has appropriate influence within its department and the MOH in general. d. Does the MOH have access to local technical resources in health financing? Is the MOH using these resources effectively for budget formulation and setting health financing policies? This indicator speaks to the availability of local technical resources in health financing, including capacity within the country to carry out and use health financing research. Investigate to find answers to the following questions: Are there local institutions that train health financing specialists or health economists (e.g., a specialized higher education program in a major local university)? Are there local organizations that produce health financing research such as NHA, Public Expenditure Reviews, and other health economics studies? These organizations might include institutes, think tanks, private consulting organizations, or specialized unit(s) within the MOH. To what extent does the MOH effectively use the data and research produced by such organizations? For example, does the MOH use NHA data in formulating health financing policies or budget allocations? Does it use evidence from cost-effectiveness or cost-benefit studies in prioritizing resources? Assessing the gaps in availability of local technical capacity to produce and effectively use health financing research and information can help the assessment team identify important areas for capacity-building assistance. Note that the information needed for this indicator is likely to be found in the Leadership and Governance module.

Ministry of Health Budget and Expenditures cont...

Indicators	Definition and Interpretation
9. MOH budget allocation structure	Budgets may be structured by line items, programs, or another or mixture of methods. What structure does the MOH use to allocate its budget? Line items? Programs? Other? Line-item budgets allocate funding by object class (e.g., salaries, electricity, fuel, medicines, and rent). Program budgets allocate funding by program or service delivery area (e.g., Expanded Program on Immunization (EPI), TB, HIV/AIDS prevention and treatment, maternal health care or broadly defined primary health care (PHC), prevention, or curative and inpatient hospital care).

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 11.

Ministry of Health Budget and Expenditures cont...

Indicators	Definition and Interpretation
10. Central and local government budget allocations for health in decentralized systems	Often given as a percentage of total central or local budget spending on health. The budget allocation for health includes all funds earmarked for health-related spending at the various levels of government. a. How does the central government allocate funds for health to lower-level administrative units such as states, regions, provinces, and districts? Different methods of allocating funds from the central to local levels offer the local levels different incentives for the way they use those funds for health. Block grants are the most common form of allocation to local levels in systems where government administrative authority is decentralized. If instead grants are earmarked for health and if those earmarks are adjusted for the locality's health needs (e.g., 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. 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? Local government taxing authority that can raise and allocate additional funds for health increases the possibility of sustainable and adequate health funding. In general, experience 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. 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, etc.). 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.

Ministry of Health Budget and Expenditures cont...

Indicators	Definition and Interpretation
11. Percentage of government health budget spent on outpatient/inpatient care	Amount of government funding spent on outpatient care divided by total government spending on health; amount of government funding spent on inpatient care divided by total government spending on health This is a general indicator of 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. 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 the funding in any one year. If the share the MOH budget allocates to outpatient services declines steadily, or periodically, it means that outpatient care is being cut in favor of inpatient spending. Such cuts can, indicate that outpatient care is declining as a government priority or that the disease profile of the population is changing in a way that requires more inpatient care. Donor funding is frequently targeted to PHC and related outpatient care services. Examine whether this is the case and whether the MOH budget provides less funding for PHC and other outpatient care because it is relying on donors to cover those costs. Note that although a common indicator for spending by level of health services compares spending on PHC and hospital care, comparing spending on *outpatient* and *inpatient* services is preferable because it accounts for PHC services that are provided at outpatient departments of hospitals (and avoids overestimating 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. Finally, 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. *Module link:* Health Service Delivery Module, Indicator 11 (primary care or outpatient visits per person per year)
12. Recurrent government health budget allocation	Percentage of the government health budget spent on: • Salaries of health workers • Medicines and supplies • Facility and equipment maintenance costs • Other recurrent costs (e.g., administrative costs at central and district levels, in-service training) 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 an MOH budget 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 lack the supplies needed to treat patients. This shortfall affects the quality of care, as well as equity. However, even when a high proportion of the MOH budget is allocated to salaries, it may not be sufficient to adequately pay health workers. The HSA team should examine whether salaries are paid on time and regularly, and compare the distribution of spending to that of other countries with a similar per capita income level, if possible. 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 Medical Products, Vaccines, and Technologies Module 3.6. *Module link:* Medical Products, Vaccines, and Technologies Module, Indicators 3 (government expenditures on pharmaceuticals) and 32 (proportion of annual expenditure on medicines financed by government budget, donors, charities, and private patients).

Ministry of Health Budget and Expenditures cont...

Indicators	Definition and Interpretation
13. Local-level spending authority and institutional capacity	The degree of autonomy that administrative units below the central level have in allocating their health budgets, as well as their ability to do so. a. Do administrative units below the central level (e.g., provincial, district, local government areas) have autonomy in allocating their health budget? Local government autonomy to allocate health budgets can help ensure that budget allocation is responsive to local health needs and priorities. b. Do MOH health facilities have autonomy in making recurrent cost expenditures such as procurement of supplies, gasoline, and medicines, and hiring of supplemental personnel? Having authority to make decisions about allocating spending to the service delivery costs at the facility level is important to ensure 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. c. Does a system exist at the central, district, or facility level for tracking and auditing budget expenditures? 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. d. Do local governments have the capacity to implement health financing policies? Institutional capacity of local governments to implement national health financing policies, develop budgets that align with district/local health plans, use spending authority effectively, track and report health expenditures, and implement user fee policies according to guidelines is important to ensure adequate health financing functions at the local level. This indicator is particularly relevant in a decentralized system where local governments have increased responsibilities and authority for health care. Assess whether local government staff responsible for the health sector are trained in basic functions of health financing, and whether they have access to relevant IT infrastructure. Note that the information needed for this indicator is likely to be found in the Leadership and Governance chapter (see Module 3.2). Exploring the different administrative and service delivery levels of the system separately on this issue is important because different facility levels (e.g., health post, clinic, secondary, or tertiary hospital) may have different rules for autonomy and expenditure tracking. 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, as well as different levels of capacity in health financing. *Module link:* Medical Products, Vaccines, and Technologies Module, Indicator 15 (procurement processes). Country and Health System Overview Module, Annex 3.1.A. (Decentralization)

Ministry of Health Budget and Expenditures cont...

Indicators	Definition and Interpretation
14. Contracting mechanisms between the MOH and public and private service providers	Performance contracting (sometimes called pay for performance) is increasingly used by the public sector (MOH) for purchasing health services from both public and private sector providers. Contracts relate health worker pay or facility allocations to performance (measured by, for example, indicators of quality of care, number of patients served, and efficiency of resource use). 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. a. Within the public sector (MOH, social health insurance providers, or both), are any contracting mechanisms or performance incentives used? Salaries alone have proven to provide the least incentive for outstanding health worker performance. Nevertheless, salaries are the most common method that MOHs use to incentivize public sector health workers. Public sector performance contracts may also relate facility recurrent cost budget allocations to facility performance (e.g., percentage of children the facility fully immunizes, percentage of relevant patients receiving family planning counseling, percentage of cases with correct diagnosis). The performance criteria promote provision of services to attain MOH coverage targets. b. Are any contracting or grant mechanisms or performance incentives in place in the funding arrangements between the MOH and private health care providers? Performance contracting is becoming more common in the arrangements between the public sector and private providers. Traditionally, public payments to NGOs and other nonprofit 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. Distinguish between inpatient hospital care and PHC and between private nonprofit (NGOs, FBOs) and commercial providers, if relevant. Assess with key informants whether alternative or revised payment methods or health worker incentives may be needed. c. Are there any programs that provide vouchers to specific population groups for using health services free of charge (e.g., vouchers for maternal care provided to pregnant women)? Vouchers for health services are a health financing mechanism to subsidize the price of health products and services for a target population. Voucher recipients can use the vouchers to pay - partially or fully - for eligible health services received from providers contracted by the voucher program. Voucher programs aim to improve access, equity, and quality of health care. Describe the target group(s) that are beneficiaries of such program(s), the types of services covered, and the types of providers participating in the program(s). Investigate any issues with targeting of voucher recipients – for example, to what extent are the intended beneficiaries receiving and using the vouchers, and is there "leakage" of vouchers to non-eligible recipients? *Module links:* Country and Health System Overview chapter, (structure of government and private sector in health care); Service Delivery chapter, Indicator 3 (private sector service delivery)

Topical Area C: Health Insurance

Overview

The indicators in this section investigate the different types of insurance schemes (if any) operating in the country of interest. Three major types of health insurance may be available:

- National health insurance (NHI): a government-managed insurance financed through general taxation, usually with mandatory coverage for all citizens. Often, the government directly provides health services but a growing number of African NHI schemes allow for consumer choice and include private sector providers as well.
- Social health insurance (SHI): a government-organized program that provides a (usually) specified benefit package of health services to members. It is frequently funded by mandatory payroll deductions for formal sector employees, but it might also include voluntary membership from those who are not formally employed. In some programs, government subsidizes premiums for population groups such as the poor, children, and pregnant women.
- Private health insurance, which can be:
  - Community-based health insurance (CBHI): a nonprofit private health insurance that provides a (usually) specified benefit package of health services to members who pay premiums to a community-based and community-managed health fund. CBHI is based on an ethic of mutual aid among members.
  - Private for-profit health insurance: a voluntary program that covers a specified benefit package of health services and is offered by private for-profit insurance companies. It is funded by premiums (and often co-payments and deductibles) that members pay to the insurance company, with premium levels usually charged based on the purchaser's risk rather than ability to pay.

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. Depending on the financing scheme some private (commercial and not-for-profit) providers are paid to deliver BBP services to target population groups.

If CBHI or other private health insurance (or both) exists but covers very small populations or provides very limited coverage, this rapid assessment need not spend much time gathering data about them. Simply noting that small schemes exist is sufficient. Nevertheless, one should not discount these small schemes when considering strategies to improve risk pooling.

Use the guidelines for information and data collection provided in Indicators 15 through 18 to fill in Table 3.3.3. These data develop a profile of the three major types (NHI, SHI, and/or private) of health insurance that might be available in the 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, and provider payment mechanisms and subsides 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, CBHI schemes are typically very small, but they are of increasing interest to governments and international donors.

Table 3.3.3 Characteristics of Insurance Schemes: National Health Insurance, Social Health Insurance, and Private Health Insurance

Indicator	NHI	SHI	Private Health Insurance
15. Population coverage • Members: who is covered? • Percentage of total population covered			
16. Services covered • Types of services covered • Key exclusions • Waiting periods			
17. Funding mechanisms • Sources of funding • Government subsidies			
18. Payment mechanism for providers • Types of payment mechanisms used • Quality or accreditation requirements for provider payments			

Screening Question:
Do NHI, SHI, CBHI, or other private voluntary health insurance exist in the country? If yes, continue with Indicators 15 through 19; otherwise proceed to the next topical area.

Health Insurance

Indicators	Definition and Interpretation
15.Population coverage of health insurance	The number and percentage of population and its demographic and locational characteristics. a. Who belongs to the scheme? Public employees? Formal sector (non-public) employees? Informal sector: urban and rural workers? 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 whenever 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. Generally, social and private health insurance schemes cover primarily urban populations working in the formal sector for wages. CBHI 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. b. What percentage of the population is covered? 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. If any of the types of voluntary insurance have existed for several years, exploring their evolution over time is useful to see if population coverage has expanded. 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?
16. Services covered by health insurance	General description of the types of services covered by the various insurance schemes. a. Which services are covered by the insurance (e.g., a basic package of ambulatory PHC, hospital inpatient services)? The greater the range of health care services covered by insurance, the more financial protection that members have against high costs of health care. b. Are any priority health services (e.g., child immunizations, family planning, childbirth, counseling and testing, antiretroviral therapy for HIV-positive patients) excluded from the benefit package? Also important is finding out if the government offers priority services (e.g., immunization, family planning) free of charge at the time of use (e.g., as part of a BBP). In that case, one would not expect to find those services included in an insurance package. c. What co-payments are required? Is coverage provided for medicines and, if so, at what prices or co-payments? 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. If co-payments for covered services are very high, exploring how those requirements might have affected use of covered services is important.
17. Funding mechanisms and sustainability of health insurance	The means through which insurance schemes are financed can have a direct impact on their sustainability.
	Is the insurance adequately funded, or does it consistently have losses? 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). Does the government or another entity (e.g., charities, NGOs) subsidize membership for any groups? (For example, does it pay premiums for the indigent or elderly or contribute a general subsidy, such as from general tax revenue?) 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.

Health Insurance cont...

Indicators	Definition and Interpretation
18. Provider payment mechanisms under health insurance	See subsection 3.2 for definitions of the most common mechanisms that purchasers of health services use to pay providers. What are the mechanisms used by insurance schemes to pay health service providers? 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 jeopardize quality. Quality assurance is promoted if only the providers who are accredited or licensed can be paid for services covered by the insurance plan.
19. Institutional capacity of health insurance organizations	This indicator speaks to a country's capacity to manage health insurance schemes and therefore expand coverage. Do health insurance bodies (e.g., NHI or SHI agency, CBHI committees) at various levels have adequate technical and organizational capacity provide policy direction and oversight of health insurance entities, and implement and manage health insurance functions? The technical team member should focus only on NHI or SHI organizations, and CBHI if a vibrant CBHI movement exists, or there is interest among donors and the MOH to develop CBHI at the national scale. Health insurance schemes ultimately must be managed by organizations with technical and institutional capacity to set benefit packages and premiums, manage the claims process, and manage financial resources effectively. Explore whether health insurance managers at various levels have timely access to necessary data and information, and the ability to use this information effectively for health insurance policy, planning, and oversight. Interview health insurance managers at various levels to assess their technical qualifications and to determine whether they have the institutional support to be effective. Donors supporting health insurance in the country can also provide insights on the gaps in organizational and institutional capacity that might need to be addressed in order to build an effective health insurance system or unit.

Topical Area D: Out-of-Pocket Payments (User Fees and Fee-for-Service/Product)

Overview

The indicators in this section help investigate out-of-pocket payments that consumers make for health services.

The term most commonly used for this payment in the public sector is user fee. User fees are usually a fixed charge that pays for services, supplies, and medications provided by public health care facilities. The primary purpose of user fees is to help facilities with cost recovery, and thus to improve quality and sustainability of service provision. Another purpose is to prevent unnecessary use of services, because cost-sharing discourages overutilization of health care or use of services at a higher level than necessary. However, user fees add a financial barrier to the use of services, especially for the poorest, thus producing inequalities.

The private sector term for user fee is fee for service. Its primary purpose is to enable the private health care provider to cover costs as well as earn a profit. Many private providers – particularly small, individually owned businesses – barely eke out an existence serving lower-income groups while other private providers/practices earn a handsome living serving wealthier income groups.

The challenge for policymakers is to create a risk-pooling mechanism that captures all the out-of-pocket expenditures that can be used to reimburse public or private health care providers in order to mitigate against catastrophic health expenses and help ensure equitable access to health care.

Out-of-Pocket User Fees

Indicators	Definition and Interpretation
20. Policies for user fee payments in the public sector	This indicator examines whether formal user fees are in place, at which levels of care, for what types of services, and whether there are exemptions for certain groups (elderly, poor, invalid, veterans, etc.). a. Do patients have to pay 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: for their stay (e.g., per day or per admission); for doctors' or nursing services; for medicines, supplies, and laboratory and other diagnostic tests? c. Are there policies (fee exemptions or waivers) that remove the payment of user fees for some patients using PHC services, in particular[1]: • Socio-demographic groups, such as children under age five, students, elderly, military personnel, health care workers, or the poor? • Health care services, such as immunizations, services included in a BBP (see definition box page 29), TB-DOTS (Direct Observation Treatment, Short Course), other chronic care? Fee waivers and exemptions can promote equity of financial access for the poor and 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. Find out if fees are set nationally or locally. If locally, they are more likely to be in line with the local population's ability to pay. Investigate formal criteria for identifying patients who are eligible for fee exemptions or waivers, especially 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 lost through exemptions. If not, there is an incentive for the facilities to give fewer exemptions. d. To what extent are user fee policies that exist followed in practice? Explore the reasons for gaps between user fee policies and practices. *Module link:* Health Service Delivery Module, Indicator 10 (user fee exemption and waivers); Medical Products, Vaccines, and Technologies Module, Indicator 33 (cost recovery methods)

[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 19c.

Indicators	Definition and Interpretation
21. Allocation of user fee revenues	This indicator examines the portion of user fees that are retained at the facility where they were collected as well as how user fee revenues are spent. a. Are all or a portion of user fee revenues retained at the facility where they are collected? Allowing a facility to retain and use the user fee revenues it collects is an incentive for the facility to collect the fee, and fee revenue can lead directly to improvements in quality and access to care. 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? 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. Community participation in the use of fee revenues can increase the probability that they will be used to improve quality. c. What is the average percentage that user fee revenue constitutes of non-salary operating costs for hospitals and for PHC facilities? 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. *Module link:* Module 3.2 Leadership and Governance, Indicators 8, 15, 16, and 22 (financial accountability of public authorities); Module 3.6 Medical Products, Vaccines, and Technologies Chapter, Indicator 33 (cost recovery methods)
22. Informal user fees in the public sector	Informal user fees in the public sector are fees that are not officially sanctioned. a. Are informal user fees common in the public health sector? If so, what is the typical form of informal fee payments? Informal user fees often are 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. b. To what extent are informal user fees a financial barrier to use of services? 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.

KEY INDICATORS

Table 3.3.4 identifies six key health financing indicators. These indicators are particularly useful to: (1) monitor and track health financing progress over time; and (2) guide a technical team member with severe time constraints to focus on the most important measures of health finance. Depending on the scope, time, and resources available for the particular assessment, modify this table and create a list of key indicators.

Table 3.3.4 Key Indicators Table

No.	Indicator
1.	THE as a percentage of GDP
2.	Per capita total health expenditure at international dollar rate
4.	General government expenditure on health as a percentage of total health expenditure
5.	External resources for health as a percentage of total health expenditure
6.	Out-of-pocket expenditure as a percentage of total health expenditure
15.	Population coverage of health insurance

3.4 Summarizing Findings and Developing Recommendations

Section 2 Module 4, describes the process that the HSA 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 in the assessment report (see Annex 2.1.C for a suggested outline for the report). This process is iteractive; 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.

Analyzing Data and Summarizing Findings

The health financing chapter of the assessment report includes specific suggestions for analysis within the discussion of each indicator. These indicators are best understood when examined as a group by their functions or their topical area.

Using a table that is organized by the topic areas of the chapter may be the easiest way to summarize and group findings; see Table 3.3.5 for a template and Table 3.3.6 for an illustrative example. Rows can be added to the table to reflect the specific country context. In anticipation of working with other team members to put findings in the SWOT framework, each finding should be labeled as an S, W, O, or T (See Section 2 Module 4, for explanation of 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 3.3.5 Template: 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]

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

As discussed in Section 1, Module 1, and Annex 2.4.A, the five WHO health system performance criteria – equity, efficiency, access, quality, and sustainability – can also be used to examine the strengths and weaknesses of the health system (WHO 2000). Table 3.3.6 is an example of how the Ukraine HSA summarized the performance criteria in a modified SWOT table (Tarantino et. al 2011).

Table 3.3.6 Summary of SWOT Findings for Equity, Access, Efficiency, Quality, and Sustainability From the Health Financing Module, Ukraine (2011)

Strengths and opportunities	General health services, HIV/AIDS, and TB	• A relatively high percentage of GDP (7 percent) is spent on health care • Ukraine's health sector is minimally dependent on donor funding • The government is pursuing health financing reforms that could improve efficiency and quality of care • Political and economic imperatives exist to pursue health reform, including an IMF conditional loan • Donor funding of HIV/AIDS, TB is significant in the near term
Weaknesses and threats	General health services	• The health system is unsustainable in its current form and the state cannot afford to deliver the guaranteed health benefit package • There is a lack of adequate government spending on health care • Expenditure on health is reliant on private sources, predominantly out-of-pocket payments • Current economic conditions have impacted government revenues, threatening decreases in spending for health • There is a notable absence of risk-pooling schemes • Health facility budgetary norms and allocations do not take into account volume and quality of services rendered or health service needs of the population • Budgetary norms and provider payment approaches foster a large portion of government funds be spent on wages, utility costs, and other inputs • Facility managers are not able to manage their finances to reinvest savings and reallocate funds for greater efficiency, responsiveness to health needs • A disproportionate share of expenditures are for inpatient care, with only 15% expended for outpatient care • Local government administrations have limited autonomy regarding allocation strategies for health services • The system of inter-budget transfers to equalize regions and to provide subsidies for social protection programs is not linked to the health needs of a region's population • There is a lack of comprehensive and reliable information on health financing, particularly to assess the contributions of various financing sources (public, private, households, donors) and ascertain the expenditure amounts on various health activities (inpatient care, outpatient care, HIV/AIDS, TB).
	HIV/AIDS and TB	• Strict separation of health budgets for selected health issues (TB, HIV/AIDS, etc.) leads to parallel medical providers, and limits optimization/rationalization • The five-year National AIDS Program budget allocations for prevention activities among MARPs [most at-risk populations] and the general populations are inadequate. • The national HIV/AIDS and TB programs rely considerably on donor support (around 50 and 15 percent, respectively); however, these programs remain significantly underfinanced

Table 3.3.7 summarizes the health financing indicators that address each of the performance criteria.

Table 3.3.7 List of Health Financing Indicators Addressing the Key Health System Performance Criteria

Performance Criteria	Suggested Indicators for Health Financing
Equity	4. General government expenditure on health as a percentage of total health expenditure 6. Out-of-pocket expenditure as a percentage of total expenditure on health 8. Process of MOH budget formulation 10. Central and local government budget allocations for health in decentralized systems 12. Recurrent government health budget allocation 15. Population coverage of health insurance 17. Funding mechanisms and sustainability of health insurance 20. Policies for user fee payments in the public sector 22. Informal user fees in the public sector
Efficiency	8. Process of MOH budget formulation 9. MOH budget allocation structure 13. Local-level spending authority and institutional capacity 14. Contracting mechanisms between MOH and public or private service providers 22. Informal user fees in the public sector
Access	1. Total expenditure on health as % of GDP 2. Per capita total expenditure on health at international dollar rate 6. Out-of-pocket expenditure as a percentage of total expenditure on health 7. Trends in MOH planned and realized expenditures 8. Process of MOH budget formulation 10. Central and local government budget allocations for health in decentralized systems 14. Contracting mechanisms between MOH and public or private service providers 15. Population coverage of health insurance 16. Services covered by health insurance 20. Policies for user fee payments in the public sector 22. Informal user fees in the public sector
Quality	1. Total expenditure on health as % of GDP 2. Per capita total expenditure on health at international dollar rate 7. Trends in MOH planned and realized expenditures 12. Recurrent government health budget allocation 14. Contracting mechanisms between MOH and public or private service providers 18. Provider payment mechanisms under health insurance 20. Policies for user fee payments in the public sector 21. Allocation of user fee revenues
Sustainability	4. General government expenditure on health as a percentage of total health expenditure 5. External resources for health as a percentage of total health expenditure 7. Trends in MOH planned and realized expenditures 8. Process of MOH budget formulation 9. MOH budget allocation structure 10. Central and local government budget allocations for health in decentralized systems 17. Funding mechanisms and sustainability of health insurance 18. Provider payment mechanisms under health insurance

Developing Recommendations

After summarizing findings, it is time to synthesize findings across chapters and develop recommendations for health systems interventions. In developing recommendations, team members should consider best practices used in other countries in the region to address problems similar to those identified in this assessment. It is useful to group recommendations into short-term and long-term solutions, or interventions that are relatively easy versus more challenging to implement in the context of this country.

Section 2, Module 4, suggests an approach that the HSA team can use for synthesizing findings across building block topics and for crafting recommendations. This subsection focuses on common health financing interventions to consider in developing recommendations; Table 3.3.8 lists the interventions.

Table 3.3.8 Illustrative Recommendations for Health Financing Issues

Health System Gap	Possible Intervention
Amount and Sources of Financial Resources	
Country is heavily dependent on donor spending	• Develop policy initiatives or reforms for raising funding for health from domestic public and private sources. In post-conflict or rebuilding state situations, these measures would typically be developed as longer-term goals, phased in over a longer period than in other more stable states or 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. For countries with a vibrant private sector and/or reaching middle-income status, consider policies and mechanisms to harness out-of-pocket spending and leverage domestic private sector resources.
Out-of-pocket spending is a large share of health spending in the country and appears to be due to inadequate government funding (i.e., not deliberate ideological policy)	• 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).
Policy initiatives are underway to address major health care financing issues	• If appropriate, propose technical assistance to assist in the design, implementation, or evaluation of current policy efforts.
MOH Budget and Expenditures	
MOH spending for inpatient and outpatient services appears to be inequitable or out of balance	• Establish policies and regulations to re-direct public resources and staffing to PHC services • 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
A substantially higher portion of the MOH budget is spent in urban areas (relative to the share of urban population in the country)	• Establish policy initiatives or reforms to redistribute MOH funds

Table 3.3.8 Illustrative Recommendations for Health Financing Issues, cont.

Health System Gap	Possible Intervention
Insufficient government funds to cover growing cost of medicines and increasing number of stock-outs	• Establish an essential drug list and adopt use of generic pharmaceutical policies and improved prescribing practices as strategies to contain costs. • Explore ways to better coordinate with private retail pharmacies to supply medicines on essential drug list at reduced prices to target population groups during stock-outs.
Government is slow to pay FBOs delivering services through service-level agreements FBOs claim payments do not cover true cost to deliver contracted services	• Strengthen MOH contracting capacity to assess value of contracts for services, including costing studies comparing public to private services. • Work with MOF to streamline payment system and timing.
Health Insurance	
No or negligible public, private, or community-based insurance exists	• Examine feasible strategies to establish and/or expand existing risk-pooling mechanisms. • If SHI exists but does not reach informal sector workers, explore alternative mechanisms to target informal sector workers if their access to health care appears to be substantially lower than formal sector workers. • If a BBP 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.
Out of Pocket Payments	
Formal user fees appear to have a negative impact on utilization of PHC or other priority health care services in the public sector	• Strengthen the waiver and exemption systems. • Examine the process for setting the level of fees at PHC and hospital facilities. • Evaluate the perceived quality of health care services. • Explore the willingness and ability to pay for different types and levels of health care services.
Excessive/prohibitive informal user-fees which limit access to care	• Explore feasibility of introducing user fees for select services and users. • Consider methods for increasing health worker wages, either through salary increases or performance-based payments.

3.5 Assessment Report Checklist: Health Financing

- **Profile of Country Health Financing**

  A. Overview of health financing

  B. Create health financing flowchart (should include):

  a. Collection and pooling

  b. Payment methods

  c. Health Financing and decentralization

- **Health Financing Assessment Indicators**

  A. Amount and sources of financial resources

  B. MOH budget and expenditures

  C. Health insurance

  D. Out-of-pocket payments (user fees and fee-for-service/product)

- **Summary of Findings and Recommendations**

  A. Presentation of findings

  B. Recommendations

Notes

Module 4
Service Delivery

This module describes health service delivery and the issues involved in assessing this aspect of a health system, including measurable indicators of the strengths and weaknesses of a country's delivery of health care services.

FIGURE 3.4.1 BUILDING BLOCK INTERACTIONS

Introduction

Health service delivery is the backbone of a health system. In most developing countries, governments historically have provided the majority of health services through a vast public infrastructure. This public-only delivery system has changed dramatically in the past 15 years and health care now is provided through a wide array of public and private (including commercial and not-for-profit) clinical settings. Because the HSA approach provides a rapid yet comprehensive assessment of the health system, the approach focuses on the demand for and supply of key health services from each sector – as just noted, public, commercial, and not-for-profit – and at national and subnational levels (district, hospital, health center, health post, and dispensary). It also examines the referrals of patients both within the public sector and between the public and private sectors to determine quality and continuity of care. A challenge to assessing health service delivery is to capture the range of services and provision methods among all the major health actors in a health sector.

This module presents the health delivery module of the assessment.

- Subsection 4.1 defines health service delivery and its key components.
- Subsection 4.2 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.
- Subsection 4.3 presents the indicator-based assessment, including detailed descriptions of the indicators.
- Subsection 4.4 discusses how to summarize the findings and develop recommendations.
- Subsection 4.5 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

TIP

Conducting the Assessment

- Select only indicators that apply to the specific country situation.
- Conduct a thorough desk review of all available secondary data sources before arriving in country.
- Stakeholder interviews should focus on filling information gaps and clarifying issues.
- Coordinate stakeholder interviews with team members so all six modules are covered and avoid interviewing the same stakeholder twice.
- Look at all health actors – public, for-profit and not-for-profit-involved in delivering health services.
- Tailor assessment questions to reflect the level of decentralization so the questions are relevant to the interviewee.
- Schedule team discussions in country to discuss cross-cutting issues and interactions.
- Finalize an outline for the assessment report early on so sections can be written in country.

4.1 What Is Health Service Delivery?

WHO defines service delivery as the way inputs are combined to allow the delivery of a series of interventions or health actions (WHO 2001c) through multiple actors in the public and private sectors. As noted in WHO's *Systems Thinking for Health Systems Strengthening* (De Savigny and Adam 2009), service delivery includes "effective, safe and quality personal and non-personal health interventions that are provided to those in need, when and where needed (including infrastructure), with a minimal waste of resources." The report *Everybody's Business: Strengthening health systems to improve health outcomes*, WHO's framework for action (WHO 2007) states that "the service delivery building block is concerned with how inputs and services [in both public and private sector] are organized and managed, to ensure access, quality, safety and continuity of care across health conditions, across different locations and over time."

4.2 Developing a Profile of the Health Delivery System

Health service delivery can be represented from the systems perspective, with inputs, processes, outputs, and impacts (see Figure 3.4.1). Among the core inputs and processes that are necessary for health care delivery, regardless of the sector, are financial resources, competent health care staff, adequate physical facilities and equipment, essential medicines and supplies, up-to-date clinical guidelines, operational policies, and record keeping. However, these inputs often are not available and processes are unused or outdated.

Figure 3.4.2 System View of Service Delivery

The profile of a mixed health care system can be presented in both narrative and graphic form, depending on the information that is available, including preexisting graphics. Table 3.4.1 presents questions organized around the topical areas of service delivery; answers will produce a profile in "narrative" form. See also Annex 3.4.A for an alternate summary of issues to explore in stakeholder interviews.

TABLE 3.4.1 SUMMARY OF ISSUES TO ADDRESS IN STAKEHOLDER INTERVIEWS

Topics	Examples
Inputs	
Health infrastructure	How many health facilities are there in total (public and private)? How many health facilities by level are there in the public, commercial, and NGO/FBO sectors? How do they compare? Where are the public, commercial, and NGO/FBO health facilities located? Concentrated in urban areas? Some in rural areas? Do health facilities – public and private – cover all areas of the country? Do existing facilities have the equipment and medical supplies needed to function? What and where are the major infrastructure gaps?
Human resources in health	How many health personnel, by cadre, are there in total? How many health staff, by cadre, are there in the public, private, and NGO/FBO sectors? Are there sufficient human resources? How do human resources vary by cadre? By sector? By region? What are the major human resource constraints? Limited pre-service training slots? Low salaries? Poor deployment to underserved areas? Loss of staff to overseas? Insufficient in-service training to enhance skills? Unclear scopes of practices between cadres (e.g. doctors/nurses), limited scopes (e.g., nurses prevented from doing simple treatment)? Difference in scopes of practice between public and private sectors?
Processes	
MOH structure, composition, and roles and responsibilities	Describe the central- and mid-level health authorities responsible for planning of health services delivered in both the public and private sectors. Does the government include private sector representatives in planning? Describe the central- and mid-level government department responsible for management and administration of public health services. Does the government include the private sector coordination of health services at the central and middle levels? Describe the government authorities' responsible for regulation and oversight of health professionals, facilities, and pharmaceuticals. Describe government body responsible for supervision.
Policy and regulatory framework	What are key policy barriers that affect quality? Access? Efficiency? What are the policy barriers constraining the commercial and NGO/FBO services? Are there policies supporting collaboration and partnerships between the different types of providers? Are the regulatory bodies (councils) in place? Is there sufficient funding for these bodies to enforce quality and other regulations affecting service delivery?
Services delivered by sectors	What services do the public, commercial, NGO and FBO sectors deliver? Where? To what population groups? What are the barriers to access of health services in general? By sector? What is the level of quality in health services delivered by the public, commercial, NGO and FBO sectors?
Role of local administrative government	Describe the role, if any, for local government authorities with respect to health services delivery.
Particularities of the system	Describe any unusual aspects of the health delivery system. For example, the Angola HSA found that service delivery data were collected by the local government authority, separate from the health supervision function. In Kenya, the private health sector is well organized into one umbrella organization representing all components of the private health sector.

In contrast to the narrative presentation, Figure 3.4.3 is a sample of graphical presentation; it shows in pyramid form the central, intermediate, and peripheral levels of care in a health system and the number of public and private facilities at each level.

Figure 3.4.3 Sample: Health Sector Pyramid (public and private sector)

Another way to present a country's service delivery system is to map functions and interactions. This approach is an effective way to illustrate the relationship between the system's major actors. Figure 3.4.4 is a sample map of the Ukrainian health service delivery system. It depicts the following: (1) MOH governance structure of the health sector, (2) the relationship between public and private sector services, and (3) the relationship between health services at the national, regional, and community level. Important aspects or details of the system not captured by the map should be described in narrative form. For example, the narrative should compare how the service delivery system is supposed to work with how it actually works (if there is a difference) and explain the reasons for any gaps. The narrative can also make distinctions between the public and private sectors at different levels of service delivery.

TIP

Mapping the MOH and Beyond

To identify MOH divisions relevant to service delivery, organizational charts of MOH subdivisions that are not represented in the overall MOH organization chart may be helpful.

If the assessment focuses on aspects of the system that cannot be represented in one map (e.g., if the client is particularly interested in TB, a focus on the laboratory services would be warranted), including a second map may provide more clarity than trying to enlarge the comprehensive map.

FIGURE 3.4.4 EXAMPLE: UKRAINE HEALTH SERVICE DELIVERY LEVELS, ACCESS POINTS, AND REFERRAL SYSTEM

Source: Tarantino et al. (2011)

When assessing health service inputs and processes, it is important to identify which sector might have a comparative advantage in terms of the key inputs/processes that could benefit the other.

For example, the private sector often has state-of-the-art but costly diagnostic equipment (MRI, CAT scans, etc.) and sophisticated IT systems. Use of this equipment and technology by the public sector could help that sector to reduce its costs by obviating the need for the sector to procure expensive equipment already in the country and to create efficiencies in public sector monitoring and evaluation.

Developing a holistic and comprehensive profile of health systems will help you understand how the entire system works, including the relationships between public and private sectors: do the two sectors coordinate, compete, or operate in completely separate spheres?

4.3. Assessment Indicator Overview

This section focuses on service delivery indicators – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and, in the "Interpretation" and "Issues to Explore" subsections, shows how to work with them. Finally, the section identifies key indicators to which the HSA technical team member can limit their work, if time precludes their measuring all indicators.

Topical Areas

The indicators for this module are grouped into the six topical areas listed in Table 3.4.2. The topical areas are based on the organization and objectives of the service delivery function.

Table 3.4.2 Indicator Map–Health Service Delivery

Topical Area	Indicator Numbers
Organization of health services	1–6
Access to health services	7–10
Coverage, utilization, and demand for health services	11–20
Equity in the delivery of health services	21–22
Quality of health services	23–27
Health service outcomes	28–33

TIP

Prioritizing Indicators

Team members constrained by limited time or resources should prioritize as follows:

1. First, assess indicators 1–2 (organization), 12–18 (coverage), and 28–33 (health outcomes), because data for them are readily available from the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org)
2. Second assess indicators 8, and 19–22. This can also be done prior to visiting the field and will further the analysis of the topical areas of access, demand, and equity.
3. If possible, assess all remaining indicators to get a more comprehensive picture of service delivery in the country.

Data Sources

There are many sources to help the team assess and analyze the health service delivery system. They are organized into three main categories:

1. Standard health indicators

- Most of the health indicators are available in the Health Systems Database at http://healthsystems2020.healthsystemsdatabase.org/.
- The World Bank also has a database on development indicators at <http://data.worldbank.org/data-catalog/world-development-indicators>
- Other surveys contain a wealth of information that, with additional analysis, can provide more nuanced analysis of access, equity, efficiency, and quality of health services in a specific country.
    - Demographic Health Surveys (DHS)
    - AIDS Indicator Survey (AIS)
    - Household health expenditure survey
    - National Health Accounts (NHA)
    - Living Standards Measurement Survey (LSMS)

2. Secondary sources

The health indicators need to be supplemented with other research and documents such policies, regulations, and health statistics. Here is a suggested list of secondary sources that are readily available:

- Organization chart of MOH
- MOH service delivery statistics
- MOH registry of facilities (public, commercial, NGO/FBOs)
- MOH health laws, policies, and regulations governing standards of care and health personnel
- Recent (past five years) MOH policy statements, strategies, strategic plans, and annual plans
- Baseline studies in areas for health projects, especially reproductive and obstetric care projects
- Situational analyses and operations research
- Country studies on access and referral systems
- Brochures, websites of private, NGO/FBO health providers

3. Stakeholders to interview

- MOH planning division that compiles and analyzes service delivery data
- MOH professional councils
- MOH division responsible for quality compliance
- MOH division that inspects and licenses facilities
- MOH program managers of vertical programs (e.g., family planning, AIDS, TB)
- MOH district supervisors
- MOH hospital and health center managers
- Provider association directors (physicians, nurses and midwives, clinical officers, lab technicians, pharmacists)
- Directors of private provider associations
- Leaders in the private health sector
- Private physicians and pharmacists
- Directors of NGO/FBO health care organizations

Detailed Indicator Descriptions

The following section provides a detailed description that includes a definition, description and interpretation for each indicator. The comprehensive list of indicators is meant to guide the technical expert in the type of data to collect and issues to discuss in the stakeholder interviews. Data sources for many of these indicators may not be readily available; therefore, the assessment team member in charge of service delivery will need to judge which indicators are needed to adequately describe the health delivery system and those that would be nicely supplement the basic information but cannot be included because the data are not available.

Topical Area A: Organization of Health Services

Overview

Organization of service delivery has been defined by WHO (2001c) as "choosing the appropriate level for delivering interventions and the degree of integration." Analysis of the organization of the services focuses on:

- An overview of the range of health infrastructure in both the public and private sectors
- Continuity of care
- Integration of health services between the public and private sectors

The higher the degree of integration between the sectors and the greater the continuity of care, the more efficient and organized is the system's attendance to patient needs.

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 the national pattern.

Organization of Health Services

Indicator	Definition and Interpretation
1. Number of hospital beds (per 10,000 population)	[(Total number of beds in hospitals of all levels) / (Population of country)] × 10,000 Hospital beds include inpatient beds available in public and 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 to assess the adequacy of the availability of health service delivery, and particularly hospital service delivery. Sometimes these data are also disaggregated by sector.
2. Ratio of health care professionals to the population	The ratio of doctors, nurses, midwives, pharmacists, and laboratory technicians per 10,000 population = [(Total number of health workers) / (Population of country)] × 10,000 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? • How does the ratio of health care professionals differ between the public and private sectors? • 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 of providers can mean educational institutions are not graduating a sufficient number of providers, that providers are dying off (e.g., due to high prevalence of HIV/AIDS), or providers are leaving the country (the "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. To compare by regional norms from other countries or WHO standards, consult the Country and Health System Overview module. The distribution of human resources personnel is important for the availability of health services; when in country, explore the distribution more deeply if possible. Look at numbers in hospitals versus other facilities – often doctors are clustered in hospitals. With high numbers of providers in urban areas, rural areas may be underserved.

Organization of Health Services Cont...

Indicator	Definition and Interpretation
3. Number of health facilities by type and ownerships	The total number of health facilities disaggregated by (hospitals, clinics, health posts, nursing homes, labs, etc.) and ownership or management (public, private, NGO, FBOs). The exact numbers, particularly for the private sector (commercial and NGO/FBO) may be difficult to obtain. However, an increasing number of MOHs are collecting this data so they have a complete inventory of health infrastructure. The MOH planning division or division that inspects and licenses facilities usually keep these statistics. If the MOH does not have these numbers, professional associations sometimes keep a registry of licensed practitioners and type of facility in which they practice. The comparison of facility types by sector provides a comprehensive picture of health service availability and helps rationalize existing and future infrastructure projects.
4. Number of primary care, facilities in health system per 10,000 population	Although few benchmarks are available, a comparison with key neighboring countries may be instructive. Consider the percentage of facilities that are functional. In some cases (e.g., post-conflict areas), facilities may exist but not be functional. Urban-rural distribution. 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 this information is unavailable, inquire whether regional differences are available and whether each region can be classified as overall urban or rural. If the urban-rural distribution is extremely skewed, you can examine recent budget expenditures and work plans to see if they contain line items or plans for capital investments, particularly for the building of new facilities. If enough detail is available, compare new facilities planned in rural areas with those in urban zones. Beyond urban-rural disparities, you may find other regional disparities that are worth noting.
5. Commercial entities offering health services for their employees and/or communities where they operate	Establish whether any or many international and medium-size businesses, particularly in the extractive, manufacturing, and agricultural industries, provide health services through a company facility or by contracting out. This indicator does not include employers that provide health insurance for their employees. Existence of work-based health care programs, usually by large employers like multinational firms, national firms, and state-owned enterprise, establishes a precedent in a country. This might be leveraged to encourage other large employers to provide health services, or – for firms that already offer health services to employees – to expand coverage to employees' families and other community members. The absence of such work-based programs might indicate an opportunity to encourage their establishment. 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. Furthermore, work-based health programs can be a strategy to delivery health care in remote areas where some large employers such as mining and timber companies are often located. 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 corporate social responsibility, determine if other opportunities – such as health promotion or health product distribution – can capitalize on the interest in the business community. Other questions to explore: What health services are delivered by onsite company clinics? Are these services offered to employees' dependents or other community members? Is there government interest in expanding workplace provision of health services? In many countries, work-based programs will not offer a mechanism for significantly increasing access to health services or otherwise improving health systems. If opportunities for corporate social responsibility appear limited, you should not invest your time on this indicator.

Organization of Health Services Cont...

Indicator	Definition and Interpretation
6. Referral system	The existence, description, and utility of a comprehensive referral and counter-referral system The existence and use of a comprehensive referral and counter-referral system is one indicator of how well the health delivery system is integrated. Determine if referral and counter-referral protocols or guidelines exist, how well the protocols or guidelines are implemented, and what barriers there are to the effective functioning of this system. Key items to look for include referrals between the different levels of care within the public health sector as well as referrals and counter-referrals between public and private health sectors. This indicator can also be used in the discussion of quality of care as a proxy for continuity of care for patients in the health system.

Topical Area B: Access to Health Services

Overview

Service delivery access refers to the ability of a population to reach appropriate health services. Various factors limit access, including distance to point of service, lack of transportation, economic barriers, and cultural appropriateness.

Describing Access to Health Services

Following are suggestions on how to analyze and describe barriers to access care. One can assess the range of barriers by doing a secondary analysis of DHS data, such as:

- Compare access to services in rural vs. urban areas (distance)
- Compare access to health services in the public and private sectors (convenience, opportunity cost in transport and wages lost to travel to distant MOH provider compared to local private providers)
- Examine percentages of women with specific barriers in accessing health care (cultural)

In addition, community, household, or patient studies explore more fully the range of access barriers from a client perspective. Interviews with health care providers should also provide information and confirmation of such barriers.

Also use the stakeholder interviews to determine if policies and strategies to improve access to care are in place and how effective they are in improving access.

Access to Health Services

Indicator	Definition and Interpretation
7. Hours of operation for public and private health service providers	The proportion of the following services (immunization, TB, HIV, prenatal care, family planning, malaria, malnutrition) available at a sample of facilities and the facilities' days/hours of operation. Compare with the days/hours of operation at public, private, and NGO/FBO facilities. This indicator is measured as positive if all health facilities are supposed to offer a given service (e.g., immunizations) whenever the facility is open, which contributes to continuity of care. If the indicator measures "None," then note exactly how frequently (hours/days) the service is available, including any regional differences. Do this also for other priority services, such as prenatal care or HIV testing in high burden countries. 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. Where services are not fully integrated, clients may have access to certain services only on certain days of the week. Also, compare and contrast hours of service for essential services (immunization, TB, HIV, prenatal care, family planning, malaria, malnutrition) at private and NGO/FBO facilities.
8. Percentage of people living within X kms of a health facility	[Number of people living within X km radius of health facilities]/[Population estimate] The distance to the facility is not specified so that you can make use of whatever data are available. For the proportion of the population that is not within 10 kilometers of any facility, how far are they? Inquire at the regional, facility, or program level whether outreach services are available for remote communities. If available, try to determine the frequency of outreach visits and which services are offered. A large percentage for this indicator suggests increased geographical access to services. 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, DHS (Measure DHS 2011) measure the percentage of women with specific problems in accessing health care for themselves; *distance to health facility* is an option (<http://www.measuredhs.com/>). Module Link: Module 3.6 medical products, vaccines, and technologies indicator 26 (distance from a pharmacy)
9. Financial access (select an indicator based on available data)	The following indicators were selected to provide insight into the degree to which financial access may be a barrier in the health services. Many of these indicators are in Module 3.3, Health Financing. • Out-of-pocket expenditure as percentage of THE. • Out-of-pocket spending as a percentage of private health spending (Country and Health System Overview module, Indicator 16) These outlays include household payments to public services, nonprofit institutions, or NGOs, and non-reimbursable cost sharing, deductibles, co-payments, and fees for service. Individuals' and households' out-of-pocket spending (on user fees for facility consults and purchase of related tests and medicines) that exceeds 60 percent of THE suggests limited government funding of health care and a potentially prohibitive financial barrier to accessing care. This is especially the case in lower-income countries, as well as with low-income groups, and thus is an issue of (vertical) equity. If total private spending is largely (more than 80 percent) out-of-pocket spending, it means relatively little other private spending (e.g., on private heath insurance) exists and individuals and households bear the full burden of private spending that fills the gap in government spending.

Access to Health Services cont...

Indicator	Definition and Interpretation
10. User fee exemptions and waivers	State whether or not exemptions and/or waivers exist and if so, describe them. ***Note:*** Although fee exemption and waiver policies may exist for inpatient hospital care, this issue is raised primarily with respect to PHC services, especially priority services. For purposes of the rapid assessment, concentrate on PHC. User fee protection for vulnerable groups is usually in the form of (1) fee exemptions for all people in a specified socio-demographic category regardless of income (e.g., children under age five, students, elderly, military personnel, health care workers) or for specified services (e.g., immunizations, TB-DOTS, other chronic care); (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 be a financial barrier to health care access. Fee waivers and exemptions can promote equity of financial access for these groups. They also can be used to 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 primary health care visits. 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.

Topical Area C: Coverage, Utilization, and Demand for Health Services

Overview

Effective coverage refers to the proportion of the population in need of health services that actually received them. 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, Gattini, Pinto, et al. 2001).

Coverage and Utilization of Health Services

Indicator	Definition and Interpretation
11. Number of primary care or outpatient visits per person to health facilities per year	[Number of primary care or outpatient visits in a year]/[Total population] This indicator is a measure of PHC 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 non-hospitalized individual and a health worker responsible for the evaluation, diagnosis, treatment, or referral of that person in that encounter (PAHO 2004). Make clear which health services are included in the indicator data you report – do the data include traditional medicine and the private for-profit, not-for-profit, or NGO sectors? Pharmacists? If data are available, please include these groups as well. Does the numerator include health post and health center visits as well as hospital outpatient visits? If overall utilization has been measured for different groups, report on this too, though PHC utilization is 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. 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? If utilization of inpatient care is more relevant to the client's needs, the relevant indicator would be the number of hospital discharges per 1,000 inhabitants.
12. Antenatal care coverage, at least one visit (%)	The percentage of women aged 15–49 with a live birth in a given time period who received ANC provided by skilled health personnel (doctors, nurses, or midwives) at least once during pregnancy (WHO 2008). The proportion of women who had one or more ANC contact 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, are not promoted, or are associated with high out-of-pocket expenditures (limiting the access to low-income households). Low utilization may also reflect weak demand for ANC. The DHS data permit secondary analysis including ANC by source (public, commercial, NGO/FBO).

Coverage and Utilization of Health Services cont...

Indicator	Definition and Interpretation
13. Births attended by skilled health staff (% of total)	Births attended by skilled health staff are the percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period; to conduct deliveries on their own; and to care for newborns (World Bank 2010). = [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 in (1) the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and (2) the identification, management, and referral of complications in women and newborns. Traditional birth attendants, trained or not, are excluded from the category. 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 (2011). The DHS can permit additional analyses including deliveries by source (public, commercial, NGO/FBO) and by income groups. As the point of contact with the 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). Assess the trend and compare with the regional average. Explore with key informants and through document review whether supply or demand needs to be improved to increase utilization of skilled attendants. Consider validating these data in country at the MOH statistical or planning division that analyzes service delivery data.
14. Contraceptive prevalence (% of women aged 15–49)	Contraceptive prevalence rate is the percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women ages 15–49 only (World Bank 2010). 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 inter-country 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 PHC) (UNICEF 2001). DHS data also enable analysis of where women receive their family planning method – from public, private, or NGO/FBO provider.

Coverage and Utilization of Health Services cont...

Indicator	Definition and Interpretation
15. Unmet need for family planning	This includes unmet need for spacing and unmet need for limiting. It describes the proportion of women who are fecund, sexually active, but do not want a child for at least two years or ever, and who are not using any contraceptives methods. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behavior. The indicator is useful for tracking progress toward the target of achieving universal access to reproductive health. Information on unmet need for family planning complements the indicator of contraceptive prevalence. The sum of contraceptive prevalence and unmet need provides the total demand for family planning. "This indicator measures the extent of unmet need for family planning at a particular time. When unmet need is measured in a comparable way at different dates, the trend indicates whether there has been progress toward meeting the need. It should be noted that, even when contraceptive prevalence is rising, unmet need for family planning may sometimes fail to decline, or may even increase. This can happen because the demand for family planning increases due to declines in the desired number of children. Changes in the desired spacing of births or changes in the percentage of women who are at risk of pregnancy can also influence the trend in demand for family planning, independently of trends in contraceptive prevalence." (UN Economic and Social Affairs Population Division Website: http://www.un.org/esa/population/publications/wcu2010/Metadata/UMN.html)
16. Percent of children under five with acute respiratory infection taken to a health facility	The number of children under five who were ill with cough and rapid breathing or a fever in the two weeks preceding the survey who were take to a health facility divided by the total number of children under five who were ill with cough and rapid breathing or a fever in the two weeks preceding the survey. This is an indicator of utilization of services by children. Using DHS data, also analyze where (e.g., public or private sector) the mother takes her child to receive treatment.
17. Diphtheria, tetanus toxoid and pertussis (DTP3) immunization coverage (percent) among one year-olds	The percentage of one-year-olds who have received three doses of the combined diphtheria, tetanus toxoid, and pertussis vaccine in a given year (WHO 2008). = [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 health care utilization. Using DHS data, also analyze where the mother takes her child to be immunized. 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? 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.
18. Percent of population tested for HIV, percent treated for STI, percent of population on ARVs [antiretroviral drugs]	The percentage of population tested for HIV, percentage treated for sexually transmitted infections (STIs,) on Antiretroviral (ARV) drugs. HIV/AIDS is a major challenge in many the countries. Whenever possible, use the AIS to present a snapshot of the availability and coverage of HIV/AIDS s prevention (testing), treatment (opportunistic infections and ARVs), care and support (orphans and vulnerable population, home-based care) The DHS and AIS permit further analysis of these population-based indicators. Suggested secondary analysis includes source of services (e.g., public, commercial, and NGO/FBO) and by gender.

CONSUMER KNOWLEDGE AND DEMAND

TIP

CONSUMER ANALYSIS

Secondary analysis of the DHS and/or AIS can develop consumer profiles that describe the "typical" client for a specific health service (e.g., family planning, deliveries, HIV testing). The profile includes age, residence (urban vs. rural), income, and education levels.

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, Gattini, Pinto, et al. 2001). The DHS also provides data on the percentage of the population that is covered by specific health services (e.g., family planning, deliveries, immunizations). These indicators can be used as a proxy for demand.

The DHS and AIS include indicators on knowledge, attitudes and practices (KAP) for key health indicators. Secondary analysis of these data sets can complement these indicators by analyzing consumer provider preference (e.g., source – public, private, NGO/FBO) and developing consumer profiles for specific health services. It also can provide more nuanced analysis on consumers. Also, the team members can supplement the secondary analysis with stakeholder interviews that ask health providers about the type of consumer to whom they deliver services.

COVERAGE AND UTILIZATION OF HEALTH SERVICES CONT...

Indicator	Definition and Interpretation
19. Knowledge, attitudes and practices (KAP) regarding key health issues and services	KAP data are collected using a survey instrument. KAP survey data on key health issues (e.g., TB) can identify: knowledge gaps, cultural beliefs, or behavioral patterns that may facilitate understanding and action, information that is commonly known and attitudes that are commonly held. (WHO 2008;c) Useful KAP indicators can often be found in DHS survey reports. KAP indicators commonly found in DHS surveys include: • Treatment of symptoms for a child illness (i.e., acute respiratory infection, diarrhea, fever) • Knowledge of oral rehydration solution • Exposure to messages on malaria • Exclusive breastfeeding • Knowledge of HIV prevention methods If these data are available, select one or two indicators from list above that are relevant to your assessment. Where DHS survey information is not available or outdated, similar indicators can sometimes be found in UNICEF surveys or even more limited surveys conducted by donor-funded projects at provincial, district, or even community levels. Finally, if no quantitative data are available, interviews with key informants (health facility staff, CHWs, or community members) can provide qualitative information on KAP regarding key health issues and services. Low levels of KAP regarding key health issues and services indicate an important gap in the health system's ability to reach communities with essential health messages and to create demand for health services.
20. Consumer profiles	First analysis determines consumer preference for source of health care, for example, percentage of women of reproductive age accepting a modern family planning method at public, private, NGO/FBO services. Second analysis develops consumer profile by source of services. For example, the percentage of women who accept a modern family planning method in the public sector by age, income, education, and residence. The same analysis can be done for women who use the private sector for this service. Consumer preference surveys are used to test consumer preferences on aspects of care such as cost, distance, and privacy, to create a consumer profile. If consumer profiles or consumer preference survey data are available, they can be a used as a proxy for focus group data on the demand side (patients and communities) of service delivery. Consumer profiles will provide information on what types of care patients are seeking from the public vs. private sector and what factors influence patients' preferences.

Topical Area D: Equity in the Delivery of Health Services

Overview

As described in Module 1.1, equity is a normative issue that refers to fairness in the allocation of resources or the treatment of outcomes among different individuals or groups. This assessment explores two aspects of equity: income and gender. In an ideal health system, poorer populations groups receive care in the public sector while wealthier ones access care in the private sector. However, World Bank research demonstrates that in fact, government services disproportionately benefit the middle and wealthier groups while large percentages of lower-income groups use their own resources to pay for services the private sector. Secondary analysis can show a percentage of who accesses specific health areas, such as delivery services, by source and by income quintile.

Gender is also an important equity issue, particularly in access to family planning methods and HIV/AIDS prevention and treatment. Research on family planning use demonstrates that household decisions makers – often male – influence whether a women accepts a family planning method. Moreover, because HIV/AIDS has become an increasingly young women's disease, it is important to examine whether women have equal if not greater access to HIV/AIDS prevention and care. DHS data disaggregated by gender can provide further insight if gender inequities exist in accessing health services.

Country Story: Kenya

The Kenyan DHS showed that a larger percentage of wealthier women delivered in the public sector than poorer women who delivered in the private sector. The team of the Kenya Private Health Sector Assessment considered the factors that could lead poorer women to use the private sector when analyzing findings and developing recommendations for the government to leverage the private sector to meet its health objectives.

(Kenya National Bureau of Statistics and ICF Macro 2010)

Equity in the Delivery of Health Services

Indicator	Definition and Interpretation
21. Percent of women vs percent of men who access HIV/AIDS test, STI treatment, etc.	[Disaggregate coverage rate of services by gender]/[Total population] In the interest of time, one can limit the gender analysis to key health areas where gender is a known constraint. Most common is family planning and HIV/AIDS prevention.
22. Percent of women who seek care for specific health intervention by source and income group	[Disaggregate coverage rate by source and by income group]/[Total population] This analysis is commonly done for attended deliveries, acceptance of modern family planning methods and treatment for diarrhea or cough. The results illustrate which income groups seek care in the public, private, or NGO/FBO, sectors. In one simple bar chart, the team can illustrate if the public sector is serving the upper groups more than the poorer group, raising questions of equity of care.

TIP

Data Strategies to Assess Quality

The data needed to analyze quality would ideally be nationwide data which, in most cases, are not available. The team member can use other approaches to collect data on quality:

- Contact client and/or major donor to identify organizations that have focused on quality of care.
- Read and analyze key reports that focus on service delivery and quality assurance including background sections or situation analyses.
- 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).

Topical Area E: Quality of Health Services

Overview

To ensure the clinical quality of health services, health systems must define, communicate, and monitor the level of quality of care. This information is used by policymakers and providers to improve quality. 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 is wide between such standards and what is possible to implement at the facility level 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 the assessment team member responsible for Module 3.3, Health Financing, to see if he or she has found any example of provider payment mechanisms that reward quality.

Equity in the Delivery of Health Services

Indicators	Definition and Interpretation
23. Existence of national policies for promoting quality of care	This indicator states 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. Quality of care guidelines indicate, at a basic level, the degree to which quality of care is formally recognized as a government priority. Probing questions include: • What national structures (i.e., MOH divisions or departments) are defined to implement such policy? • How does those structures act – do they have a budget and an action plan (to define who will do what when)? • Who funds the quality assurance work? • What is the policy regarding the government role in ensuring quality in the private sector? How does the private sector assure quality within its own facilities? *Module link:* Human Resources for Health Module, Indicators 17–20 (training of human resources) and Medical Products, Vaccines, and Technologies Module Indicator 31 (pre- and in-service treatment guidelines)
24. Clinical standards adapted into a practical form that can be used at local level	Select two priority national clinical areas (e.g., of high morbidity or mortality) stated in policy documents or elicited in interviews with high-level health officials. For these two areas, investigate the existence of adaptations of clinical guides or manuals (e.g., pocket guides, memory or job aids, algorithms, flowcharts, forms, posters, checklists) that are developed for use on-the-job by the provider or supervisor. 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. Site visits might also be an opportunity to ask ***public and private providers*** whether they have published guidelines and how useful or practical they find job aids.
25. Percent of primary care facilities that are adequately equipped	[Number of adequately equipped facilities]/[Total number of facilities] 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 specified infrastructure other than equipment (e.g., materials, electricity, running water, and laboratory services). Apply this standard **to both public and private** clinics visited during the assessment. *Module link:* Medical Products, Vaccines, and Technologies Module, Indicator 30 (national therapeutic and standard treatment guides) Adequately equipped facilities ensure that the full range of services is available to clients. The absence of such standards or a responsible MOH division indicates lack of management capacity of the system. • How does the condition of the facilities affect the availability of service delivery? • Consult with the pharmaceutics assessor: what proportion of facilities has adequate supplies of pharmaceuticals? • What proportion of facilities is adequately staffed (see Module 3.5, Human Resources for Health)? • 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. • How does the condition of facilities differ between public and private facilities?

Equity in the Delivery of Health Services cont...

Indicators	Definition and Interpretation
26. Existence of clinical supervision by district-level supervisor	Finding nationwide data on this indicator (such as the percentage of clinics that receive regular supervision and frequency and type) may be difficult, but the basic point is that, regardless of quality of supervision, it is a basic level of quality control. To ensure 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 a health delivery system has to monitor and regulate 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. How does the central level monitor whether this district-level oversight is being conducted? If the MOH has no method to do this, this signifies that a quality assurance system is lacking. Other questions to ask, include: • Who is responsible for clinical supervision of primary care facilities – central MOH? If so, which departments? If not, provincial authority? • Who is responsible for supervision and/or regulation of quality of care at private facilities? • 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? Are they 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? • Does the supervise also visit private services in his/her region? *Module link:* Human Resources for Health Module, Indicator 9 (supervision)
27. Existence of other processes assuring quality of care besides supervision	Additional quality assurance processes exist, and can include 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. It is useful to determine to what extent the private sector is included in quality assurance processes. Supervision is only one method of improving the quality of care. The previous two indicators have focused on the district level. This indicator is qualitative and designed to identify previous quality assurance efforts. Since the MOH in many developing countries does not have the manpower to oversee and visit private providers, an increasing number of professional associations are stepping in to fill this gap and are self-regulating. Also, provider networks and national health insurance schemes have become alternative methods for assuring quality, particularly in the private sector. 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? 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? How is supervision of private sector actors handled? Are there regular facility inspections or other requirements to ensure quality of care in private facilities? *Module link:* Human Resources for Health Module, Indicator 7 (enabling environment for health workers); Leadership and Governance Module, Indicator 14 (financial incentives for quality care)

Topical Area F: Health Services Outcomes

Overview

Up to this point, the analysis has focused on performance criteria – access, equity, efficiency, quality, and sustainability. Now the team focuses on the system outcomes as measured by population-based health impact indicators.

Health Services Outcomes

Indicator	Definition and Interpretation
28. Life expectancy at birth, total (years)	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life (World Bank 2010). Life expectancy at birth is also a measure of overall health status of the population and the quality of life in a country.
29. Mortality rate, infant (per 1,000 live births)	Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year (World Bank 2010). 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.
30. Maternal mortality rate (per 100,000 live births)	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.
31. HIV prevalence among people aged 15–49	Percentage of people aged 15-49 who are HIV infected (Measure DHS 2011). A high prevalence of HIV/AIDS indicates a high burden on the health care system (for example, in terms of infrastructure, staff, and financing needs).
32. Diarrhea prevalence	Percentage of children under five with diarrhea in the two weeks preceding the survey. The incidence of diarrheal infections demonstrates the likelihood of poor nutrition status among children in the country (due to decreased absorption of nutrients during illness and recovery period). It is more likely to be fatal in children under three years old and the frequency of occurrences decreases with age.
33. Diarrhea treatment	Percentage of children under five with diarrhea in the two weeks preceding the survey who received oral rehydration solution Treatment with oral rehydration solution shows both the awareness of parents and health care workers of simple but effective treatment methods. It also increases the likelihood of the child's survival.

4.4 Summarizing Findings and Developing Recommendations

Section 2, Module 4, describes the process that the HSA 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 in the assessment report (see Annex 2.1.C for a suggested outline for the report). This process is iteractive; 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.

Analyzing Data and Summarizing Findings

Table 3.4.3 provides an easy way to summarize and group findings. (This process is part of Step 4 for summarizing findings as described in Module 2.4.) It organizes each building block module by topical area. Rows can be added to the table if additional areas are needed to accommodate the HSA country context. In anticipation of working with other team members to put findings in the SWOT framework, each finding should be labeled as an S, W, O, or T (See Section 2 Module 4, for explanation of the SWOT framework). The "Comments" column is used to highlight links to other modules and possible impact on health system performance in terms of equity, efficiency, access, quality, and sustainability. Examples of system impacts on performance criteria are summarized in Annex 2.4.A. Additional guidance on which indicators address each of the WHO performance criteria is included in Table 3.4.5. In countries with a sizeable private sector, a separate SWOT framework examining the private sector could be prepared.

Table 3.4.3 Template: Indicator Findings—Health Service Delivery

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, efficiency, access, quality, and sustainability) and list any links to other modules.

In some cases, it may be helpful to create your own subheadings – in addition to or in place of the topical areas – to organize the Service Delivery chapter write-up. Subheadings that have been used in past assessments include:

- Mapping of entire health sector's health services – public and private
- Organization of MOH
- Health facilities – public and private
- Services provided – public and private
- Coverage – overall and by source
- Utilization by public and private sectors, use by source and income groups
- Quality by public and private providers
- Referral systems within public system and between public and private sectors

To summarize the findings, an alternative to Table 3.4.3 is shown as Table 3.4.4, where the performance criteria are used to develop the SWOT analysis. The SWOT rows may also be combined into two rows: strengths/opportunities and weaknesses/threats.

Table 3.4.4: Illustrative Presentation of Summary of Findings

	Equity	Access	Efficiency	Quality	Sustainability
Strengths and opportunities	Renewed commitment to primary care and integrated services in national strategy	Improvement in infrastructure (new health facilities and roads)	Information from allows for informed planning and decision making	Clinical guidelines developed Promising pilot experiences for quality improvement	Improvement in infrastructure (new health facilities and roads)
		Partnerships with private pharmacies and clinics can help improve access to medicines and services in an efficient way			
Weaknesses and threats	Lack of clarity on how integration should work at provincial and central levels			Clinical guidelines not disseminated or used Lack of institutionalized quality assurance mechanisms	
	Lack of basic equipment to provide essential health services				

Table 3.4.5 List of Suggested Service Delivery Indictors Addressing the Key Health System Performance Criteria

Performance Criteria	Suggested Indicators for Service Delivery
Equity	Percentage of births attended by skilled health personnel per year (If possible, disaggregated by wealth quintile)
Access	Hours of services Km to nearest facility
Quality	Existence of adaptation of clinical standards into a practical form that can be used at local level.

TIP

Consider How the Private Sector Could be Leveraged

The public sector has access to donated ARVs; making subsidized ARVs available to private providers would help make their private services more affordable and therefore accessible to the target population groups the public sector is struggling to cover.

Developing Recommendations

After summarizing findings, it is time to synthesize findings across chapters and develop recommendations for health systems interventions. In developing recommendations, team members should consider best practices used in other countries in the region to address problems similar to those identified in this assessment. It is useful to group recommendations into short-term and long-term solutions, or interventions that are relatively easy versus more challenging to implement in the context of this country.

Section 2, Module 4, suggests a generic approach that the HSA team can use for synthesizing findings across building block topics and for crafting recommendations. This subsection focuses on common service delivery interventions to consider in developing recommendations; Table 3.4.6 lists the interventions.

As much as possible, make conclusions about service delivery findings within the first week of the assessment so that findings can be validated 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? In the context of the given country, what key areas of improvement would be feasible?

Table 3.4.6 Illustrative Recommendations for Service Delivery Issues

Health System Gap	Possible Interventions
	System performance criteria: Increase access to critical health services
Limited access to public or private health facilities in rural/remote areas	• Organize community transportation; rotating community clinics. • Coordinate and share clinical responsibilities with community midwives, traditional healers, and community health workers. • Seek collaborative partnerships with private sector (for-profit, NGOs, church, pharmacies) to serve more people. • Explore partnerships with commercial entities operating in remote areas.
Financial barriers to access	Develop vouchers to specific health interventions (e.g., deliveries, family planning, HIV testing) to allow a consumer to seek care at either a public and/or private provider; supplement voucher with reimbursement of transportation costs for both patient and family member. Create some form of risk pooling mechanism (see Module 3.3, Health Finance).

Table 3.4.6 Illustrative Recommendations for Service Delivery Issues cont...

Health System Gap	Possible Interventions
System performance criteria: Improve equity of health services	
Scarce public resources subsidizing middle- and upper-income groups	Create market incentives (e.g., vouchers, sliding scale fees, charging full cost for those who can pay) to "pull" in lower-income groups and "push" out upper-income groups.
System performance criteria: Improve quality of health services	
Missing key laws and/or health acts to create institutional framework supporting quality	Many countries have not updated their health acts recently. Revise and update health law and acts to reflect changes in health system, including presence of new health actors delivering health care, new technologies, and new financing mechanisms. The vast majority of countries have health regarding human resources. However, many do not have health acts governing the auxiliary health cadres such as clinical officers, nurse assistants, pharmacist aides, and lab assistants. Encourage drafting health acts and harmonizing them with existing ones.
Non-existence and/or out-of-date clinical standards of care	Update and revise clinical standards according to evidence-based practices involving all types of health care providers (public, private, NGO/FBOs). Widely disseminate and train providers – public and private – in new clinical standards.
Limited capacity to enforce quality standards Weak institutional framework Private providers unregulated and supervised	Strengthen health councils'/boards' capacity to allocate more funds so they can monitor the health profession, inspect facilities, and sanction providers as needed. Review scopes of practice for each health profession to clarify areas of overlap between cadres (e.g., doctors and nurses) and eliminate inconsistencies between sectors (e.g., public nurses have expanded scopes of practice but private nurses with similar skills are not allowed to perform same tasks). Streamline professional and facility licensing processes.
System performance criteria: Improve quality of health services cont.	
Poor clinical skills among both public and private providers	Improve quality (i.e., adherence to clinical standards) in a selected clinical domain using facility-level quality improvement teams working as a collaborative. Expand model to select number of private facilities in underserved geographic areas. Introduce/strengthen supportive supervision at the intermediate (district) level. Funding permitting, include supervision of private sector entities. Involve private provider association in public sector initiatives to improve clinical skills so that the associations can transfer same knowledge and training to private providers.
Lack of incentives motivating providers to deliver quality services	Institute a "pay for performance" incentive system that rewards public and private facilities for improved quality of services. Institute annual continuing medical education requirements and periodic re-licensure for all health professionals, private and public. Institute a (formal or informal) accreditation system that recognizes other incentives for a minimum level of quality of services.
System performance criteria: Improve efficiency of critical health services	
Duplication of services and equipment	Institute certificate of need policy requiring the MOH to first determine if there are any qualified health care providers and/or needed equipment (e.g., MRI, CAT scan, dialysis machines, laboratory facilities) in a geographic area before authorizing building a new facility and/or procuring new equipment. Explore mechanisms, such as contracting, subsidies, tax breaks, or nonfinancial incentives, to encourage private sector providers to deliver specific health services at affordable prices to target population groups. Establish alliances with private providers or employers to encourage private support/provision of specific health services (such as immunization).
Limited scopes of practice for key health personnel	To address scare human resource in health, particularly limited numbers of physicians, many countries are "liberalizing" the scope of practice for certain health cadres such as nurse, midwives, clinical officers, pharmacy assistants, to perform basic tasks that do not require a physician. Recommend liberalizing scopes of practice for both public and private sector health cadre to perform certain functions needed in critical health services.

4.5 Assessment Report Checklist: Service Delivery Chapter

❑ Profile of Country Health Service Delivery

A. Overview of Service Delivery

B. Create service delivery profile, including descriptions of:

a. Inputs

b. Processes

c. Outputs

❑ Service Delivery Assessment Indicators

A. Organization of health services

B. Access to health services

C. Coverage and utilization of health services

D. Equity in delivery of health services

E. Quality of health services

F. Health services outcomes

❑ Summary of Findings and Recommendations

A. Presentation of findings

B. Recommendations

Module 5
Human Resources for Health

This module presents a framework for human resources for health and outlines specific indicators to measure to understand the strengths and weaknesses of a country's workforce capacity and the enabling environment.

FIGURE 3.5.1 IMPACT OF BUILDING BLOCK INTERACTIONS

Introduction

HRH is the foundation of the health care system. A well-performing health workforce has sufficient numbers of trained staff, who are fairly distributed throughout the country, and supported by policies and systems. This module will review the fundamentals of HRH and describe what to include in the HSA report's chapter for this topic. When assessing a country's HRH, one must consider both the government and nongovernmental sector, including not-for-profit and for-profit training institutions, health care facilities, and health care providers. Often, government does not collect and/or include private sector data in its HRH planning. This means that its estimates of future HRH requirements or plans to scale up service provision through increased employment or service expansion do not take into account private HRH. In most countries, the private sector has become a prominent producer, distributor, and employer of the health care workforce and, thus, an important element to describe in the HRH assessment.

This module presents the HRH building block of the HSAA manual.

- Subsection 5.1 defines HRH and its key components.
- Subsection 5.2 provides guidelines on preparing a profile of HRH in the HSA country.
- Subsection 5.3 presents the indicator-based assessment.
- Subsection 5.4 details the process for summarizing findings and developing recommendations.
- Subsection 5.5 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

5.1 WHAT IS HUMAN RESOURCES FOR HEALTH?

The *World Health Report 2006* (WHO 2006) defines HRH, or the health workforce, as "all people engaged in actions whose primary intent is to enhance health." According to WHO, 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" (2006b). For example, health educators, such as nurse tutors, are part of HRH. Finally, there is a growing number of para- or nonprofessionals, such as CHWs and peer counselors, providing health services in communities in clinics and at home. In some countries, these CHWs have become a significant proportion of the overall health care workforce. It will be important to include these CHWs in the HRH assessment in order to fully describe the HRH capacity.

WHO recommends that country governments engage in a multi-sectoral and participatory process to create an enabling environment for effective human resources management (HRM). The factors that affect an enabling environment – policy, finance, education, partnership, leadership, and HRM – are presented in Figure 3.5.2, the Global Health Workforce Alliance (GHWA) HRH Action Framework (http://www.who.int/workforcealliance/en/). This figure also shows the components and outcome of strengthened influencing factors for HRH.

FIGURE 3.5.2 THE GHWA HRH ACTION FRAMEWORK

The framework website stresses the importance of government considering the private sector: "The HRH Action Framework…is designed to assist governments and health managers to develop and implement strategies to achieve an effective and sustainable health workforce [for the entire health sector]. By using a comprehensive approach, the Framework will help address staff shortages, uneven distribution of staff, gaps in skills and competencies, low retention and poor motivation, among other challenges." Recognizing that many of the health workforce are outside the purview of the MOH, the HRH Action Framework advocates for mechanisms and processes that foster multi-stakeholder cooperation (inter-ministerial committees, health worker advisory groups including private professional associations and donor coordination groups) and greater cooperation between public and private sector providers (see indicators under Partnership).

TIP

Human Resources Management Tools

For further information on HRM, the HRH Action Framework, or additional HRH tools, refer to the USAID funded Capacity Plus Project website: www.capacityplus.org

5.2 Develop a Profile of Human Resources for Health

To give the overall HSA team and country stakeholders an overview of the institutions and functions of the HRH in the health system, the technical team member responsible for HRH will develop a profile of the human resources component across public and private sectors.

A comprehensive profile includes the following components:

- The total number of health care workers in the public, private, and NGO/FBO sectors by cadre
- The total number of health care workers in public, private, and NGO/FBO sectors by geographic distribution
- The enabling environment for a strong HRH component (using the HRH Action Framework, described above)
- HRH planning capacity
- HRH development (education and training) through public and private institutions
- HRH performance support (includes management and leadership as well as performance management)

The following approach can guide the HRH assessment:

- If available, review the existing government HRH strategic plan. Determine when it was produced and last updated and whether it includes plans for HRH in all sectors.
- Obtain organizational charts of the MOH at central, regional, and district levels to ascertain where human resources fit into the larger system.
- Review HRH assessments that have been completely recently (within four years).
- Review the MOH's human resources establishment register or registries of health professionals, including information on degrees, diplomas, graduation, deployment, and licensure. These documents may be at either the national or regional level and may be managed by the health professional regulatory bodies or internal offices within the MOH. Some of these registries include private and NGO/FBO providers.
- Prepare lists or tables that capture and synthesize key elements of the HRH system, for example, categories, numbers, and distribution of health workers and levels of authority for key human resources functions at various levels within the system.
- Seek existing reports or survey data with total (public and private sector) estimates of HRH. Data from the World Bank, WHO, or a national statistics bureau may be useful, but they must be used with caution because they could be outdated or incomplete.

Where they exist, national registries of commercial for-profit and/or non-profit service providers can provide useful estimates of HRH available across the sectors.

- Seek data from professional provider associations or other private sector entities for augmenting or cross-referencing.

Decentralization and HRH

In the public health sector of many developing countries, HRM decisions are made at the central level. In some countries, although policy is made at central level, most other functions are managed at a lower level; district health managers, autonomous hospitals, and large municipalities often have their own HRM structures. In addition, HRM functions for health may be housed in the MOH, the Ministry of Education, the Ministry of Labor or Civil Service, local government, and so on.

In creating the HRH profile, describe:

- The relationships between the various HRH functions and how integrated or fragmented they are;
- The level of authority for hiring, firing, disciplining, promoting, and deploying workers (e.g., which level can execute rewards and incentives or initiate disciplinary action to influence performance?).

In gathering data, it is important to ascertain any differences between how things are meant to work – often described in secondary source documents – and how things are really working. Key informant interviews and field visits are useful in this regard. Assessment questions should be tailored to reflect the level of decentralization in country, so that the questions are relevant to the interviewee.

TIP

Conducting the Assessment

- Select ONLY indicators that apply to the specific country situation.
- Conduct a thorough desk review of all available secondary data sources before arriving in country.
- Stakeholder interviews should focus on filling information gaps and clarifying issues.
- Coordinate stakeholder interviews with team members so all six modules are covered and avoid interviewing the same stakeholder twice.
- Look at all health actors – public, for-profit and not-for-profit, involved in delivering health services.
- Tailor the interview questions to each level of decentralization so they are relevant to the interviewee.
- Schedule team discussions in country to discuss cross-cutting issues and interactions.
- Finalize an outline for the assessment report early on so sections can be written in country.

5.3 Assessment Indicator Overview

This section focuses on HRH indicators – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and, in the "Interpretation" and "Issues to Explore" subsections, shows how to work with them. Finally, the section identifies key indicators to which the HSA technical team member can limit their work, if time precludes their measuring all indicators. Annex 3.5.A lists Issues to Explore in Stakeholder Interviews to show technical team members the type of information that each stakeholder typically will know and priority topics for discussion.

TIP

Prioritizing Indicators

Team members constrained by limited time or resources should prioritize as follows:

- First, assess Indicators 1–4, because data for them are readily available from the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org).
- Second, assess Indicators 5, 7, 21, and 22.
- Third, if possible, assess all remaining indicators to get a more comprehensive picture of HRH in the country.

Topical Areas

The HRH Action Framework is a useful way to group and organize data into topical areas and to understand country-specific HRH strengths and weaknesses. Topical area A has four indicators: data for Indicator 1, the number of HRH by cadre, are available through the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/). Indicators 2–4, concerning geographic distribution, sector, and recent trends, are likely found in country, mostly in MOH data. Information for topical areas B–H should be gathered to the extent possible through desk review and then complemented with discussions and interviews with key informants and other stakeholders. Data sources recommended for these indicators may not be readily available. As always, the technical team member for HRH is responsible for organizing and developing a process for the review of records, documents, and key informants' and stakeholders' interview responses to obtain information necessary to make judgments on the indicators listed.

Table 3.5.1 lists the HRH topical areas and the numbers of the indicators associated with each area.

Table 3.5.1 Indicator Map—Human Resources

Topical Areas	Indicator Numbers
A. Current HRH situation	1–4
B. HRH management systems	5–9
C. Policy and planning of HRH	10–12
D. Financing HRH	13–16
E. Educating and training HRH	17–21
F. Partnerships in HRH	20–22
G. Leadership of entire HRH system	23–24

Data sources

There are many sources to help technical team members assess and analyze HRH systems. The sources are organized here into three main categories:

1. **Standard health indicators:** Readily available data on HRH are drawn mainly from existing and publicly available international databases.
    - A compilation of these indicators is available at a single online source at the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/)
    - Global HRH Resource Center (http://www.hrhresourcecenter.org/)

2. **Secondary sources:** The health indicators need to be supplemented with other research and documents such as policies, regulations, and health statistics. Below is a list of secondary sources available in most countries:
    - National health strategic plans (should be the prime source for documenting national statistics, policies, and strategies, and required), current and the previous edition
    - National HRH strategic plans (should be the prime source for documenting national statistics, policies, and strategies, and required), current and previous edition
    - HRH section of national health budgets
    - Actual financial performance compared to budget allocations
    - Existing wage and salary studies
    - NHA
    - WHO Global Atlas of the Health Workforce
    - Global Health Workforce Alliance website
    - Country MOH, MOF payroll database
    - Previous HRH assessments (literature review) and/or country-level HRH assessments
    - Health sector information not included in the national health strategic plan, including other health-related policies, other strategic plans, reviews, evaluations, service delivery package descriptions, DHS, service availability mapping, and facility surveys
    - HRH information not included in the national health strategic plan, including HRH policies, other strategies and plans, evaluations, reviews, staffing norms, workforce plans, and staffing, recruitment, deployment, attrition, and training data
    - Public service information including establishment, payroll, personnel regulations, schemes of service, and job descriptions
    - Policy documents from large private sector providers such as FBOs or FBO associations

TIP

How To Get To The Core Issue Through Stakeholder Interviews

To get to the bottom of things, start at the top of the MOH structure and work your way down the organizational chart.

For example, in HRH Finance, begin with high-level MOH finance and budget decision makers. Continue with key staff in the MOH budgeting unit. Interview the key MOF staff who work with the MOH.

TIP

INTERVIEWING HEALTH WORKERS

Although the list of stakeholders to interview is long, it is critical to interview health workers themselves, where possible. Allow sufficient time during the assessment trip to include health worker interviews. An efficient way to capture health workers' perspective is to organize focus groups.

- Professional bodies such as nursing councils and medical boards. Each profession typically has a governing council that sets criteria for licensure, continuing education (if any), and emigration documentation.

3. **Stakeholders to interview:** Annex 3.5.A presents a Summary of Issues to Explore in Stakeholder Interviews.

- MOH HRM and Planning department staff:
  - MOH staff responsible for the training, deployment, practice standards, and monitoring of health care workers – including staff in departments of medical services, public health services, human resources and human development engaged in HRM activities, and any chief medical or nursing officers on the Ministry of Education staff who are involved in establishing or monitoring health professional degree programs – including staff in higher education departments responsible for medical and other health professional curriculum and training in universities or other colleges and institutions
  - Senior administrators (deans, department chairs) at national or local universities with medical, nursing, or other health professional training programs under the jurisdiction of the Ministry of Education
  - Senior administrators of non-university-based public and private training institutions not managed by the Ministry of Education, including colleges and training institutions that graduate degree and diploma nurses, clinical officers, and laboratory and health management staff. Most of these institutions will be under the jurisdiction of the MOH
  - MOF payroll clerks
  - Health professional councils or regulatory bodies (physician, allied health, nursing, pharmacy, and others) and professional associations representing health care workers. Include interviews with executive director and other senior staff and staff responsible for information and, database
  - Health information system database administrators within national and regional offices; if available, the human resource information system (HRIS) database administrators
  - In-country PEPFAR HRH/HSS technical advisors, Centers for Disease Control and Prevention, and USAID, responsible for developing HRH plans and programs
  - Global Fund HRH or HSS technical advisors or in-country staff
  - Other development partners that have a substantive role in funding HRH activities in

the country

Depending on time available, you can choose to do key informant interviews, focus group discussions, and observations with a representative range of stakeholders from among the following:

- Faculty from training institutions
- Students enrolled in training programs
- Health workers representing a range of providers: physician, clinical officer, nurse, midwifes, and CHWs
- Other government agencies with human resources roles and mandates, e.g., ministries of Public Service, Education, Finance, Local Government

The following sections provide an overview of each topical area, sources for data collection, descriptions about each indicator and ways to interpret the information.

Topical Area A: Current HRH Situation

Overview

HRH statistics provide quantitative evidence of the HRH situation. For example, the numbers of health care workers, as well as ratios per population, will help the HSA HRH technical expert to judge if the country has adequate number of HRH and, if not, the severity of the HRH situation. It will also allow quick comparisons to other countries. Disaggregating these statistics allows the HSA team member to describe the allocation of specific providers across the various levels within the delivery system and the distribution of providers between geographic boundaries (rural/urban). The distribution figures are perhaps more important than overall numbers because they show geographic areas, HRH cadres, and service delivery levels where HRH is inadequate. For example, Bangladesh has a large surplus of doctors and a drastic shortage of nurses (World Bank 2009a). In Kenya, district hospitals have on average 120 percent of nurses they need, while dispensaries have 70 percent vacancies for nurses (average 1.7 out of 5) (Muchiri and James 2006).

Current HRH Situation

Indicator	Definition and Interpretation
1. Ratio of different health personnel per 1,000	This indicator considers: • Ratio of health cadre per 1,000 people • Total number of physician • Total number of nurses • Total number of midwives • Total number of pharmacists • Total number of laboratory technicians • The number of health care providers, by cadre, is the raw material upon which all other statistics will be based. WHO gathers and presents statistics on the number of health care workers per 1,000 population, which allows easy comparisons between countries in a region, and between areas within a country. The country comparison data can be presented in a table; the table can include a column for the WHO-recommended workforce number for the HSA country (e.g., 2.28 total health care workers per 1,000 population) so that overall adequacy of the workforce is easy to judge. Note: While population ratios provide a handy comparator, additional factors such as population density may exacerbate HRH access issues. Probe for these factors in the interviews and present them in the text that accompanies the tables.
2. Total number by cadre and sector	This indicator considers: • Total number of physician by sector • Total number of nurses by sector • Total number of midwives by sector • Total number of pharmacists by sector • Total number of laboratory technicians by sector It is easy to collect by cadre the number of HRH who work in the public sector and in many countries MOH statistics include HRH in the NGO/FBO sectors. But finding the number of HRH who work in the private sector usually requires some investigation. The place to start is with professional council licensure registries; private providers are normally licensed although the registries do not indicate public or private status. A second source is professional association member registries, which often do indicate public or private status. You can "guessestimate" the number of private providers by extrapolating from the above numbers. Finally, telephone books list almost all legitimate private providers; these listings can be cross referenced with council and association registries. Taking the time to collect the total number of health professionals by sector is critical to helping the MOH understand how many providers work in the overall health sector, where are they located, and how can they be mobilized to help address some of the HRH gaps. These gaps can be shown in a table or pie chart. See Annex 3.5.B for examples of how to present these data.
3. Ratio of health care worker by geographic distribution	This indicator considers: • Ratio of health care workers by cadre and by geographic area. • If possible, break out geographic distribution by cadre and sector. Use MOH and other HRH data sources to examine HRH distribution by: (1).cadre, (2) geopolitical boundaries, (3) urban/rural split, and (4) service delivery level, including the number of CHWs (not attached to any level of facility). This will reveal inequities in service coverage. It may be helpful to present these data in four adjoining tables. It may be possible to combine (2) and (3) above through use of asterisks or other markings to tell, for example, which districts are rural and which are urban. Depending on country usage, it may also be possible to split geographic area into three categories, adding "peri-urban." See Annex 3.5.B for examples of how to present these data.
4. Trends for the past five years	This indicator considers: • Ratio of health professionals by population over time • Total numbers by cadre and sector over time • Ratio of health care worker by geographic area over time Present the client and other country stakeholders with evidence about whether the HRH situation is getting better or worse for as many years as there are data available. Where possible, disaggregate the historical data by cadre. Again, this information should be presented in graphical form; for example, historical data by cadre can typically be presented on one graph, using different shapes to present the data points for each cadre. If the resulting graph is too busy and therefore unclear, present individual graphs. See Annex 3.5.B for examples of how to present this data.

Topical Area B: Human Resources for Health Management Systems

Overview

Central to a country's health care needs is strong HRM at all levels of the health care system. HRM is an organizational function that effectively develops and uses the skills of the people who work in the organization – here, the health care system. It is important because it addresses the system's need for a competent, stable, and motivated workforce that allows the system to perform optimally (i.e., have the right number of service providers with the right skills in the right locations at the right time).

HRM comprises:

1. Planning the workforce: Accurately estimating HRH needs based on data
2. Developing the workforce: Training, recruiting, selecting, and deploying HRH
3. Managing the workforce: Retaining workers through good performance management (setting performance expectations and appraising), compensation (including benefits), career development, and related activities such as employee relations and labor relations programs

In most developing countries, achieving effective HRM is complicated. These countries' health ministries have data on public sector employees but almost none on workers in private nonprofit and for-profit sectors. MOH workforce planning and management is obviously hampered when the ministry is uninformed about an appreciable percentage – often half or more – of the country's health professionals.

Issues to Explore

The following questions can be used to assess the strength of HRM systems:

- What systems and capacity are available to ensure the collection, analysis, and utilization of HRH data to inform sound evidence-based decision making and monitoring of the workforce?
- Are health workforce recruitment and deployment systems and interventions aligned with and responsive to service demands?
- Are there persistent problems in retaining health workers and, if so, what are the reasons for this?
- What management systems and capacity are available to promote and sustain a positive working environment?
- What policies and practices are in place to protect health workers?
- How are staff needs and expectations appropriately heard and addressed in the workplace?
- How do existing mechanisms adequately address health care worker career development and staff engagement?
- What policies, mechanisms, and practices are in place to effectively manage, support, and promote health worker performance and productivity?

Human Resources for Health Management Systems

Indicator	Definition and Interpretation
5. Existence of a comprehensive HRH plan with a budget	Intrahealth defines an HRH plan as follows: "Strategic planning helps an organization make fundamental decisions about its human resources by taking a long-range view of what it hopes to achieve and, in broad terms, how [it hopes to achieve its goals]… Operational planning is related to the implementation of the strategies on a day-to-day basis. For example, if training more staff is the strategy selected for improving staffing in remote facilities, the operational planning would include the start date for training courses and the number of tutors needed." (http://www.intrahealth.org/~intrahea/files/media/health-systems-and-hrh/techbrief_9.pdf) There should be evidence that the strategic plan is being implemented. If the country has a strategic and operational HRH plan, determine when the plan was developed and/or updated. Existence of an HRH plan is a positive sign; however, plans are not always implemented. If the plan is not being implemented, probe for implementation bottlenecks. As in all qualitative data gathering, it is advisable to ask multiple interviewees the same question in order to triangulate and thereby discover more complete information. In addition, key areas to look for in the plan are: • Existence and use of HRH annual operational plans; use as a means to identify actual interventions or actions that have been taken to reach benchmarks defined in plans such as new laws, regulations, policy guidance, or system/structural changes evident at training or employment sites • Availability of strategic and operational HRM functions and structures at national and local levels • Availability of annual recruitment and deployment plans, including numbers and types of health workers required at all levels • Existence of fair, consistent, timely, merit-based, and well-defined recruitment and deployment systems and procedures • Existence of policies, systems, and procedures to choose appropriate bundle of retention interventions and to manage retention schemes • Availability of monitoring data on retention schemes and impact
6. Availability of strategic and operational HRM functions and structures at the national and local levels	Management Sciences for Health (MSH) defines an HRM as follows: "HRM is the integrated use of systems, policies, and practices to plan for necessary staff and to recruit, motivate, develop, and maintain employees in order for the organization to meet its desired goals." (http://www.capacityplus.org/files/resources/projectTechBrief_2_0.pdf) Describe or map the current status of HRM functions and structures. The HRM functions are often weak, understaffed, fragmented, and staffed by people with no human resources training, so probe to find out the current status. In mapping the HRM functions, ascertain in particular the level at which the functions are located within the organization, and whether the staff's human resources work is strategic or mainly concerned with logistical matters. Assessing the strength and gaps of the HRM function is key, as sustainable HSS cannot often be done without a reasonably integrated and strong HRM function both at the central and district levels.

Human Resources for Health Management Systems cont...

Indicator	Definition and Interpretation
7. Enabling environment exists for health workers to achieve goals and targets	Elements of an enabling environment include: • Clear job descriptions • Appropriate tools • Adequate supplies • Supportive supervision Does this exist in a strategic or operational plan? Is there evidence these are followed at the intended level? First, determine if a policy statement or the components of an enabling environment exist on paper, for example, in a strategic or operational plan. If so, how widely available is the plan? How easy is it to retrieve, for example, the set of job descriptions of the safety policy? Does the policy or role description appear to be up-to-date? Second, ascertain policy implementation. Is there evidence that policies (or parts thereof) are actually being followed at the intended levels? Do the enabling environment elements as described in the indicator exist – at least to some degree – at the facility level? If there is, for example, a retention challenge that HRH leaders are trying to address, is there evidence of policies, systems, and procedures to choose appropriate bundles of retention interventions and to manage retention schemes? Ascertaining what is being implemented is difficult without visiting a certain number of facilities (which should be part of the overall assessment). However, respondents – if asked – are often willing to volunteer information about the difference between what exists on paper and what is actually happening in practice. This is critical information as it will point toward intervention areas: For example, it is important to know whether the issues are more around plans and policy formulation or putting these into practice as they require different kinds of interventions to "fix."
8. Availability of and use of HRH information systems	Evidence of use includes: • capacity to collect, integrate, and analyze HRH data that include both state and non-state players; • information used to plan, train, appraise, and support the health workforce. Does an up-to-date HRIS exist, and are the data used to inform decisions about planning, training, and supporting the health workforce? The existence of the system should be easy to determine. If an HRIS exists, determine the quality of data input, as well as how broad based the system is. Describe who uses the data and for what purpose, e.g., MOH to track new graduates into the field; regulatory councils to manage licensing requirements. In many countries an MOH HRIS typically includes only government workers, leaving out significant percentage of the country's health workers. FBO-based workers alone can make up 30–70 percent of the workforce. If the HRIS is producing data, seek evidence for how the data are used. Are there standing groups or task forces, or planning functions that routinely review and use the data? Is there evidence that HRIS data has informed or driven a recent decision about, for example, medical education or in-service training?
9. Availability of mechanisms used to monitor and improve health worker performance, productivity, and expectations	The existence and use of monitoring reports that include data on health worker performance (e.g., health worker absenteeism relative to the total number of scheduled working days over a given period at a facility). Is there a documentation system in place to monitor and inform HRH performance and productivity, for each cadre separately (including community health care workers)? If a documentation process and other mechanisms exist: • Are the mechanisms actually being used? • Are they producing positive benefits in terms of improving performance? • Are any unintended consequences occurring? (Measuring productivity and doing performance management is a difficult organizational task in any system, and often makes things worse if not done well) Are workers being given clear job expectations? This is generally a key to effective performance and – unlike feedback – is generally acceptable across cultures. One proxy indicator for HRH performance is absenteeism – the higher the level of absenteeism, the lower the quality of the performance will be. However, absentee data may be difficult to find, and may also be sensitive. It may help to ask for it in general, or by type of facility, and not tie it to specific locations or regions.

TIP

Stakeholder Interviews for HRH Policy

Start interviews with a high-level MOH official. If possible, do a pre-trip telephone interview with the MOH (organized by onsite logistics coordinator) to simply gain contacts for each of the policies you are interested in (e.g., the compensation policy is with the MOF, while the recruitment policy is at the Ministry of Public Service). Ask the in-country logistic coordinator to obtain these documents to review before the team's arrival.

Also plan to interview FBO/NGO and commercial facilities and professional health associations to determine if private sector policies follow government policies or, if not, if the sector has no policies at all.

Above all, be sure to ask health care workers if these policies have been implemented

Topical Area C: HRH Policy and Planning

Overview

HRH policies formalize how health care personnel cover the entire career of a health worker, from preparation to enter medical or nursing school to retirement. Important phases include: pre-service training, deployment, retention, salaries and incentives, performance quality and mentoring, and a range of issues affecting the worker's ability to provide quality health care to communities. The better these policies are documented, the more likely it is that employees will be treated at least consistently, if not "fairly." However, simply having the policies in place is not sufficient for consistent treatment. During review of documents and interviews, especially with providers, technical team members can probe for how often these policies are followed.

Issues to Explore

- How detailed are the policies, and have the policies been translated into guidelines and other process documents?
- Are they open to interpretation, favoritism, or gaming the system?
- When were they last updated?
- Do managers or workers know what is in the policies?
- Have any health care workers ever seen the policies?
- Are the policies and guidelines actually followed? In both the public and private sectors?
- Is there an overarching HRH plan that takes into account all HRH in public, and nongovernment sectors including NGO/FBO sectors?

Policy and Planning of HRH

Indicator	Definition and Interpretation
10. Existence of and use up-to-date HRH policies	Capacity Plus explains the need for HRH policies. "To facilitate action, countries need evidence-based, costed, implementable HRH strategic plans, anchored by a policy framework that supports HRH plans with necessary legislation and regulation." (http://www.capacityplus.org/sites/intrah.civicactions.net/files/resources/HRH%20Policy%20and%20Planning.pdf) Seek evidence that the HRH policies exist and are actually used or implemented. If HRH policies exist, describe them: • Are they presented as part of an overall HRH policy? • Are they part of the health policy? • Are they part of the Public Service Commission policy? Make broad statements about the existence of the policies, who controls them, and how well they are put into practice.
11. Existence of clear and up-to-date scopes of practice	This indicator documents the existence of policies in place – often addressed in legislation – requiring registration, licensure, or certification for cadres of staff such as doctors, nurses, midwives, pharmacists, laboratory technicians, CHWs, and other personnel. 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 maintains their qualified status. Often these regulations also specify the documentation available upon emigration. Stronger HRH systems have more flexible scopes of practice that allow MOHs to fill shortages in certain cadres and accommodate changing health service delivery needs. For example, the scope of practice for clinical officers may be expanded because the officers can be trained to take on certain clinical procedures, and provide valuable services in places that lack access to a physician.
12. Employment policies documented and used	This indicator documents the presence of an employee manual or other written documentation of the conditions of employment – the rules and regulations that govern employees' conditions of service, and related policies and procedures such as leave and discipline. Evidence that policies are documented and used are: • Personnel policy manual that is available to all employees • Policies are actually followed Service documentation lets employees know what to expect in general from the organization and what rules they will be governed by. Lack of service documentation raises issues of fairness. It is also helpful to determine whether or not the policies described in a manual are actually carried out.

Topical Area D: Financing of HRH

Overview

HRH represent the largest single cost element in providing health services in developing countries, and these countries are challenged to find the financial resources and appropriate payment methods to ensure an adequate supply and mix of health workers and stimulate productivity, responsiveness, and the provision of effective care.[1] HRH financing is defined as obtaining, allocating, and disbursing adequate funding for HRH. This covers areas such as (1) setting levels of salaries and allowances, (2) doing budgeting and projections for HRH intervention resource requirements including salaries, allowances, education, incentive packages, etc., (3) increasing fiscal space and mobilizing financial resources (e.g., government, Global Fund, PEPFAR, donors), and (4) analyzing NHA data on HRH expenditures.

Financing of HRH

Indicator	Definition and Interpretation
13. Data indicating public salaries are competitive in the local and regional labor market	Having national or regional wage studies that look across the public and private health sectors. Describe how wages for public sector medical personnel compare to those in the private health care sector, to nonhealth sector wages in the country, and to public health sector wages in the region. Include allowances to get an overall picture of workers' financial compensation. Other, more specific potential comparison groups are listed below: • Other civil servants in the country (e.g., compare doctors to engineers or compare nurses to teachers) • Other professions in the country (e.g., compare doctors to attorneys) • International partners – hiring salaries for foreign service nationals in international NGOs • Similar professions in other countries, especially regionally, and then internationally (e.g., compare compensation for doctors in Ethiopia with those in Tanzania, Botswana, and Canada) If no data on wages are available, ask about wage difference perceptions during key informant interviews, especially with health workers. Such perceptions may be at least as important as actual wage differences, because perceptions of unfairness have been shown to drive staff turnover.
14. Evidence indicating that National Health Accounts regularly collect and report data about HRH expenditures	If the country carries out NHA studies, can the interviewees cite the NHA data and explain how they use the data? The extent to which HRH financial policies can be understood and improved depends on knowing how HRH are funded and where the funds are going. Virtually all countries now do NHA studies, and they are frequently completed annually. Ministries of Health and Finance should both be able to provide access to the most recent NHA data.
15. Evidence indicating budgets and projections done for HRH requirements	Is there a comprehensive account of the budget process and contents? For example, does the budget include salaries, allowances, education, and incentive packages? Describe how the country handles HRH financing: • Is there a separate line item in the overall MOH budget for health care workers' salaries and allowances? • If the health system is decentralized, how are the HRH budgets allocated (e.g., by geographic area)? • How is HRH budgeting is done: bottom-up vs. top-down? • Are HRH budget amounts allocated based on (1) need, or (2) last year's levels? • How is HRH finance treated in the country's overall budget (e.g. as a separate and important section)?

[1] Global Health Workforce Alliance: www.who.int/workforcealliance/about/taskforces/financing/en/index.html

Financing of HRH cont...

Indicator	Definition and Interpretation
16. Evidence indicating MOH makes good use of finances already available	This indicator describes evidence such as the MOH does not turn unused money back to the MOF (makes use of its entire budget) In many countries, HRH budget amounts are limited because of non-use of "last year's" funding. The MOF will have accounting reports showing the amount of funding returned by the MOH at the end of each fiscal year. In most cases, salaries and allowances will appear as separate line items on these reports. Document, for as many years as possible, the amount and/or percentage of the total budget and HRH budget that has been returned to the MOF.

Topical Area E: Educating and training HRH

Overview

Education refers to the process of producing qualified health professionals and para-professionals to address population-based health care needs. For health professionals, this process is split into several stages: pre-service education, post-graduate and specialty training, and in-service training including professional development. Pre-service education is the formative training of a health professional through a recognized, and often accredited, training institution: nursing school for nurses, and medical school for physicians. Upon graduation from a training institution, health professionals may be able to pursue ongoing training through specialty programs or continuing medical or nursing training through in-service programs. Pre-service education usually represents the largest method of increasing the workforce. In-service training is important for staff to acquire new skills, especially when staff need to gain new skills or competencies due to changes in practice standards or new roles and responsibilities.

The public sector has historically been responsible for educating HRH. However, in recent years, there has been increased participation by the private sector. In many countries, FBOs are the primary private sector actor, though not-for-profit and for-profit institutions are increasingly playing a larger role. Like the public sector, private medical institutions (PMIs) train the full gamut of health care workers: doctors, clinical officers, nurses, midwives, pharmacists, laboratory technicians, etc.

In countries with severe human resources for health deficits, PMIs serve as a necessary complement to public training institutions to increase the number of trained health care workers. Many PMIs operate outside government supervision and oversight, and a number of barriers – regulatory, policy, financial, and accreditation – can hinder the successful utilization and leveraging of PMIs as an important source for the expansion of the health workforce.

Country Story: St. Lucia

The first internationally accredited private hospital in St Lucia, Tapion Hospital, has established partnerships with Canadian and U.S. hospitals for consultation on difficult cases and continuing education of Tapion's staff. To expand this partnership, together the hospitals are building a state-of-the art telemedicine and conference center. Tapion has expressed keen desire to partner with the MOH to extend continuing medical education learning with its international partners to MOH staff.

Data Challenges

Consult regulatory councils and the Ministry of Education to determine educational requirements for each cadre. In each country, a regulatory council typically oversees the education process for each cadre, and licenses public and private education institutions. These councils keep records of the number of applicants, the number accepted, and the number graduated, by cadre. The Ministry of Education also plays a key role in pre-service education within university and other academic settings, and should be consulted to address some of the same questions.

In-service information is much harder to track, as the training is usually done in an ad hoc manner, based on whatever training opportunities are available, which vertical programs (and donors) are offering training, and what employees are due for training. Professional associations may have some requirements for continuing education for licensure, and if so, may have records of training by their members. Often, it is most expeditious to get the information through field interviews, asking workers and their supervisors about in-service training experiences over the past few years. Also, because donors often drive the in-service training agenda, they should be consulted for information.

Issues to Explore

- Is a central training planning function in place?
- May continuing professional education activities, whether off site or in-service, 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?
- How are community-based providers trained?
- Do any policies govern leaving one's post to go for donor-funded training?
- Are training requirements enforced? If so, how?
- Is training the right solution? Does it seem to improve performance?

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.

Educating and Training HRH

Indicator	Definition and Interpretation
17. Number of pre-service and in-service training institutions	Quantify and describe systems and institutions (public and private) to produce new health workers Document the number of health professional education institutions, including type of institution, degrees, public or private ownership, and graduation rates, job placement rates. Determine the constraints the educational institutions face. Typically the main one is the number of instructors or tutors available, not infrastructure or equipment. Heads of health professional institutions, both public and private, will have records of established teaching posts and vacancies. In very large countries with many PMIs, it may be possible to visit only a sample but PMIs should be included as they play an increasingly complementary role to public training institutions, (for example offering courses not available at public institutions, being an alternative if public schools are full, or offering more flexible course hours for working professionals). Other constraints, particularly for PMIs, include lack of public oversight of PMIs; lack of accreditation and curricula standards; and minimal or no assurance of quality of teaching instructions received. From the student perspective, PMI tuition is a major constraint to accessing private medical education.
18. Production of new health care workers is responsive to the needs of the health care system	This indicator documents the ratio of health care worker production to the need for health care workers presented in the HRH strategic plan. This indicator documents formal links between the pre-service public and private educational institutions and the health system. Pre-service education based on competencies needed to address population health needs is necessary so that the right numbers and cadres enter the workforce with the right skills. Note whether there is a systematic process for aligning the training curriculum with the competencies and skills needed by each new cadre to work at the community and facility level. This process might be coordinated by the MOH, the Ministry of Education, or a joint committee. Ideally, a stakeholder leadership group would be involved in educational planning and alignment to ensure that the numbers and skills and competencies of graduates needed are produced through a combination of public and private institutions. Specific questions to pose include the following: • Does the MOH have a relationship with 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 to the epidemiology and health service delivery needs of the country? The numbers of graduates produced and the skills that they are taught should be linked to the strategic HRH plans. • Has an HRH capacity analysis been done, aimed at determining the ability of the country to fill its human resources needs in the future? • Are training institutions accredited, or otherwise assessed on a regular basis, to ensure training standards are met? 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.

Educating and Training HRH cont...

Indicator	Definition and Interpretation
19. Evidence that pre-service education curriculum is updated regularly	Document the last time the pre-service curriculum was updated for each cadre and by public and private pre-service educational institutions. These records can be found at the ministry responsible for training each cadre. For example, in many countries the MOH is responsible for training doctors, and the Ministry of Education is responsible for all other provider training. Rate the changes as major or minor and indicate this degree of change in a table, by cadre. 1) Is the curriculum updated regularly? An outdated curriculum is a source of poorly trained health workers. 2) The process for updating and the frequency of updating will indicate whether the quality is good and follows state of the art guidelines.
20 Frequency, quality, and alignment of in-service training to health priorities and workforce needs	This is the overall description of type of in-service training offered, to whom, with what resources. In-service training may be somewhat harder to document than pre-service education: even if there is a central training process, or a continuing education requirement, additional ad-hoc training, usually donor-provided, is sure to take place. Ideally, the training component is based on a 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 unrelated to needs, and often results in frequent provider absence from their sites. Training could be continuing professional education in different technical areas for cadres of health care professionals including physicians, nurses, pharmacists, and midwives. In addition to the training increasing professionals' knowledge, it has become an important incentive for better worker performance, particularly among private providers. Continuing education may be provided by the MOH, donors, professional societies, or others. A certain number of credit hours of continuing education may be required annually for membership or certification. Ask if continuing medical education is available, mandatory, and for whom (public sector workers? private? which cadres?) Ask whether training is evaluated for effectiveness, in particular, for whether employees perform better on the job, not just on how good the training was perceived to be. Also document if the training has been adapted to meet private sector constraints (e.g. providers cannot absent themselves from their practices for one-week trainings, and they often prefer training to be held in the evening and on weekends).
21. Ratio of rural vs urban admissions and graduates	This is the percentage of students recruited from rural areas/total population of admissions and/or total number graduated to pre-service training programs. Rural recruitment of medical trainees is a key intervention to improve rural retention of health care workers. Evidence suggests that providers who are recruited from and then posted to rural areas tend to stay in post as opposed to transferring to urban areas. To document the rural/urban ratio, it is likely that assistance will be necessary to list all districts/counties and to classify them as rural vs urban. Admission records will typically include the home district of the applicants. Likewise graduates can be followed up and classified as urban/rural.

Topical Area F: Partnerships in HRH

Overview

Partnership refers to the extent to which there are formal and informal linkages between all HRH stakeholders. The most formal of these systems are HRH observatories, many of which are organized and supported by WHO. Partnerships are coordinating mechanisms that bring together all the stakeholders of a country's HRH as well as smaller-scale bilateral or multilateral linkages. For example, in many countries, there is a coordinating body for all FBO facilities, and it is represented in the country's HRH strategic plan. Or there may be an NGO network to represent nonprofit facilities. In some countries, donor coordinating mechanisms exist to ensure that duplication of funding and programming is avoided and that donor funding for HRH is used synergistically.

Data Challenges

Indicators for partnerships are somewhat softer and harder to determine than provider/population ratios. Examine partnerships from both a bottom-up and a top-down approach to find examples. This includes the following:

- Providers: Which organizations do they belong to?
- NGO/FBO clinic owners: Who are the coordinating organizations?
- MOH officials: Who are the HRH working groups? Coordinating committees (e.g., donor coordination groups)? Does an HRH observatory exist?

Issues to Explore

- The first level of investigation is to learn whether these groups and mechanisms exist. If they do, examine how representative they are: Are they composed only of public sector groups or do they include commercial and NGO/FBO sectors? Do they include representative organizations for services providers as well as private medical institution?
- The second level determines how often they meet, if at all: some groups are formed around projects or donor-funded initiatives and cease to exist once the project is over. Document how often and for how long the groups have been meeting as well as the activities (e.g., HRH policy review? HRH planning? HRH framework?).
- Conduct more in depth interviews to determine the influence each group has over HRH policy and decision making. Some groups exist only as information-sharing bodies (which have value in their own right) while others instigate, review, or approve HRH policy and practices.

Partnerships in HRH

Indicator	Definition and Interpretation
22. Active stakeholder participation in HRH policy and processes	This indicator assesses whether stakeholders are involved, and through which mechanisms and bodies, composition of coordinating mechanisms, and types of processes. Are there any formal mechanisms in place to bring together the many stakeholder groups that help to create or use HRH? Provide a description of the mechanisms that include: • Who attends (public, private, FBO/NGO sectors)? • What types of organizations are involved to represent their sector's perspectives, (e.g. ministries beyond MOH, professional associations, umbrella organizations)? • How often do they meet? • How are they created (e.g., an act of the Cabinet vs. an ad hoc meeting called by a donor)? • What are they producing (e.g. HRH policies, frameworks, strategic plans)? • How are they measuring progress? Technical team members can check the WHO or GHWA website for the presence of a WHO HRH observatory in the study country.
23. Formal agreements in place between government and other entities involved in HRH	Qualitative information describing the mechanism in place and if it establishes transparent rules of engagement that facilitate the partnership among the sectors. While information-sharing groups have some value, coordinating mechanisms with formal charters and memoranda of understanding (MOUs) typically have more influence with government and donors over policy and funding. Specific examples to look for include: • The charter and/or the MOU signed by each member group • MOUs or mention of the organizations in legal or policy frameworks. Such legal recognition gives these groups more political clout.
24. Mechanisms in place to involve community in service planning and provision and to provide feedback	In many countries, communities are being given a voice to determine which services are provided and how funding is budgeted in the health sector, and to provide feedback on service quality. For example, in Kenya, each rural health center and dispensary has a village health committee, supported by the MOH. The members are elected by the community, and have formal voice in how funding is allocated. Starting at the facility levels, determine if this kind of mechanism exists. If health committees or similar mechanisms exist on paper, determine if they actually operate in the field. Conduct interviews to determine their actual influence on HRH. In some countries, these groups exist on paper, but are nowhere to be found in the field. The main areas of questioning should be: • Do the committees have a say in what kinds of providers are needed at the facility level? • Do they have any influence in advocating for positions that are unfilled? • In rural and hard to reach places, do they offer help and support to attract and retain providers? • Is there a community committee attached to each facility? The Leadership and Governance Module will examine this data as well.

Topical Area G: HRH Leadership

Overview

HRH issues will be addressed and improved to the extent that country-level leadership is engaged in and prioritizes these issues as critical to the health situation of the country's population. For example, in Tanzania, the president has called the HRH situation "an emergency" and has pointed to the HRH shortage as the key constraint to health care access. Consequently, changes are being made in HRH policies and practices that should lead to HRH improvements. When documenting leadership engagement, there are two levels (and two indicators) to consider: Is leadership aware of the HRH situation and does it see the situation as important, and is leadership actively participating in making changes to improve the HRH situation?

This information will be more difficult to find than for other topical areas. Start with high-level interviews at the ministerial or member of Parliament levels if possible. Donors such as USAID will also be privy to the extent to which country leadership is engaged in HRH. Where there are donor-funded projects dealing specifically with HRH, project directors will be aware of the leadership for HRH climate in the country.

HRH Leadership

Indicator	Definition and Interpretation
25. Government capacity to govern HRH across the sectors	Qualitative description of MOH stewardship capacity in HRH Key indicators of government capacity include staff within the government department of policy and planning charged with HRH planning and policy. • Does the staff have the needed skills to conduct sector-wide HRH planning? • Does the staff have the HRH expertise to assist other MOH entities to revise and update policies and regulation? • Does the staff use HRH data in HRH policy and planning? • How participatory are the policy and planning processes to reflect other sector's perspectives in sector-wide HRH strategic plan and HRH policies?
26. Evidence of awareness among high-level government officials of HRH issues	High-level government officials include ministers, Parliament, or Cabinet-level members as well as leaders from the private health sector. Document examples of high-level leadership speeches, articles, and proclamations, and press releases concerning high-level leadership awareness of HRH. Are HRH problems treated with importance? Are there calls for action? Do officials responsible for working with donors include HRH in donor requests?

5.4 SUMMARIZE FINDINGS AND DEVELOP RECOMMENDATIONS

Section 2, Module 4, describes the process that the HSA 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 in the assessment report (see Annex 2.1.C for a suggested outline for the report). This process is iteractive; 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.

ANALYZING DATA AND SUMMARIZING FINDINGS

Using a table organized by the topical areas of each technical module (see Table 3.5.2) may be the easiest way to summarize and group your findings. Note that additional rows can be added to the table if it is necessary to include other topical areas based on the specific country context. Examples of summarized findings for system impacts on performance criteria are provided in Table 3.5.3. In anticipation of working with other team members to put findings in the SWOT framework, label each finding as either an S, W, O, or T (please refer to Section 2, Module 4, in 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, efficiency, access, quality, and sustainability. Additional guidance on which indicators address each of the WHO performance criteria is included in Table 3.5.4, Human Resources Indicators by Health System Performance Criteria.

TABLE 3.5.2 SUMMARY OF FINDINGS—HUMAN RESOUCES FOR HEALTH CHAPTER

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, efficiency, access, quality, and sustainability. Also list any links to other chapters.

Table 3.5.3 is an example summary of findings from the Guyana 2010 HSA.

Table 3.5.3 Performance of Human Resources for Health in Terms of the Health System Assessment Criteria

	Equity	Access	Efficiency	Quality	Sustainability
Strengths and Opportunities	• Data and standards exist on the human resources necessary to deliver the PPGHS. • Strategic approach to providing primary care services in the hinterlands through health posts.	• Increased training numbers is bringing more health workers into the system. • Foreign doctors improve short-term access to medical services.	• HRIS has been developed and is housed in the MISU. • IMAI training to improve efficiency of health workers, especially HIV services.	• The MDP is improving the quality of health managers. • I-Tech and other stake-holders are conducting trainings for health workers to improve quality.	• A new health workforce strategic plan is currently in development and is an opportunity to plan for the future.
Weaknesses and Threats	• Doctor and nurse distribution is skewed toward hospitals and urban centers. • Significant HRH gaps exist across all health cadres, and with nurses in particular.	• Foreign doctors often have difficulty integrating into the Guyanese health system and communi-cating with clients and colleagues.	• Current health worker information is not captured by the HRIS, nor is the HRIS used to analysis workforce data and trends. • PSM rules and regulations delay hiring of qualified staff.	• Worker motivation is adversely affected by working conditions, including incentives and infra-structure. • CNE is ad hoc and not required.	• Health workers attrition is very high and retention systems have not been able to fully address the problem. • The HRH TWG does not have strong external stakeholder partici-pation.

Source: Health Systems 20/20 and Ministry of Health of Guyana (2011)

Table 3.5.4 summarizes the key HRH indicators that address each of the five key performance criteria highlighted by WHO: equity, efficiency, access, quality, and sustainability (WHO 2000).

Table 3.5.4 List of Human Resources Indicators by Health System Performance Criteria

Performance Criteria	Suggested Indicator from HRH Module
Equity	1. Ratio of health personnel per 1,000 3. Ratio of health care workers by geographic distribution (doctors, nurses, pharmacists, and laboratory technicians)
Efficiency	5. Existence of a costed HRH strategic plan; evidence that strategic plan is being implemented
Access (including coverage)	21. Ratio of rural vs urban admissions/graduates
Quality (including safety)	7. Enabling environment exists for health workers to achieve goals and targets, including clear job descriptions, appropriate tools, supplies, and supportive supervision
Sustainability	22. Active stakeholder participation in HRH policy and processes

It may be helpful to organize the description of the HRH situation and key findings along the lines of the HRH Action Framework. Depending on the amount of data collected and their importance (e.g., a critical health system gap), some of the subheadings can be combined and/or eliminated. The headings correspond to the topical areas and include:

- Current HRH situation (see Annex 3.5.B for examples on how to present the data)
- HRH management systems
- Policy and planning HRH
- Financing HRH
- Educating and training HRH
- Partnerships in HRH
- Leadership of entire HRH system

Developing Recommendations

After summarizing findings for your module, it is time to synthesize findings across modules and develop recommendations for health systems interventions. Section 2, Module 4, suggests an approach for doing this. The recommendations should be specific and actionable, giving the client a clear sense of how to move forward. One important consideration is that recommendations come from the analysis points in the text, so that there is a logical connection between the main body of the document and the recommendations section. Additionally, recommendations should be tailored to the types of activities that the country is willing and able to do. A number of recently developed tools and guidelines will be helpful references for developing the recommendations. For example, the WHO Retention Policy Guideline document launched in September of 2010 (WHO 2010b) offers a comprehensive approach to addressing retention issues.

Table 3.5.5 provides a list of common human resouces-related interventions seen that may be helpful to consider in developing recommendations:

- Group key problems by the topic areas addressed in the chapter.
- When suggesting interventions, make sure that there is a direct link between the problem and the suggested intervention.
- Keep in mind that causes of problems related to retention and motivation overlap and thus are likely to respond to similar interventions.

Table 3.5.5 Illustrative Recommendations for Human Resource Issues

Health Systems Gap	Possible Interventions
Limited or no trained HRH/facilities in rural and/or remote areas Shortage of health students from rural areas	• Consider training lower cadres of workers and/or CHWs in less demanding tasks and shift those tasks to them. • Explore ways to use private sector (commercial and/or NGO/ FBO) providers to deliver PHC services where there are no public services. • Establish incentive payments for rural hardship postings (e.g. special bonuses; loans; vehicles; scholarships; promotions; management responsibilities; retirement benefit packages and/or nonmonetary incentives such as congratulation/thank you notes; public recognition programs; intake of medical students from rural areas and training in the locations where physicians will later practice.) See the recently released WHO report on Global Recommendations on Retention (WHO 2010b), which includes recommendations in four areas: education, regulatory, financial, and personal and professional support.
System Performance Criteria: Access	
Limited number of trained HRH/facilities (particularly in remote, rural and peri-urban areas	• See strategies above. • Conduct legal and regulatory review to identify barriers (e.g. need to have physician supervising nurses) that limit access and prevent strategies that address HRH shortage.
Health System Performance Criteria: Efficiency	
Poor planning that does not rationalize existing HRH and PMIs	• Improve linkages between planning for needed providers and production of them that includes all sectors (public, commercial, and NGO/FBO). • Involve not only organizations that represent service providers but also medical training institutions • Explore opportunities to leverage private sector workers in underserved areas and/or with underserved population groups through a variety of financial and contracting mechanisms (see Service Delivery Module).
Shortage of qualified personnel to carry out tasks	• Conduct legal and regulatory review to ensure scopes of practices between different levels of the same health cadre do not overlap and are clearly defined (e.g., scopes between nurses and nurse's aides, pharmacist and pharmacy assistants). • Liberalize scopes of practices for and train lower cadres of workers and/or CHW in less-demanding tasks and shift those tasks to them. Extend same scopes of practice to same cadres in the private sector (commercial and NGO/FBO). Open training for lower cadres of workers in the private sector located in underserved areas. • Eliminate mandatory retirement policy for public sector. • Explore opportunities to partner with PMIs to reduce the burden at public training institutions and produce the numbers and types of health cadres needed.

Table 3.5.5 Illustrative Recommendations for Human Resource Issues cont...

Health Systems Gap	Possible Interventions
HRH workforce not motivated and/or burned out	• Improve salary and compensation and ensure salary is paid on time. • Provide effective leadership and management at the site level. • Change existing punitive supervision practices (reducing incentives, using blame which causes fear) to supportive supervision. • Increase work-related self-efficacy (workers are trained to do the tasks; clear expectations are communicated; workers receive feedback on their performance; appropriate selection; clearly communicated job descriptions and standards; and systems for developmental appraisals) (Franco, Bennett, Kanfer et al. (2000)). • Retain and get the most out of the present set of providers through a range of incentives and better supervision. • Create "friendly" competition between public and private providers in underserved areas. • Measure and share results of HRH from all sectors public recognize and reward high-performing HRH.
Graduates of professional schools lack needed skills needed	• Establish feedback loop/link between the professional schools and the MOH. • Place students in facilities for practicum/clerkships, using faculty or facility staff as preceptors.
Lack of joint planning and review between employees and supervisors	• Introduce a process to conduct joint planning based on job descriptions tied to organization's mission/goals, and conduct periodic employee performance reviews.
Workforce at risk of HIV/AIDS	• Implement programs and policies on HIV/AIDS for prevention and protection of employees (e.g., prevention of needlestick injuries and other exposure to blood-borne pathogens; improve adequate follow-up of injured workers including post-exposure prophylaxis; provide ARV drugs to HIV-positive personnel; decrease stigma).
Health System Performance Criteria: Quality	
No employees feedback on their performance	• Strengthen supervision (management training for evaluators or supervisors; define and enforce staff review cycles).
Punitive/controlling supervision	• Train supervisors in supportive supervision techniques. • Introduce self-assessment at facilities.
Health System Performance Criteria: Sustainability	
Low HRH retention in domestic health market; Attraction and retention, including unequal distribution of health workers and poor coverage in some (usually rural) areas	• Incentive payments for rural hardship postings; special bonuses; loans; vehicles; scholarships; promotions; management responsibilities; retirement benefit packages; nonmonetary incentives such as congratulation/thank-you notes; public recognition programs; intake of medical students from rural areas and training in the locations where physicians will later practice. See the recently released WHO report on Global Recommendations on Retention (WHO 2010b), which includes recommendations in four areas: education, regulatory, financial, and personal and professional support.

5.5 Assessment Report Checklist: Human Resources for Health Chapter

- **Profile of Human Resources for Health**

  A. Overview of the health workforce (can include):

  a. Number of health care workers in the public, private, and NGO/FBO sectors by cadre

  b. Number of health care workers in public, private, and NGO/FBO sectors by geographic distribution

  c. Enabling environment for a strong HRH component

  d. HRH planning capacity

  e. HRH development (education and training) through public and private institutions

  f. HRH performance support (includes management and leadership as well as performance management)

  B. Authority structure (can include):

  a. Relationship between the HRH functions

  b. Level of authority for HRH decisions

- **HRH Assessment Indicators**

  A. HRH country situation

  B. HRH management systems

  - Table – Facilities and Human Resources Sample Table

  C. Policy and planning

  D. Financing HRH

  E. Educating and training HRH

  F. Partnerships in HRH

  G. Leadership of entire HRH system

- **Summary of Findings and Recommendations**

  A. Presentation of findings

Notes

Module 6
Medical Products, Vaccines, and Technologies

This module describes the importance of a well-managed procurement and distribution system for medical products, vaccines, and technologies and includes measurable indicators to determine the strengths and weaknesses of an existing system.

FIGURE 3.6.1 IMPACT OF BUILDING BLOCK INTERACTIONS

Introduction

Access to and regular availability of medical products, vaccines, and technologies at affordable prices is central to a functioning health delivery system. The gaps in this system area are critical to the overall performance of the health sector and merit close examination.

A unique feature of this system area is the active role of the private sector. As demand for health services has increased over the past 15 years, so has the quantity of medicines supplied through the private sector. There has been a large increase in the number of private pharmacies and typically, these pharmacies are often the first point of contact in the health system for many consumers, particularly consumers in rural and remote areas. Increasingly, MOHs are exploring ways to leverage private sector expertise and capacity to not only improve the efficiency of the public system, but in some cases, to contract out discrete segments of the public system (e.g., contracting-out of storage and distribution, partnering with private pharmacies in underserved areas). The challenge is to find the right public-private mix that ensures ready access and affordability of quality medicines and technologies to the overall population.

This module presents information that is critical to understanding the importance of how a well-managed system – one that ensures availability and affordability of products and technologies – impacts health service delivery:

- Subsection 6.1 presents and defines the key functions of managing medical products, vaccines, and technologies, and the processes that make up a system for this.
- Subsection 6.2 provides guidelines on preparing a profile of a system for managing medical products, vaccines, and technologies in the country of study.
- Subsection 6.3 presents the indicators to assess the systems and country capabilities to manage medical products, vaccines, and technologies.
- Subsection 6.4 is a guide to summarizing the findings and using them to recommend next steps.
- Subsection 6.5 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

6.1 What Constitutes Management of Medical Products, Vaccines, and Technologies?

According to WHO, "a well-functioning health system ensures equitable access to essential medical products, vaccines, and technologies of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use" (2007). Careful management of pharmaceuticals and technologies 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 medicines and technologies essential to saving lives and improving health will be supplied, managed, and used. These items can be expensive to purchase and many pharmaceuticals are difficult to distribute because of their fragile nature. However, the reverse – lack of good-quality medicines and technologies, or their improper use, has an even higher cost, in terms of resources wasted, illness that could have been prevented or treated, and death.

Because medical supplies, vaccines, and technologies are so important and resources so limited, different methods have been developed to improve the supply of pharmaceuticals while minimizing costs. Managing medical products, vaccines, and technologies 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.

How Does a Management System for Medical Products, Vaccines, and Technologies Work?[1]

Management of medical products, vaccines, and technologies is composed of a set of practices aimed at ensuring equitable access to,[2] timely availability of, and cost-effective and appropriate use of safe, effective medicines, health products, and services in any health care setting. These activities are organized according to the functional components of a framework or system and may take place at various levels of the health system according to the design of the system. The components are the same for all sectors (public, faith-based, private nonprofit, private for-profit) although procedures and activities within each component may differ.

[1] There are many terms used in managing medical products, vaccines, and technologies (please refer to Annex 3.6.A).

[2] According to the Pharmaceutical Management Framework, access is a construct of several dimensions: geographic accessibility, product availability, financial accessibility, and cultural acceptability (Centers for Pharmaceutical Management 2003).

Activities in the management of medical products, vaccines, and technologies 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 3.6.2). Each component of the framework depends on the success of the previous component and contributes to the viability of the next.

The entire framework operates within and is affected by health policies, laws, and regulations that affect both public and private sector actors in the pharmaceutical sector. Health policies, laws, and regulations define priorities that have an impact on:

- Types of products and services that can or should be offered at different types of facilities
- 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

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.

Figure 3.6.2 Framework for Managing Medical Products, Vaccines, and Technologies

Source: Adapted from MSH: http://www.msh.org/projects/sps/SPS-documents/upload/Eng_Pharm_Framework_Letter_rev.pdf

TIP

CONSIDER BOTH THE PUBLIC AND THE PRIVATE SECTOR

At the community level, patients may seek services from public and/or private (commercial or NGO) facilities including CHWs.

- Private facilities may have some level of interaction with the government and may obtain their pharmaceuticals from the public distribution system or parallel systems set up to service facilities individually.
- Private facilities, particularly when left to self-regulate, may obtain their supplies via alternate channels to governments – which can result in higher costs to patients due to low economies of scale and/or facilities obtaining materials through nonreputable sources.
- CHWs obtain their supplies from health facilities and play an important role in providing services and commodities to the community.

It is important to map out the totality of the flow of commodities taking into account all these players to fully understand the system.

6.2 DEVELOPING A PROFILE OF THE MANAGEMENT SYSTEM FOR MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES

OVERVIEW OF THE MANAGEMENT SYSTEM

The medical products, vaccines, and technologies system can be diagrammed in terms of the flow of information, funds, and products. The activities associated with carrying out each component of the system management can also be diagrammed.

The starting point for developing a profile is to diagram the distribution system to show how pharmaceuticals enter and move through the country. Figure 3.6.3 diagrams a typical multilevel distribution system that included private sector participation in the public sector supply system. In this system, medical products, vaccines, and technologies are procured and distributed to a designated level of the distribution chain by the appropriate government unit, NGO,[1] or private sector entity.

FIGURE 3.6.3 TYPICAL COUNTRY DISTRIBUTION SYSTEMS

Source: Adapted from MSH

[1] NGOs in some countries have established nonprofit essential drugs supply agencies to provide high-quality medicine products, vaccines, and technologies.

Figure 3.6.4 diagrams an alternative public sector system in which storage and transportation functions are contracted out to private distributors. In this system, medicinal products, vaccines, and technologies are delivered directly to health facilities. Variations to these two models, or a combination of the two, may be implemented in an individual country. Additional flows may be added to demonstrate the channeling of funds, including budget allocations, procurement, payments to suppliers, and payments from clients/patients.

Figure 3.6.4 Direct Delivery Model for Distribution

Source: Adapted from MSH
Note: CMS = Central Medical Stores

Technical team members should fully understand all the alternative supply chain flows that may be at play in a country's health system. However, determining the best model for any particular context is beyond the scope of this assessment.

Similar to the system overview, diagrams can be made to illustrate individual aspects of the process of selecting, procuring, and distributing pharmaceuticals. 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. As mentioned above, 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 (NMP). Alternatively, this information can be determined in the course of the in-country assessment.

1. **Selection** involves reviewing the country's priority health problems and identifying treatment options based on national policies and guidelines (see Figure 3.6.5). The existence of a formalized system for regular review of essential medicines lists and standard treatment guidelines (STG) for the treatment of priority disease conditions ensures that the health care system uses the most cost-effective and efficacious treatment options available.

FIGURE 3.6.5 COMPONENTS OF THE PUBLIC SELECTION PROCESS SYSTEM

Source: Adapted from MSH

The assessment should examine:

- Is there a system for review of essential medicines lists?
- How often is this undertaken?
- By whom?
- What process do they use?
- How long does it take?
- How are guidelines updated and communicated?

This information will help inform procurement, donation, and other supply chain management decisions.

2. Efficient **procurement management** is composed of elements that collectively ensure that a public health care system is able to obtain the right products at the right prices in a timely manner (see Figure 3.6.6). An efficient procurement policy will also ensure that actors outside the public health care system access and/or import materials that are effectively regulated and consistent with national health care standards of quality. Several actors may be involved in the country's procurement systems including development partners, the World Bank, or a variety of private companies or wholesalers. The procurement system may be centralized, decentralized, or mixed and technical team members should examine the impact of all players on the effectiveness of the procurement system.

Figure 3.6.6 The Procurement Cycle

Source: Adapted from MSH

3. An efficient **distribution system** is required to ensure that pharmaceuticals are appropriately stored, managed, and transported to their point of use (see Figure 3.6.7). The various components of the distribution cycle are impacted by the type of supply chain architecture that exists in the country. The various logistics systems in the country may be based on a push or pull system and appropriate mechanisms need to be in place to manage inventory, the flow of information, and requisitions. Warehouse infrastructure, including adequacy of storage space, material-handling equipment, transportation equipment and/or contracts, needs to be examined to determine the effectiveness of the logistics systems.

Note that a country can have a mix of logistics systems. For example, the essential medicines program might be a pull system integrated with other programs such as for HIV/AIDS or family planning, while the EPI might maintain a vertical push system for managing its commodities. It is important to recognize all the different systems in place and examine how they have an impact on each other, where synergies could be built into them, or what recommendations for integration might be appropriate.

Figure 3.6.7 The Distribution Cycle

Source: Adapted from MSH

Decentralization

Government decentralization can have significant impacts on the management of a country's medical products, vaccines, and technologies. Understanding the degree of decentralization will provide context for assessing the management. (See Module 3.1: Country and Health System Overview and Annex 3.1.A: Template for Organizing Information Regarding the Level of Decentralization of a Government.) Assessment questions should be tailored to reflect the level of decentralization, to ensure the questions are relevant to interviewees.

It is now generally understood that some functions of the health system are more appropriately centralized as opposed to decentralized, for example, normative/ stewardship and some procurement functions. Critical issues to consider include where important decision makers are based and their control over the medicines budget, as well as their supervisory and monitoring responsibilities. Critical governance issues include how well decentralized medical product budgets are executed in terms of both technical efficiency (selection of appropriate products and their use), allocative efficiencies (the amount spent on medicines versus something else), and transparency and accountability to the central system.

General Issues

The system of managing medical products, vaccines, and technologies generally reflects the health care system in which it operates. The first step in developing a profile of the system for managing medical products, vaccines, and technologies therefore is to map out how the overall health system, including public and private sector entities, is organized and how it

Country Story: Sub-Saharan African Country

Site visits combined with probing discussions with local staff often reveal undocumented situations that adversely affect the delivery of health care. Site visits to select health facilities at all levels of care during an 2010 HSA in one sub-Saharan African country found stock cards showing the facilities had recently received high-tech and modern equipment, and a supply of essential drugs. However, what the HSA team observed was completely different – the facilities had only antiquated equipment (microscopes, sterilizers, etc.), and there were stock-outs of many drugs. Interviews with facility staff revealed that most of the equipment had been sold to neighboring countries in order to pay staff salaries, which had not been paid for over six months due to political and economic turmoil. A visit to the MOH office showed that power outlets, doorknobs, sinks, and other equipment was missing or just being replaced.

functions. In addition to diagraming the management system, the following questions will help the technical team member to understand the country landscape and context for the management system.

- What is the participation of various levels of care in the public health care system? Of the private health care system? Of the NGO health care delivery 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?
- How big is the private pharmaceutical sector? Particularly retail pharmacies? Are there retail pharmacy chains? Large private importers and distributor? What is the relation of the private supply of medicines with public supply?
- Are vertical programs present?[2] 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)?

[2] Vertical programs, such as TB, Integrated Management of Childhood Illness, or malaria programs, may operate with program-specific essential medicine lists, STGs, procurement processes, and distribution systems. Where vertical programs function separately 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 program 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.

TIP

CONDUCTING THE ASSESSMENT

- Select only indicators that apply to the specific country situation.
- Conduct a thorough desk review of all available secondary data sources before arriving in country.
- Stakeholder interviews should focus on filling information gaps and clarifying issues.
- Coordinate stakeholder interviews with team members so all six modules are covered and avoid interviewing the same stakeholder twice.
- Look at all health actors – public, for-profit and not-for-profit, involved in delivering health services.
- Tailor assessment questions to reflect the level of decentralization so the questions are relevant to the interviewee.
- Schedule team discussions in country to discuss cross-cutting issues and interactions.
- Finalize an outline for the assessment report early on so sections can be written in country.

6.3 ASSESSMENT INDICATORS

This section discusses the indicators related to managing medical products, vaccines, and technologies – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and, in the "Interpretation" and "Issues to Explore" subsections, shows how to work with them. Finally, the section identifies key indicators to which the HSA technical team member can limit their work, if time precludes their measuring all indicators.

TOPICAL AREAS

The indicators for this module are grouped into eight topical areas (see Table 3.6.1), which cut across the many facets of managing medical products, vaccines, and technologies that were illustrated in Figure 3.6.2.

TABLE 3.6.1 INDICATOR MAP–MANAGING MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES

Topical Area	Indicator Numbers
A. Standard indicators	1–4
B. Pharmaceutical policy, laws, and regulations	5–11
C. Selection of pharmaceuticals	12–14
D. Procurement	15–21
E. Storage and distribution	22–24
F. Availability and access to quality products	25–27
G. Appropriate use	28–31
H. Financing pharmaceuticals	32–34

DATA SOURCES

There are many sources to help the team members assess and analyze medical products, vaccines, and technologies. The sources are organized into three main categories:

1. **Standard indicators:** Data are drawn mainly from existing and publicly available international databases.
   - **Data on indicators** 1–4 are available through the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/)
   - The *World Medicines Situation* (WHO 2004) (http://apps.who.int/medicinedocs/en/d/Js6160e/) is also an excellent resource. This document, which draws from studies in a wide range of countries and regions, provides an overview of key issues in managing medical products, vaccines, and technologies. Its annexes contain extensive data and information. More recent data may be available from the MOH and/or from project documents.

2. **Secondary sources:** Information for topical areas B through H should be gathered to the extent possible through desk review of reports, forms, and other documents.
   - Existing country studies
   - National drug law and national health and medicines policy
   - National drug regulatory authority (NDRA) reports
   - Documents supporting the public procurement process such as national procurement guidelines; standard bidding documents; standard operating procedures (SOPs) for MOH procurement[1]; procurement records and reports
   - Existing country studies
   - Quality control laboratory reports and quantification exercises
   - MOF audit reports
   - Service Provision Assessment and physical inventory reports
   - Logistics management information system (LMIS); transport department records
   - Existing health facility surveys or monitoring reports
   - EPI reports

3. **Stakeholder interviews:** The document reviews should be complemented, and any information gaps completed, during discussions and interviews with key informants and local stakeholders.
   - Head of the MOH pharmacy department
   - National essential medicines program
   - NDRA
   - National drug and therapeutics committee chair
   - Drug quality control laboratory
   - National drug inspectorate
   - MOH pharmacy department
   - MOH procurement unit or office
   - Pharmacy council/board
   - Pharmacy and other (e.g., manufacturing, distributors) professional associations
   - Private distributors

TIP

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 1–4, because data for them are readily available from the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org).
- Second, assess indicators 25, 26, 29, and 34.
- Third, if possible, assess all remaining indicators to get a more comprehensive picture of health system financing in the country.

[1] If an independent audit has been conducted, most information will be found there. World Bank project appraisal documents will exist if the country gets funding from the International Bank for Reconstruction and Development.

- Private retail pharmacy managers/owners and medical store managers
- Procurement managers at retail pharmacies
- Public and private health facilities managers
- Representatives of agencies throughout the supply chain (both public and private)
- MOF
- Site visit to public warehouse or central medical stores, to examine public storage, public pharmacies at government facilities, and vertical program managers (EPI, donors)
- Site visits to private pharmacies in urban and rural areas
- Department of health services or health services research (university or MOH)
- MOH office of health statistics
- Agency responsible for importation regulations

Data sources for these indicators may not be readily available. The assessment team member in charge of this module is responsible for organizing and developing a process for the review of documents and key informants' and stakeholders' interview responses to obtain information necessary to make judgments on the indicators listed.

Topical Area A: Standard Indicators

Overview

The data for the indicators in topical area A (indicators 1–4) are readily available at the The *World Medicines Situation* (http://apps.who.int/medicinedocs/en/d/Js6160e/) and the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/).

Standard Indicators

Indicator	Definition and Interpretation
1. Total expenditure on pharmaceuticals (% total expenditure on health)	Enables measurement of significance of pharmaceutical spending relative to other spending on health; indicates financial and institutional sustainability of current pharmaceutical purchases. Data estimates in health system database are all in USD at average exchange rate values for the year 2000 Compare country to selected regional or income-level peer group.
2. Total expenditure on pharmaceuticals (per capita at average exchange rate) in US$	Per capita expenditure at average exchange rate in USD. Data estimates from the health system database for this indicator are all in USD at average exchange rate values for the year 2000. Measures magnitude of pharmaceutical spending and indicates financial and institutional sustainability. This measure should be compared to peer groups.

Standard Indicators cont...

Indicator	Definition and Interpretation
3. Government expenditure on pharmaceuticals (per capita at average exchange rate) in US$	Per capita spending government spending on pharmaceuticals at average exchange rate in USD. Data estimates from the health system database for this indicator are all in USD at average exchange rate values for the year 2000. Measures magnitude of government spending on pharmaceuticals; indicates financial and institutional sustainability. Compare to selected peer group.
4. Private expenditure on pharmaceuticals (per capita at average exchange rate) in US$	Per capita at average exchange rate in USD. Data estimates from the health system database for this indicator are all in USD at average exchange rate values for the year 2000. Measures magnitude of government spending on pharmaceuticals; indicates financial and institutional sustainability. Compare to selected peer group

Topical Area B: Pharmaceutical Policy, Laws, and Regulations

Overview

A country's NMP specifies the government's goals for the pharmaceutical sector, the priority of each goal, and the main strategies the government intends to use to attain the goals. 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.

Pharmaceutical Policy, Laws, and Regulations

Indicator	Definition and Interpretation
5. Existence of an NMP or other government document that sets objectives and strategies for the pharmaceutical sector based on priority health problems	An NMP is a guide to action for the pharmaceutical sector. Existence of an NMP indicates commitment to improving the management of medical products, vaccines, and technologies in public and private sectors. If the NMP has been updated in the past five years, this indicates that the policy is kept up to date. If the country has a National Essential Medicines Program, it is likely that the program has received 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.

Pharmaceutical Policy, Laws, and Regulations cont...

Indicator	Definition and Interpretation
6. Existence of a comprehensive pharmaceutical law	A comprehensive pharmaceutical law includes all of the following components: • A regulatory framework • Principles for selecting medicines, including donations • Strategies for supply and procurement • Promotion of rational use of pharmaceuticals • Economic and financing mechanisms • Control of premises for distribution • Role of health professionals • Monitoring and evaluation mechanisms The existence of a comprehensive law demonstrates commitment to improving the management of medical products, vaccines, and technologies in public and private sectors. Specific questions to ask the interviewee include: • When was the national pharmaceutical law last updated? A law 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. • How does the regulatory framework differ between public and private sectors?
7. Existence of a NDRA responsible for the promulgation and enforcement of regulations	A governing regulatory body responsible for oversight of pharmaceutical laws. An effective NDRA indicates commitment to implementing and enforcing pharmaceutical laws. • 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? If there is not a clear separation of functions, the NDRA is vulnerable to corruption.
8. Existence of a system for pharmaceutical registration	A system for registration of pharmaceuticals in the market allows surveillance of drug quality and adverse events. • Is periodic renewal required, and are pharmacological standards applied? • Is registration based on an assessment of product efficacy, safety, quality, and truth in packaging information? If so, then pharmaceutical registration is part of a comprehensive quality assurance program. • Is the system kept up to date? • What are the 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 application backlog of several months would indicate a problem with the registration process; examining the pharmaceutical registration files will confirm if such a problem exists. Conversely, a very short turnaround time might mean that application information is not being reviewed seriously. If either problem exists, the registration system may simply be for generating revenue. • What are interviewee concerns regarding an underground market and/or unregistered products circulating in the market? The registration process may be considered too cumbersome (e.g., fees too high, delays too long), or the country may have no way to enforce registration requirements. • Some systems accept registration in "reference countries" (neighboring countries or countries with more stringent regulatory systems). This option may make sense for countries where human resource and infrastructure limitations prevent proper application review.

Pharmaceutical Policy, Laws, and Regulations cont...

Indicator	Definition and Interpretation
9. Existence of a post-marketing surveillance system	Yes or no with a qualitative description of the post-marketing system that determines if the MOH collects data regarding the effectiveness, quality, and safety of marketed products. Existence of a system to monitor pharmaceutical product quality is a critical first step, but does not address how well post-marketing surveillance is conducted. To learn more about post-marketing surveillance is conducted, ask the following questions: • How long has a post-marketing system been in place? • How extensively is it actually used for detecting and taking action on substandard pharmaceutical products? • Are data available? • What standards are used? • Are decisions taken as result of the system adequately enforced? • Does the country have a system by which providers and consumers can report product problems? If so, is it a passive, self-reporting system and/or a mandatory reporting system? If it is the latter, a key component of quality assurance is in place. Post-marketing surveillance systems may focus on some priority pharmaceutical therapeutic categories, products known to be particularly prone to problems or sources known to be problematic.
10. Existence of a pharmaco-vigilance system	A pharmacovigilance system is a mechanism to monitor adverse medication reactions and events. Ideally pharmacovigilance data should be reported to and aggregated at the national level. A pharmacovigilance system is the first step for monitoring patient safety, but this indicator does not address how well it is performing. If any of the following are present, it indicates an attempt by the country to institute mechanisms to ensure patient safety: • How long has the pharmacovigilance system been in place? • Is the country a member of the WHO Programme for International Drug Monitoring? If so, has the country been contributing to the program? • Is there a national center or mechanism to collate and analyze reports and take action to prevent adverse events? • Does the country have a system by which providers and consumers can report adverse events? If so, is it a passive, self-reporting system or a mandatory reporting system? • Are there any active surveillance activities, in the past or planned? The indicator does not measure whether actions are taken based on the results/findings reported by pharmacovigilance systems.
11. Mechanisms exist for licensing, inspection, and control	Yes or no, the mechanisms are in place for licencing, inspection, and control of pharmaceuticals. Existence of these mechanisms means a key component of quality assurance is in place, but it does not ensure that licensing, inspection, or other regulatory control activities are fully functional. As a result, dig deeper and ask the following questions of both public and private providers in the pharmaceutical sector: • How rigorous is the enforcement of licensing requirements? • Is a report of inspections and enforcement results generated regularly? • Does the country have sufficient qualified staff to conduct all inspection activities? • 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? Review a report. • What systems are in place to minimize corruption of inspection staff? (MOH staff are often enticed and bribed by the private sector to ignore poor quality products. Inspection staff corruption is a major and constant concern).

Topical Area C: Selection of Pharmaceuticals

Overview

A National Essential Medicines List (NEML) is intended to result in more rational prescribing, lower treatment costs, and a more reliable supply of medicines. NEMLs should reflect evidence-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 although the NEML has implications for the private sector (noted below).

Country Story: Vietnam

Facility visits provide important opportunities for observing the local health system context.

While visiting two commune-level health centers in Vietnam, a technical team member noticed that the facilities had beautiful gardens. When asked about the gardens, a nurse explained that the facilities in Vietnam grow many medicinal herbs. The facilities use both Western and Eastern treatment methods. Alternative/traditional medicines may not be on the essential medicines list, but they may be used as a substitute for, or supplement to, medicines found on the list.

Selection of Pharmaceuticals

Indicator	Definition and Interpretation
12. Existence of an National Essential Medicines List	A NEML is a list of drugs that satisfy the health care needs of the majority of the population; the drugs should be available at all times in adequate amounts and in appropriate dosage forms, at a price the community can afford. A current NEML demonstrates a country's commitment to improved prescribing, improved supply management, rational resource allocation, and containing pharmaceutical costs. • Is the NEML based on national STGs? • Does it identify medicines by level of care? • Has the NEML been updated within the last five years? If so, it is likely to contain information most pertinent to current public health concerns and new advances in medicines. • Is the NEML meant to guide cost control issues (procurement) as well as therapeutic issues (quality of care)? • Are generic names or international nonproprietary names (INNs) used consistently throughout the system (prescriptions, logistics management information system (LMIS), inventory cards, etc.)? • Is there evidence of preference for branded products? Why? • Is this stated preference for brands also true in the private sector? • What are consumers' responses to generics? • From which countries? • Do consumers go to private sector in order to purchase brand names not available in the public facilities? For a very small number of products, "bioequivalence" (the generic or therapeutic equivalent may not be biologically equivalent, with clinical implications) may be an issue. Such cases are generally well documented. The definition of purpose and use of the NEML may be stipulated in the NMP.

Selection of Pharmaceuticals cont...

Indicator	Definition and Interpretation
13. Evidence of an active national committee responsible for managing the process of maintaining a NEML	An organized group of experts responsible for managing and maintaining a NEML. An active committee shows awareness of need for up-to-date pharmaceutical information and existence of a system to provide it. If the NEML is updated periodically (see Indicator 12) and an active committee is in place, then the list is updated through a consensus process and not by an individual. • What is the composition of the committee? • Does the committee include the private sector representing different aspects of pharmaceutical sector? • Does this committee have terms of reference (TORs) or 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 committee has SOPs, do they require review of 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 and practitioners? Does the country have a system to monitor compliance to the NEML for treatment and procurement purposes? As some countries develop their systems for managing medical products, vaccines, and technologies, they may rely on a generic NEML developed by WHO, or the NEML of a neighboring country that has a similar epidemiological profile.
14. What is the total number of pharmaceuticals on the NEML? (dosage forms and strengths)	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. 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: • First-level care facilities: 40–50 pharmaceutical products • Secondary care facilities: 150–200 pharmaceutical products • Tertiary care facilities: 300–400 pharmaceutical products How stable has the NEML been over time? Are more items added than eliminated? 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

Topical Area D: Procurement

Overview

The primary purpose of procurement is to provide regular delivery of adequate quantities of high-quality supplies at the lowest possible cost. National procurement decisions take place within a country's policy and legal framework; they may be made at the central level or be decentralized down to the facility level. Some steps of the procurement process may be centralized while others take place at the local level. Knowing where each step takes place is critical. It will contribute to identifying the appropriate stakeholders to interview. For example:

- **Centralized system:** Procurement is conducted 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 decentralized health systems, pharmaceutical procurement is still done at the central level to maintain an economy of scale. Tendering may be done at the central level, with purchases from centrally approved vendors conducted at the lower levels.

Because procurement involves many steps and agencies, the technical team member 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.

The focus here is on procurement for the public sector. However, because a growing number of developing-country consumers rely on private provision of drugs, the assessment includes questions on procurement of medicines in the private sector. Taking the time to meet with procurement officers of large retail drug stores and private importers and distributors indicates if the private sector is complying with regulations, and therefore helping ensure that quality drugs are available through private channels.

Procurement

Indicator	Definition and Interpretation
15. Existence of formal SOPs for conducting procurement of pharmaceuticals	Formalized SOPs include detailed descriptions of the roles and responsibilities of all offices and agencies involved in the procurement of pharmaceuticals. SOPs promote accountability and transparency. Are there any formal mechanisms in place to bring together the many stakeholder groups that help to create or use SOPs? • Has an independent audit of the public sector procurement been conducted within the last three years? • Were the SOPs developed specifically for health sector goods and pharmaceuticals, or are they general SOPs? The general procurement guidelines are inadequate for pharmaceuticals. The procurement of pharmaceuticals requires unique considerations, including specifications and sourcing issues. Use this indicator in centralized and decentralized systems.
16. Use of generic or international nonproprietary names (INNs) for MOH procurement	Yes or no. This indicator measures a country's commitment to rational resource allocation and the containment of pharmaceutical costs. Generic names refer to the chemical names defining the medicines. In most cases, the generic is the same as the INN. Note: Generic names are to be differentiated from generic branded products. Use of generic or INN names facilitates competition among suppliers and manufacturers on the basis of the chemical entity of interest. Do health professionals feel pressure to procure brand name products due to detailing by medical representatives? Use this indicator in centralized and decentralized systems.
17. Percentage of procurements or purchases according to plan	The indicator reflects the reliability of a central procurement system. • More than two central pharmaceutical procurements (defined here as tenders, not orders against contracts) per year suggests system inefficiencies and a high level of activity. Several procurements or unplanned procurements may be related to poor quantification, supply planning, or to problems with the availability of financing at the time procurement is needed. How many unprogrammed (emergency) procurements occurred in the last two years? This number indicates the effectiveness of procurement planning and regular procurements. Frequent emergency procurements may indicate problems with planning and programming of regular procurement needs, barring force majeure. • What was the value of 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. • 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. What percentage of items listed for procurement in the last three tenders were actually purchased? A high percentage would indicate successful tenders and good quantification. It would imply lesser need for emergency purchases and a possible willingness among suppliers to bid and participate in the procurement system. 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.

PROCUREMENT CONT...

Indicator	Definition and Interpretation
18. Percentage (by value) of MOH pharmaceuticals is procured through competitive bids	The MOH has a competitive bidding process in place to procure pharmaceuticals. 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. • Why is procurement not conducted through competitive bid? • What reasons are cited? 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. • 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 can be due to a number of factors but may indicate that the procurement process is not very competitive. 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.
19. Existence of a procurement pre- or post-qualification process for suppliers and products	This indicator demonstrates quality assurance within the procurement system and whether the process is based on review of objective information about product safety, efficacy, quality, and manufacturer/supply capacity. If quality assurance is present, it can limit participation of suppliers and products of dubious quality in the procurement process. • What is the procurement pre/post- qualification process for suppliers and products? • Is the process transparent? • Are the criteria for qualification clear? • Does the country participate in the WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce? Use this indicator in centralized and decentralized systems
20. Pharmaceuticals procured based on reliable estimates	"Past consumption is the most reliable way to predict and quantify future demand, providing that the supply pipeline has been consistently full and that consumption records are reasonably accurate." (WHO 1999). Measures efficiency and appropriate use of resources. The more reliable needs estimates are, the lower the risk of overstock and stock-outs. • 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 these 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? "In many countries consumption data are incomplete or do not reflect real demand because the supply pipeline has not always been full and drug use has not always been rational. In such cases the morbidity-based and extrapolated consumption techniques may be used to estimate procurement requirements." (WHO 1999). Use this indicator in centralized and decentralized systems.
21. Private sector procurement processes	The private sector plays a big role in procuring pharmaceuticals. In many cases, importation of drugs distributed and sold in the private sector is unregulated. As a result, it is important to interview private sector importers (wholesalers) and distributors along with procurement officers for private pharmacies to assess whether they are following guidelines or international best practices (e.g., purchasing known brands and generics from reputable manufacturers).

Topical Area E: Storage and Distribution

Overview

The storage and distribution area includes all activities related to managing inventory: ordering, receiving, storing, and issuing supplies. These activities may take place at various levels of the system. The goals of distribution 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.

Storage and Distribution

Indicator	Definition and Interpretation
22. Value of inventory loss over 12 months	This indicator measures wastage or inefficiencies in the inventory management system and identifies opportunities for minimizing costs. Inventory loss is a holding cost. Inventory loss should be looked at for each level of the distribution chain. Current standards for commercial firms put inventory loss at a range of 20–30 percent of holding costs. Standards can vary by country or region, thus for comparison purposes, a few local private sector suppliers can be queried about their norms. This is the percentage of average inventory value Compare the value of inventory loss and other holding costs in public entities with commercial firms in the country, by level of the health system or distribution chain. Large disparities in the figures suggest opportunities for improvement. For example, where costs are lower in the commercial sector, options may include contracting out for selected services. Types of inventory loss that can be examined in detail include: • Expiry: Indicates that stock is not moving fast enough, that products purchased are not used, or that products have too short a shelf life. • Damage: Indicates storage or transport problems. • Obsolescence: Indicates that products purchased do not meet needs. • Theft: Indicates that enhanced security measures are needed. If available, list the inventory losses 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 an unusual event or instead to ongoing storage problems, such as storage facilities that are dilapidated or of inadequate size or construction. Other costs in the distribution system that can be explored include transportation costs (e.g., fuel, vehicle depreciation, personnel, and maintenance) and storage costs (e.g., personnel, rent, machinery, and utilities). Transportation and storage costs should be minimized and ideally should be compared to the commercial sector in country. 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
23. Percentage of deliveries or pick-ups according to plan	This indicator measures the level of performance of the order processing system. Medical store systems typically set a schedule for pick-up or delivery of orders for lower-level facilities. Multiple deliveries or pick-ups outside the planned schedule indicate problems with either the orders placed by requisitioning sites or that the medical store is not able to meet the demands of the regular order. Other problems that can contribute to this may include poor route planning and unavailability of transportation or financial resources. The ability of lower-level facility personnel to adequately determine their needs may also impact on the efficiency of the order processing system.

Storage and Distribution

Indicator	Definition and Interpretation
24. Existence of refrigeration units with functional temperature controls at each level of the distribution system	Public and/or private distribution systems include a cold chain. Interruptions in the cold chain (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 some systems, the cold chain is best managed as a separate vertical program. Provide a qualitative description of units (refrigerators or coolers) at different levels of the distribution system (central, regional, district, facility) • Are the thermostats checked regularly? • Are facilities equipped with a backup power supply? Are temperature logs/charts kept? Are there temperature controlled vehicles or cool boxes used to transport temperature sensitive commodities routinely? • Are private sector facilities required to maintain a cold chain? 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

Topical Area F: Availability and Access to Quality Products

Overview

This topical area examines availability of medicines, vaccines, and technologies as well as their appropriate use. Physical availability is 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. If possible, physical availability should be measured repeatedly over a period sufficient to cover at least one procurement cycle, and preferably three cycles. 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. (A sample tracer list is presented in Annex 3.6.B.)

Country Story: St Kitts and Nevis

Many MOHs do not consider themselves to be in partnership with the private health sector, but health system and private sector assessments reveal, a wealth of informal and ad hoc partnerships between the sectors. In St. Kitts and Nevis, the MOH experiences frequent stock-outs in medicines and laboratory reagents. MOH staff, through informal working relationships with private pharmacies and labs, refer patients to private pharmacies that "lend" medicines so the public sector patient does not have to pay. MOH labs "borrow" reagents from private ones and/or use private lab equipment for free when MOH equipment requires repair. The MOH re-supplies the private pharmacies and labs once the drugs and reagents arrive.

Availability and Access

Indicator	Definition and Interpretation
25 Percentage of a set of unexpired tracer items is available	This indicator measures the physical availability of a set of essential or key medicines where they are expected to be in both public and private facilities. This is presented as a percentage at time of study and over a period of time in a sample of public and private facilities. Ideal levels would be at or nearly 100 percent unexpired tracers available. 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. Is availability more of a problem for some products than for others? Why? When? • What is the average frequency of stock-outs for tracer items at different levels of the health system (e.g., central medical stores, regional medical stores, health facilities) over a 12-month period? Compare this information across public and private facilities. The 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. • If stock-outs occur, what is the average duration of stock-outs for tracer items at different levels of the health system (central medical stores, regional medical stores, health facilities)? This information may be available from existing studies. • Review questions posed in the stock status table of the Logistics Indicators Assessment Tool (LIAT) (USAID, Deliver Project, Task 1 2008). http://deliver.jsi.com/dlvr_content/resources/allpubs/guidelines/LIAT.doc for a subset of products. • What happens when there are stock-outs in the public sector? Do consumers go to the private sector? 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.
26. Percentage of households more than 5/10/20 km from health facility/pharmacy to dispense essential medicines	This indicator measures geographic access to and availability of public and private facilities with dispensary services. This is presented as a percentage of households measured against (1) public and (2) private facilities. 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. • Are there concerns about the existence of unlicensed facilities? • Are unlicensed facilities more widely distributed geographically than licensed outlets? • The private pharmaceutical sector is the primary source of medicines consumed in many countries. One of the primary reasons is easy access to a private pharmacy compared to a public health facility. 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. • Does the country have different categories of medicine outlets? • What is the basis for differentiation? • Are they all licensed? Do they stock quality medicines? Module link: Module 3. 4, Health Service Delivery, Indicator 8 (people living within X km of health facility)
27. Existence of licensing provisions or incentives for private wholesalers and retailers	This legislation determines who is allowed to practice pharmacy and the conditions under which a pharmacy may operate, and it sets out rules for prescription and sales of drugs. (Lowe and RF, Montagu D. 2009) The presence of licensing provisions or incentives (e.g., certificate of need, tax incentives, and access to subsidized products) 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. 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? 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 assigning 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.

Topical Area G: Appropriate Use

Overview

The aim of any system for managing medical products, vaccines, and technologies 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 28–31, which relate to the appropriate use of pharmaceuticals, should be explored for both the public and private sectors.

Appropriate Use

Indicator	Definition and Interpretation
28. SOPs for dispensing and counseling available	Standard procedures and consistent training assist dispensers to provide quality services to patients in the public and private sectors. There should be evidence that the strategic plan is being implemented. A high percentage of dispensers who are trained will indicate a commitment to promoting good dispensing practices. Good dispensing practices go beyond counting and handing over medicines. They include providing counseling and information on how to take the drug, how to dispose of it, and how to recognize and respond to adverse events; in most countries, this is considered an essential dispensing function. Determine if private providers have also received this training and apply it.
29. Existence of functioning mechanisms to improve the prescribing and dispensing practices	The commitment to ensure the appropriate use of medicines is generally described in a NMP. 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 Drugs and Therapeutic Committees (DTCs). These committees exist primarily at the hospital level, but they may support review of prescribing at the lower-level facilities. 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. However, the following questions may be helpful for probing into the local situation: • Are regular reviews of prescribing practices conducted at the public facility level? In private facilities? • How regular are the reviews of public facilities? Private facilities? • Who is responsible for conducting these reviews? • Are decisions/actions taken as a result of the finding of reviews and are these decisions enforced? • 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? • 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)?

Appropriate Use cont...

Indicator	Definition and Interpretation
30. Existence of national therapeutic guides with standardized treatments for common health problems	Up-to-date guidelines and STGs indicate that evidence-based best practices for treatment of common conditions are reviewed and codified. • Are the guidelines used to develop the NEML? • When were the guidelines last updated? • Does the system that ensures that the guidelines are updated rely on unbiased clinical and pharmaceutical information? If so, treatments are consistent with changing evidence-based best practices and changing country disease patterns. • Are these guidelines distributed to and used in all levels of the health care system and to the private sector? 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. Also see Service Delivery Module, Indicator 24 (existence of clinical standards).
31. Existence of treatment guidelines used for pre- and in-service training of health personnel in both public and private sector	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. If treatment guidelines exist, ask the following questions: • Are treatment guidelines used for supervision and monitoring activities in public-sector health facilities? In private facilities? If so, supervision and monitoring practices incorporate oversight of quality and appropriateness of treatment. • 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. Compare supervision of public facilities to private facilities. • 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. 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 except possibly in the private sector. Module Link: Service Delivery Module, Indicators 23 and 27 (quality assurance processes), Module 3.5, Human Resources for Health, Indicators 12 and 18 (Production of new health care workers is responsive to the needs of the health care system)

TOPICAL AREA H: FINANCING OF MEDICAL PRODUCTS, VACCINES AND TECHNOLOGIES

Overview

Because medical products, vaccines and technologies 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 these items. Sources of funding may include public financing based on national budgets, donor contributions, and direct private spending or indirect spending through insurance programs.

FINANCING OF MEDICAL PRODUCTS, VACCINES AND TECHNOLOGIES

Indicator	Definition and Interpretation
32. Proportion of annual national expenditure on medicines financed by government budget, donors, charities, and private patients (last through out-of-pocket payments)	Total amount spent on medicines distributed by source of funds. To better understand this indicator disaggregate in terms of: • Spending by income level • Ratio of urban-rural expenditures • Expenditures 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. But if they are present examine: • How many donors are involved? What types of medicines do they support? • Be sure to include contributions by reimbursement mechanisms (public and private sectors) and various sub-national budgets. *Module link:* Health Financing Module, Indicators 9 and 12 (government health budget allocation by cost category) and 13 (local-level spending authority)
33. Existence of a system to recover the cost of pharmaceuticals dispensed in MOH facilities	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. If a system of cost-recovery exists, follow up with the following questions: • 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. • What portion of recovered costs is used for purposes other than to replenish stock? Is there evidence that cost-recovery schemes are not meeting targets (e.g., are revolving drug funds being depleted?) • When was the system instituted? Why? • Are there any political concerns or management issues regarding the system? Revolving drug funds are a common type of cost recovery mechanism. The funds may be at a national-level "cash and carry" type of medical store. They 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. *Module link*: Health Financing Module, Indicators 20–22 (user fees)

Financing of Medical Products, Vaccines and Technologies cont...

Indicator	Definition and Interpretation
34. Out-of-pocket expenditure for health on medicines	Percentage of out-of-pocket spending on medicine out of total out-of-pocket spending on health. There are various scenarios in which patients may spend out-of-pocket resources to acquire medicines. Although medicines are in principle 'free of charge' in many public systems, patients may choose to access private pharmacies due to perceptions of higher quality and/or during stock-outs at public facilities due to ineffective or dysfunctional public procurement systems. In other cases, because the cost of medicines and medicinal treatments can represent a significant percentage of all of the health system costs, governments seek some form of cost sharing, by having patients pay a portion of the cost of medicines. There is also the belief that if patients pay for their medicines, they will use them more wisely. Health insurance programs may include co-payments for medicines, whereas other schemes will only cover the cost of the treatment. Some systems will include the cost of medicines in the overall treatment. The ability to determine when out-of-pocket expenditures for medicines result in an unnecessary barrier to care is a constant concern. This indicator should be considered within the context of the overall health system financing scheme, as well as assessed in relation to where/why patients choose to seek pharmaceuticals at particular locations

Key Indicators Table

Table 3.6.2 identifies four indicators from the medical product, vaccines, and technologies indicator list that are particularly useful to: (1) monitor and track medical products, vaccines, and technologies management progress over time; and (2) guide the technical team with severe time constraints to focus on the most important measures of medical products, vaccines, and technologies. Depending on the scope and time and resources available for the country assessment, this list should be modified.

Table 3.6.2 Key Indicators

No.	Indicator
25.	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?
26.	Percentage of households more than 5/10/20 km from a public or private health facility/ pharmacy that is expected to dispense essential medicines
29.	Are there any functioning mechanisms/tools in place to improve the prescribing and dispensing practices in hospitals and health facilities?
34.	Percentage of out-of pocket expenditure for health on medicines

6.4 Summarizing Findings and Developing Recommendations

Section 2, Module 4, describes the process that the HSA 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 in the assessment report (see Annex 2.1.C for a suggested outline for the report). This process is iteractive; 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.

Analyzing Data and Summarizing Findings

Using a table that is organized by the module topic areas (see Tables 3.6.3 for a template and Table 3.6.4 for an example) is a methodical way to summarize and group findings as data are collected. Note that additional rows can be added to the table if additional topic areas are included based on the specific country context. In anticipation of putting findings in the SWOT framework, each finding should be labeled as S, W, O, or T (please refer to Module 2.4 for additional explanation on the SWOT framework). The "Comments" column can be used to highlight links to other modules and possible impacts on health system performance in terms of equity, efficiency, access, quality, and sustainability. Additional guidance on which indicators address each of the WHO performance criteria is included in Table 3.6.5.

Table 3.6.3 Template: Summary of Findings–Medical Products, Vaccines, and Technologies 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] List impact with respect to the five health systems performance criteria: equity, efficiency, access, quality, and sustainability. Also list any links to other chapters.

Table 3.6.4 is an example of the completed table.

Table 3.6.4 Summary of Findings – Medical Products, Vaccines, and Technologies 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*
Availability	Poor availability in health facilities (W); better availability in private sector but not well controlled (O)	Observations in public and private 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 National Medicines Policy (NMP), interviews with the pharmacy department staff	Link with Governance module
Selection	National Essential Medicines List used as basis for kit system in public sector (S)	Draft NMP	Link with quality of care
Procurement	Ministry of Finance (MOF) conducts international competitive bids on behalf of the Ministry of Health (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); private sector able to procure reliable drugs at all different price points (O)	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); but private sector has further reach (O)	Interviews with the director of the pharmacy department and the medical stores manager ; private wholesalers and distributers	Link with equity and access
Use	Standard treatment guidelines 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); private retail and chain pharmacies have state of the art IT systems; willing to share info with MOH (O)	Observations in health facilities, interview with staff in the pharmacy department; private pharmacy owners	Link with Health Service Delivery module
Financing	Dependency on donors for kits (W), facilities make local purchases (W); but private sector can procure some needed drugs at affordable prices (O)	Interview with MOH; MOF audit report; procurement officers of private importers and retail pharmacies	Link with sustainability, and with Health Service Delivery and Health Financing modules

* List impact with respect to the five health systems performance criteria: equity, efficiency, access, quality, and sustainability. Also list any links to other chapters.

Table 3.6.5 List of Suggested Medical Products, Vaccines, and Technologies Indicators Addressing the Key Health System Performance Criteria

Performance Criteria	Suggested Indicator from HRH Module
Equity	34. Percentage of out-of pocket expenditure for health on medicines
Efficiency	17. Percentage of procurements/purchase according to plan
Access (including coverage)	26. Percentage of households more than 5/10/20 km from (1) public and (2) private health facility/ pharmacy that is expected to dispense essential medicines
Quality (including safety)	9. Is there a system for the collection of data regarding the efficacy, quality, and safety of marketed products (post-marketing surveillance)?
Sustainability	33. Is there a system to recover the cost of pharmaceuticals dispensed in MOH facilities?
	22. Active stakeholder participation in HRH policy and processes

Each indicator includes specific suggestions for interpretation. When examining medical products, vaccines, and technologies though, it is important to consider each topical area as a whole and not look simply at the area's individual indicators – small problems may be symptoms of larger, systemic issues.

As discussed in Section 1, Module 1, WHO's health system performance criteria can also be used to examine the strengths and weaknesses of the health system. Table 3.6.5 summarizes the medical products, vaccines, and technologies indicators that address each of the five key performance criteria highlighted by WHO: equity, efficiency, access, quality, and sustainability (WHO 2000).

It may be helpful to organize the description of the medicines, vaccines, and technology profile and key findings according to topical areas. Depending on the amount of data collected and their importance (e.g., is it really a critical health system gap?), some of the subheadings can be combined and/or eliminated. The headings correspond to the topical areas and include:

- Current situation (see Annex 3.6.C for examples on how to present the data)
- Policy environment supporting medicines, vaccines, and technologies
- Selection and procurement
- Storage and distribution
- Availability and access to quality products
- Appropriate use
- Financing to purchase medicines, vaccines and technologies

Developing Recommendations

Summary findings will be synthesized across all the modules to identify and prioritize major issues and develop recommendations for health system interventions. Figure 3.6.8 demonstrates how observed performance problems can be linked to appropriate interventions. Careful consideration must be given to historical, economic, socio-cultural, and political factors that may have contributed to or exacerbated current performance problems. Keep in mind the priorities and competitive advantages of various donors, and the gaps in current donor programming, as well as opportunities for consistent, coordinated donor focus. To use the fishbone diagram, start by identifying a problem statement. In the diagram, one problem statement is "inventory management and distribution is inefficient." Use information collected from the assessment to determine all the factors that 'cause' the problem. Using this information can then help to identify appropriate alternative interventions.

Figure 3.6.8 Sample Fishbone Diagram of Managing Medical Products, Vaccines, and Technologies Issues and Potential Interventions

Source: MSH

Section 2, Module 4, Analyze Findings, suggests an approach for synthesizing findings across modules with your team and for crafting recommendations. Table 3.6.6 contains a list of common issues and interventions seen in the area of managing medical products, vaccines, and technologies. These points can be helpful in developing recommendations.

TABLE 3.6.6 ILLUSTRATIVE RECOMMENDATIONS FOR MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES ISSUES

Health Systems Gap	Possible Interventions
Availability and Access	
Public facilities experience stock-outs of key essential medicines • Insufficient public funds to purchase essential medicines • Inefficient govt procurement and distribution systems	• Explore alternative methods to increase public funds to purchase essential medicines (e.g., user fees for drugs). • Strengthen public sector capacity to forecast and purchase essential medicines. • Explore opportunities to partner with private sector distributors to get essential medicine out to rural areas more regularly. • Better coordinate with the private sector during stock-outs, referring patients to private pharmacies and possibly working out affordable prices for medicines for public sector patients.
Geographic access to public health centers that provide pharmaceutical services is limited • Greater number and wider distribution of private sector outlets exist • Varied quality of private services	• 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. • Open up donor-sponsored training to strengthen private sector clinical skills in underserved areas. • Develop accreditation system to license the number of private sector outlets in underserved areas ensuring quality and thus complementing the public sector. • Explore ways to reduce the cost of the essential medicines delivered by private pharmacists (e.g., donated) ensuring affordability.
Pharmaceutical policy, laws, and regulations	
No up-to-date policies and laws regulating the pharmaceutical sector, including a NMP • Private sector self-regulating • Registration system does not address product quality.	• Update the NMP with participation of public and private stakeholder groups. • Using same participatory process, work with the NDRA to develop or update policies and procedures for the pharmaceutical registration system. • Include private sector leaders in pharmaceuticals sector in policy and planning as one of many strategies to bring private sector into public sector regulatory framework. Involve professional associations as mechanism to distribute new policies, guidelines and to offer in-service training.
Selection	
NEML does not exist, is out of date, or does not include medicines for key health conditions	• Formulate a committee or process to review and revise the NEML based on morbidity patterns and STGs. • Establish drug information centers or an alternative mechanism to increase access to unbiased information about medicines.
Appropriate use	
• 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	• Formulate a committee or process including the private sector to review and revise STGs based on morbidity patterns and evidence-based best practices. • Make copies of STGs available to all facilities and all providers (public and private alike. Provide training on the guidelines to practitioners including private sector through professional associations or by opening up public sector training. • Establish DTCs and provide training to DTCs; provide pre- and in-service training on appropriate prescribing to all providers. • Develop managerial interventions to restrict prescribing that can be applied in both public and private sectors.

Table 3.6.6: Illustrative Recommendations for Medical Products, Vaccines, and Technologies Issues, cont

Health Systems Gap	Possible Interventions
Procurement	
At the national level, purchasing prices are high compared to international prices	• Review and update procurement procedures according to international best practices (e.g., competitive bidding, transparent processes, appropriate specifications, and delivery and payment terms). • Provide training on procurement procedures and practices. • Compare prices in private sector to determine where and how able to purchase at lower prices, if applicable.
Storage and distribution	
Holding costs (storage costs and inventory loss) are high relative to inventory value	• Improve inventory management practices through optimizing flows, development of SOPs, training on inventory management functions and monitoring of key indicators. • Explore lower-cost alternatives with private sector (e.g., contract with prime distributor).
Financing	
The level of public financing of pharmaceutical expenses is low	• National level (and subnational level in decentralized systems): Study cost recovery or other cost-sharing options (e.g., revolving drug funds 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., revolving drug funds and community-based insurance).

6.5 Assessment Report Checklist: Medical Products, Vaccines, and Technologies

- ❑ **Profile of Country Medical Products, Vaccines, and Technologies**

  A. Overview of Medical Products, Vaccines, and Technologies

  a. What constitutes management of medical products, vaccines, and technologies?

  b. How does a management system for medical products, vaccines, and technologies work?

  B. Create medical products, vaccines, and technologies flowchart (should include):

  a. Management

  b. Distribution

  c. Selection

  d. Procurement

  e. Decentralization

- ❑ **Medical Products, Vaccines, and Technologies Assessment Indicators**

  A. Standard Indicators

  B. Pharmaceutical policy, laws, and regulations

  C. Selection of pharmaceuticals

  D. Procurement

  E. Storage and distribution

  F. Availability and access to quality

  G. Appropriate use

  H. Financing pharmaceuticals

- ❑ **Summary of Findings and Recommendations**

  A. Presentation of findings

  B. Recommendations

Module 7
Health Information Systems

This module describes the components of a functioning health information system and provides indicators to assess the adequacy of information collection, reporting, analysis, and use in a country's health system.

Figure 3.7.1 Impact of Building Block Interactions

Introduction

The objective of the HIS assessment is to provide a better understanding of a country's capacity 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). This definition should be broadly interpreted to include information not only about the government-supported public health system, but also data from the country's private for-profit and not-for-profit health providers. HIS performance should be measured in terms of the quality and comprehensiveness (e.g., all actors delivering health services and products) of data produced and by the evidence of regular use of data by all health system stakeholders, to improve the performance of the entire – public and private alike – health system.

This module looks at how the HSA approaches the HIS building block.

- Subsection 7.1 defines an HIS and its key components.
- Subsection 7.2 provides guidelines on preparing a profile of the HIS of the country.
- Subsection 7.3 presents six topical areas around which the HIS assessment should be structured and includes detailed descriptions of the indicators to assess the performance of the HIS.
- Subsection 7.4 provides suggestions on how the assessment results can be developed into possible solutions to address HIS-related issues in the context of the HSA.
- Subsection 7.5 contains a checklist of topics that the team leader or other writers can use to make sure they have included all recommended content in the chapter.

7.1 What Is a Health Information System?

For the purposes of this HSA, 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 [entire] health system" (Lippeveld, Sauerborn, and Bodart 2000). The goal of an HIS is to allow decisions to be made in a transparent way, based on evidence, and ultimately to improve the population's health status. Therefore, the objective of the HIS is to produce relevant and quality information to support decision making (HMN 2008).[1]

HMN developed a conceptual framework for a national HIS (Figure 3.7.2). The framework describes the six components of an HIS (HIS resources, indicators, data sources, data management, information products, and dissemination and use), and promotes the processes of internally driven assessment, strategic planning, and HIS strengthening. As such, it provides a useful outline for studying HIS and describing their fundamental requirements of HIS.

Figure 3.7.2 The HMN Framework for Health Information Systems

Source: http://www.who.int/healthmetrics/documents/hmn_framework200803.pdf

An HIS typically has both routine and non-routine data sources; routine sources include regularly reported health facility data, while non-routine sources include data from censuses, DHS, and civil registration systems (for birth and death records). Routine HIS data are reported at least every six months, while reporting of non-routine data is generally less frequent.

Most countries have a national HIS and a variety of HIS subsystems at different levels of government. The HSA should assess each of these, as well as examine how the MOH system collects information on private (commercial and NGO/FBO) sector facilities and provide a wide range of information to all (including non-MOH) stakeholders in health.

[1] HMN was launched in 2005 and has led the way in harmonizing approaches to strengthening country HIS while promoting country ownership of the HIS strengthening process. HMN assessments have been conducted in over 80 countries. Country reports and the 2008 HMN Framework document can be downloaded at: http://www.who.int/healthmetrics/documents/hmn_framework200803.pdf.

7.2 Developing a Profile of the Health Information System

This section provides guidance on developing a profile of the assessment country's HIS, a starting point for the indicator-based assessment[2]. 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. Before addressing the specific indicators in Subsection 7.3. you will need to map the HIS by first listing, then developing a schematic or flowchart for each HIS component or subsystem, by level of government, which will help you visualize the structure.

The PRISM (Performance of Routine Information System Management) Toolkit containes several well-tested and frequently updated tools that can help guide you through the process of mapping routine health information systems (RHIS). The toolkit can be downloaded at: http://www.cpc.unc.edu/measure/publications/pdf/ms-09-34.pdf. It includes a chart for mapping various types of HIS to the information that each HIS supplies. It also includes guidance for creating an information flowchart that specifies which types of data are reported by each level of care in a RHIS. (Both tools are shown in Annex 3.7.A) When mapping the information flow, be sure to examine how data are collected and shared with private health stakeholders.

Creating a flowchart will help show, by reporting level and by stakeholder group, who reports to whom, at what 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?

A number of HIS components may operate within a given health sector, and each may have a different and separate flow of data and reporting mechanism. Externally funded programs (e.g., HIV/AIDS, TB, malaria) often have distinctly defined indicators reported through a separate mechanism. Understanding all of these components and diverse elements, their operation, and their level of integration, consolidation, and cohesion is important for assessing and understanding the performance of the HIS and opportunities for its strengthening. It also is important to consider the private commercial and not-for-profit providers (such as FBOs and NGOs): Does the HIS include them? If not, as is often the case, are there plans to incorporate these sectors into the national HIS?

TIP

Conducting the Assessment

- Select only indicators that apply to the specific country situation.
- Conduct a thorough desk review of all available secondary data sources before arriving in country.
- In stakeholder interviews, focus on filling information gaps and clarifying issues.
- Coordinate stakeholder interviews with team members so all six modules are covered and avoid interviewing the same stakeholder twice.
- Look at all health actors – public, for-profit and not-for-profit – involved in delivering health services.
- Tailor assessment questions to reflect the level of decentralization so the questions are relevant to the interviewee
- Schedule team discussions in country to discuss cross-cutting issues and interactions.
- Finalize an outline for the assessment report early on so sections can be written in country

[2] Note that these indicators provide a framework for assessing the structure and function of an HIS – they are not 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 key 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.
In some countries, HIS staff may be seconded from the central statistical office and may not appear on the MOH establishment register.

Because the structure and functional format of an HIS reflects the organizational structure of the entire health system, doing an assessment first requires a clear understanding of the overall system organization, of how the different sectors – public, private, and FBO/NGO – interact and relate to each other, and of the division of responsibilities among the different levels within the MOH (see Country and Health System Overview Module) which, in many countries, are national or ministry level, regional or provincial level, district level, and health center or facility level (Figure 3.7.3). The national or ministry level may include health parastatals (e.g., national reference laboratories and teaching hospitals). You must also understand the role of the private sector and its participation in the HIS, and the role of other ministries or national offices (e.g., interior or justice ministries often track births and deaths, and the census is often the purview of the office of statistics).

Because HIS-related international donor support may affect how the country's HIS is organized and functions, you must investigate donor assistance: Does it strengthen the nationwide HIS, or only individual components in individual regions? In some countries, donors may be the main source of funds and resources for the HIS. For more information on this area, see Subsection 7.3, Topic A of this Module, and for donor mapping, the Country and Health System Overview. Donor implementation plans, monitoring and evaluation plans, and activity reports also are informative.

FIGURE 3.7.3 HIS NEEDS BY LEVEL OF DATA COLLECTION

Source: http://www.who.int/healthmetrics/documents/hmn_framework200803.pdf

Decentralization and Health Information Management

In a decentralized health system (see Modules 3.1, the Country and Health System Overview, and 3.2, Leadership and Governance, for definitions of decentralized health systems), some government functions and responsibilities are devolved to lower levels of government (provincial, regional, or district). In such a context, you will need to determine whether the level of decentralization of the health system is consistent with that of the HIS and whether the HIS is structured to satisfy the information needs of each level. If not, the utility of the HIS as a management tool is likely to be severely limited. For example, data that flow to the central level and are analyzed there may actually have more relevance to the regional or district level where important resource allocation decisions are made.

Most HIS components and subsystems are managed at the central level of government. If you are told or observe that all or some HIS subsystems (e.g., data collection) are the responsibility of lower levels, you will need to look for information at the lower 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 sets being collected at different locations
- Inequity in the amount of data collected or in the level of resources (funding, staff, equipment) of the HIS subsystems between regions, provinces, or districts
- In some highly decentralized countries, some regions may report to the central level while other regions do not, which may skew the balance of national data sets
- If standards for data collection are set nationally in a highly decentralized context, the issue of relevance to the decentralized level can become an issue

Unregulated decentralization – where data standards vary by region – is not desirable. Even when HIS responsibility and management is shifted to districts and regions, HIS structure and functions in all regions must conform to national standards and guidelines on data collection, reporting, and analysis, and the lower levels must be held accountable for the application and implementation of the national standards.

TIP

Use HIS Management as an Indicator

How the HIS is managed can be a useful proxy to measure the decentralization process and to identify regional inequities and differences with regard to health indicators, budget allocations, and staff distribution or allocation.

7.3 Assessment Indicators

This section focuses on HIS indicators – it shows the topical areas into which the indicators are grouped, lists data sources to inform the indicators, discusses how to deal with indicators that overlap with other building block modules, defines the indicators, and, in the "Interpretation" and "Issues to Explore" subsections, shows how to work with them. Finally, the section identifies key indicators to which the HSA technical team member can limit their work, if time precludes their measuring all indicators.

Topical Areas

The indicators for this module are grouped into three topical areas (see Table 3.7.1), based on the HMN Framework:

A. Inputs: more particularly, the HIS resources

B. Processes: how indicators are selected, what the data sources are for those indicators, and how the data are managed and analyzed

C. Outputs: including the quality of the information products, and the dissemination and use of information

Table 3.7.1: Indicator Map–Health Information System

Topical Area	Indicator Numbers
A. Inputs	1–8
B. Processes	9–21
C. Outputs	22–24

Data Sources

There are many sources to help the technical team member assess and analyze the health information system. They are organized in three categories:

1. **Standard indicators**: Data are drawn mainly from existing and publicly available international databases.

- Data on information products available in the Health Systems Database at http://healthsystems2020.healthsystemsdatabase.org/.
- The World Bank also has a database on development indicators at <http://data.worldbank.org/data-catalog/world-development-indicators>
- Other surveys contain a wealth of information; with additional analysis, they can provide more nuanced analysis of access, equity, efficiency, and quality of health services in a specific country.

- Demographic Health Surveys (DHS)
- AIDS Indicator Survey (AIS)
- Household health expenditure survey
- National Health Accounts (NHA)
- Living Standards Measurement Survey (LSMS)

2. **Secondary sources:** Indicators should be gathered to the extent possible through desk review of reports, forms, and other documents (i.e., determine whether an HMN assessment has been done recently).

- Health Metrics Network. 2007. Framework and Standards for Country Health Information Systems. Second edition. Geneva: World Health Organization.
- MOH policies, decrees, public health laws (i.e., notifiable conditions)
- MOH budget, regional and district budgets (review guidelines for what is to be included in these budgets)
- National HIS strategic plan
- National HIS operational plan/budget (if available)
- Human Resources Information Systems
- U.N. census files
- Vital events records (as available) or alternatively, Sample Vital Registration with Verbal Autopsy (SAVVY), produced by MEASURE Evaluation, may be available
- National data management software platforms
- Donor reporting guidelines and/or monitoring and evaluation plans
- Central-level technical guidelines, specific program guidelines, and directives
- Supervision checklists; MOH district-level procedures and directives
- Reports, graphs, or maps that display the information provided through the HIS

3. **Stakeholder interviews:** The indicator data should be supplemented with additional information obtained in the stakeholder interview process. Ideas for probing questions to be asked during the assessment may be found within the discussion of the topical areas and indicators and under "Issues to Explore." Annex 3.7.B presents a Summary of HIS issuess to discuss in Stakeholder Interviews.

- MOH planning unit or health information unit
- Central statistics office (may be within the MOF)
- Vital records office

TIP

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 1–4, because data for them are readily available from the Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org).
- Second, assess indicators 25, 26, 29, and 34.
- Third, if possible, assess all remaining indicators to get a more comprehensive picture of health system financing in the country.

- Key private sector health care providers: private physicians and/or medical groups, laboratories, pharmacies, hospitals, and home care providers.
- Central-level MOH budget authorities
- Central-level program heads (especially the head of the planning or statistics unit); regional and district program heads
- Human resources officers; medical officers; health management team members.
- HMIS director or director of eHealth [as appropriate]; other agencies involved in HIS strengthening such as the ministries of telecommunication and local government
- Donor representatives; 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).
- Staff working in the statistical department of MOH and MOH staff who analyze the data[3]

Detailed Indicator Descriptions

This section provides an overview of each topical area and then a table that gives a definition and interpretation of each indicator.

Topical Area A: Inputs

Overview

Inputs include those HIS resources that must be in place for the HIS to function properly such as:

- **Coordination and leadership**: mechanisms to effectively lead and coordinate the HIS and use the data generated by the system. The HMN Framework recommends the creation of a national HIS coordination committee and a national HIS strategy. The strategy should outline goals for streamlining and improving existing reporting mechanisms, roles and responsibilities of all stakeholders (public and private), funding for HIS strengthening including maintenance of the current HIS system, and improving integration of data at national and subnational levels. Moreover, private sector stakeholders should be members of the HIS coordination committee and actively involved in the creation of the national HIS strategy.
- **Information policies**: existing legislative and regulatory framework for public and private providers, use of standards, guidelines for transmission, management and storage of information, rules and guidelines for data confidentiality and security

[3] In some countries, HIS staff may be seconded from the central statistical office and may not appear on the MOH establishment register

- **Financial resources**: government 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
- **HIS infrastructure:** for paper-based information systems as well as the required information and communication technology (hardware and software) for electronic systems

Inputs

Indicator	Definition and Interpretation
1. Availability of financial and/or physical resources to support HIS-related items within MOH/central budget	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 • Maintenance of a functioning communications infrastructure • HIS-related training • Operational costs related to data collection/transmission (e.g., fuel, per diem, phone bills) • Population-based surveys (e.g., health surveys, census) • Facility-based records • Administrative records Module link: Health Financing Module, Indicators 9 and 13 (MOH budget process and allocations by line items). Also link to budget utilization rates. Sometimes funding is available but not used.
2. Availability at each level of a sufficient number of qualified personnel and infrastructure to compile and analyze information	Sufficient and adequately trained MOH human resources for HIS essential for the operation of the HIS at facility, district, regional (if applicable), and national level in the public health system Assess this indicator by preparing a staffing profile of the HIS unit at the MOH central level – it is important to know whether the MOH has trained statisticians, epidemiologists, and information technology personnel to support the HIS unit. It is also important to know whether data officers are deployed at district level and whether data managers are working in health facilities. How many staff are working on HIS at central, district, and facility level? What are their professional profiles? Are they project, government, temporary, or donor staff? How does staffing for the routine HIS differ (if at all from vertical programs)? The source of funding (donor/government) is an important dimension to consider from a sustainability/integration of HIS perspective. Additionally, it is important to know if any, and which, capacity-building activities for HIS staff were carried out in the last year Module link: Governance Module, Indicator 10 (Technical capacity for data analysis)
3. Evidence of ongoing training activities related to HIS data collection and analysis	Training is essential to maintain analytical skills of personnel. 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 Training contributes to efficiency and quality by maintaining or augmenting personnel's skill set. Investigate for the presence of training curricula. Review training curricula, and make notes if you have concerns. Look at the frequency and duration of trainings; ask trainees how useful it has been. Also assess the degree to which private providers are trained in HIS data collection and analysis. Keep in mind that HIS training activities are often funded by external donors.

Inputs cont...

Indicator	Definition and Interpretation
4. National HIS strategic plan consistent with resources available, developed in broad consultation with key stakeholders, and widely accepted	The starting point for strengthening the HIS is a widely accepted strategic plan that provides direction and coherence to HIS strengthening efforts. According to the HMN Guidance for HIS Strategic Planning Process (2009), a strategic plan for HIS should include the following: • HIS vision • Description of current and planned HIS strengthening efforts • HIS objectives and interventions • Timeframe for phasing in the interventions • Plan for activity implementation • Costing of the strategy • System/plan for monitoring and evaluation of the strategy and the overall performance of the HIS Some countries do not have HIS strategic plans. If that is the case, other documents may provide direction to HIS, such as national health plans, MOH strategic plans, and/or a national information systems/plan. Also assess the degree to which the private sector is incorporated into these strategic plans.
5. Functioning interagency body with the mandate and capacity to guide the implementation of the national strategy	It is important to determine if such a body exists, and if it is effective. Because of the interagency nature of HIS, an interagency body should be formed to oversee the implementation of the HIS national strategy. This body is likely to include representatives from the MOH, telecommunications, local government, and the central statistics bureau. To encourage greater private sector reporting, it is critical to also have representatives from the private health community. The interagency body must also have the official mandate to function effectively including capacity in a wide range of areas: • Strategic leadership to align partners and their activities with the strategy • Coordination of stakeholders including establishing mechanisms for coordination and regular communication • Project management that includes planning, monitoring, and holding people accountable for results. • Gaining commitment and support from decision makers • Establishing demand for health information
6. 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	State whether donors are present, and, if so, provide a qualitative description of how donor funding is assisting or preventing the HIS efficiency and effectiveness 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. If donors provide assistance for the HIS, include assessment of the scope, type, level, and impact of such assistance in your analysis. 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. Issues to consider are: • Are the donors who fund vertical programs promoting the creation of parallel systems to address their health information needs? • How can vertical HIS systems be linked with the rest of the HIS? For example, are the same codes for identifying health facilities used consistently nationwide? You may find projects that address HIS issues on a limited basis (e.g., for that specific program or a geographic region) but have little impact on the broader system. Inefficiencies arise when resources are not shared (e.g., computers bought by a program can be used only by that program) across the health system. Module link: Country and Health System Overview Module, section on donor mapping, and, Governance module

Inputs cont...

Indicator	Definition and Interpretation
7. Existence of policies, laws, and regulations mandating public and private health facilities/ providers to report indicators determined by the national HIS	State which such documents exist.Provide a qualitative description of those that are in place and the extent to which they are enforced. 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 that are pertinent to individual subsectors. For example, assess whether or not the legal framework is consistent with the United Nations' Fundamental Principles of Official Statistics (United Nations 2006). Issues to consider are: • 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? If possible, assess the degree to which the laws are enforced because the presence of a regulatory framework does not guarantee compliance.
8. Presence of mechanisms to review the utility of current HIS indicators for planning, management, and evaluation process, and existence of process by which to adapt and modify accordingly	State whether these exist and if so, provide a qualitative description of mechanisms and processes. An HIS must provide relevant and important information to stakeholders. HIS design should provide for a dynamic process subject to periodic review and adaptation to the changing health environment in the country. Needed mechanisms include the existence of an active national HIS steering committee, a national HIS policy, and periodic HIS review meetings. Interviews with stakeholders will indicate whether and with what frequency HIS outputs are reviewed. Most health systems do not regularly reflect on the utility of HIS methods or outputs. If data collection tools and report contents have been unchanged for many years, it is likely that their output is unresponsive to need and of limited use to stakeholders – they simply are a burden to health workers who must collect and report data. Conversely, some HIS are constantly revised and as a result suffer from a lack of clarity and definition and therefore are not fully functional, often error-ridden, and incomplete.

TIP

CHECK OUT MEASURE EVALUATION

MEASURE Evaluation developed tools for data quality assessment are also widely utilized and excellent for this context. http://www.cpc.unc.edu/measure/tools/monitoring-evaluation-systems/data-quality-assurance-tools

TOPICAL AREA B: PROCESSES

Overview

HIS generally evolve in a non-linear way, in response to different pressures – administrative, economic, legal, or donor – that the health system encounters. This can result in multiple, fragmented, and overburdened HIS. Parallel subsystems frequently arise from a lack of coordination among local stakeholders and donor-driven vertical systems. As a result, it is typically difficult to use the output of HIS for decision-making.

An *integrated, well-functioning HIS* should be able to produce data for 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 that all stakeholder groups, in the public, private, and NGO/FBO sectors, use in the provision of health care; and (3) to the health status of the population. Figure 3.7.4 presents the data sources and the processes by which to collect, analyze, and apply the data to health sector policy and planning.

FIGURE 3.7.4 SCHEMATIC OF AN INTEGRATED HIS

Source: http://www.who.int/healthmetrics/documents/hmn_framework200803.pdf

Obtaining the data required for evidence-based decision making requires querying different data sources. A very important function of the HIS is precisely 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 why the information is needed for contributes to making the right choice as to which data source to use. The list of indicators should be defined in a consensus-building process by the users of information at different levels in the health system, including stakeholders outside of the MOH who also rely on data to help them plan the delivery of their health services and products.

According to the HMN Framework, data management includes three aspects of HIS: data storage, data quality, and data processing and compilation (HMN 2008).

1. **Data storage** involves the organization of patient and other records in such a way that they can be accessed at a patient's next visit, while maintaining patient confidentiality.
2. **Data quality** can be difficult to assess, but is best achieved by collecting a minimum number of data and defining each piece of information to be collected clearly.
3. **Data processing** and compilation relies on successful data storage and collection of high-quality data. It includes cleaning and aggregating data sets from various sources as well as extracting trends and relevant information for data use.

These processes are frequently a mixture of paper-based manual processes and computer-based electronic processes. In evaluating data management, it is important to observe the way that these processes interact and whether high-quality information is produced as a result. At some point in the development of a national HIS, an electronic repository would be created to bring together the multiple data source across a given country, be they paper based or electronic

TIP

Two Categories of Data Sources

Population-based data sources:

- Censuses: Information regarding standards for censuses can be found on the UN World Population and Housing Census Programme Website at: http://unstats.un.org/unsd/demographic/sources/cwp2010/docs.htm
- Civil registration: Records of vital events including marriages, divorces, births, and deaths.
- Population-based surveys on health: Two of the most commonly used surveys are the DHS and the Multiple Indicator Cluster Surveys (MICS).

Institutional data sources:

- Individual records include those kept by patients and facilities, such as routine patient records, visit logs, and vaccination records.
- Service records extend beyond health facilities to records kept by other local authorities such as police and insurance companies.
- Resource records describe health system inputs such as human resources for health, facilities, infrastructure, and fiscal resources.

PROCESSES

Indicator	Definition and Interpretation
9. Availability of minimum core indicators at national and subnational level	Qualitative description of available data and how it links to the overall HIS system. Availability of indicators, and information on how they were defined, is indicative of the functioning of a country's HIS. The types of indicators tracked (reliability, etc.) are also indicative of HIS performance and organization. Data should be comprehensive and cover all categories of health indicators: determinants, inputs, outputs, outcomes, and health status.
10. Availability and accessibility of data sources	Yes or no, with qualitative description of data sources and its availability. Were the population and institutional records described above available? (Such as censuses, civil registrations, and population surveys, individual records, service records, and resource records). Are these accessible by the public? Were the MOH records or health information department aware of the types of data sources available?
11. Timeliness of updates to the national database of facilities	Measures the timeliness for updating the national database of health facilities. In assessing this indicator, note the timeliness of its updating (when was it last modified and at what intervals) and any indications of quality or completeness of the data used in its calculation. The HMN standard for when the national database of facilities was last updated is: highly adequate if less than two years; adequate if 2–3 years; present but not adequate if more than three years; not adequate at all if there is no national database or if no data are available. The existence of a national database of facilities also indicates that facilities have been assigned a unique facility identifier, making data reporting more reliable.
12. Percentage of districts represented in reported information	Number of districts in HIS reports divided by the total number of districts. Incomplete data do not permit adequate decision making. The absence of this indicator is indicative of an HIS weakness. You may find that reports do not indicate the percentage of districts represented. This omission calls into question the information reported. It may also signify a system that lacks quality control mechanisms to review and improve data and report quality. Keep in mind that even if 100 percent of the expected reports are received but they are only 5 percent complete, the data are "incomplete." 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. Is a quality review mechanism in place to improve the reporting of districts or units? Also it is important to note 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. Module link: Governance Module, Indicators 15–19 (information/assessment capacity)
13. Percentage of private health facility data included in reported data	MOH reports should indicate whether private facilities or services are included. In many cases, information on this indicator will be "unspecified" or "unknown." Inclusion of private facilities and health personnel in the HIS is important given high utilization of the private sector for essential services in many developing countries.

Processes cont...

Indicator	Definition and Interpretation
14. Availability of clear standards and guidelines for: 1) data collection, 2) reporting procedures methods, and 3) data analysis to be performed	Yes or no, with qualitative description of quality and use of guidelines. To measure this indicator, list available documents and topics covered by them. Review the documents carefully, and make notes if they are not complete or if you have other concerns. In many instances, staff will indicate that such procedures, standards, and guidelines exist but will be unable to produce copies or evidence of them. Clear instructions contribute to increased data quality. In addition, there should be clear instructions for data analysis. Many HIS have predefined analyses that 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.
15. Number of reports a typical health facility submits monthly, quarterly, or annually	Description of the ease and/or difficulty in complying. Health workers in the public sector may be overburdened with data collection and reporting requirements, which can negatively affect the HIS quality. 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, including duplication of information. Other issues to consider: 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. Some probing and persistence may be needed to fully catalog all of the forms and reports required at this level.
16. Presence of procedures to verify the quality of reported data (accuracy, completeness, timeliness)	Description of procedures for tracking the quality of data, data verification, and subsequent processes to correct data to ensure quality. Data quality is an important consideration when interpreting or using system information and results. It can be verified using tools such as data accuracy checklists prior to report acceptance and internal data quality audit visits. According to the IMF'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 applying these criteria to assess data quality is beyond the scope of this assessment – the focus of the HSA is to verify if such checklists are used – you should try to get some insights into how the HIS or subsystem being studied responds to the criteria. Review HIS reporting documents carefully; make notes if they are not complete or if you have other concerns. If these criteria exist, what is the government response to poor quality? Many systems assign the task of monitoring the quality of data to the supervisory level. In many cases, however, such supervision is not carried out for a variety of reasons. Although most systems have general checklists to be used during supervision, the checklists often do not include steps to improve the quality of data or reports. Data entry staff, or those who aggregate the data reporting forms, often make corrections and carry out data quality functions.

Processes cont...

Indicator	Definition and Interpretation
17. Availability of a national summary report (i.e. annual health statistics report) that contains HIS information, analysis, and interpretation (most recent year)	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. Issues to consider: Is a current-year report that includes HIS data, analysis, and interpretation available? 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? Is it possible to determine who uses this report?
18. Data derived from different health programs/ subsectors are grouped together for reporting purposes (or even integrated in a single document), and documents widely available	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). 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 member. 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? Module link: Leadership and Governance Module, Indicators 9 (data flows) and 11 (data presentation to policymakers)
19. Availability of appropriate and accurate denominators (such as population by age group, by facility catchment area, by sex, number of pregnant women) for analysis	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. The collection of these statistics allows the technical team member to judge 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. The presence/absence of these indicators at the national level is a strong indication of the system's function and capacity; lack of current data also implies serious weaknesses in the HIS. The source of these weaknesses, however, cannot be derived from a review of the indicators alone. These should be investigated during the in-country stakeholder interviews. Denominators for the 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. WHO EPI documents can be a source of commonly used denominators at the facility level, based on numbers of estimated or reported births, see http://www.who.int/immunization_delivery/en/
20. Availability of timely data analysis, as defined by stakeholders and users	This indicator must be assessed at the central, regional, and district levels (across both public and private provider groups) by reviewing documents; make notes if they are incomplete or if you have areas of concern. Questions to ask include: 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)? When assessing the timeliness of any analysis, remember that the frequency of analysis depends on the program and on its specific needs and guidelines. Module link: Leadership and Governance Module, Indicators 7 and 8 (responsiveness to stakeholders)

Topical Area C: Outputs

Overview

Two outputs that are indicative of a well-functioning HIS are: (1) production of relevant and quality data and (2) regular use of information for decision making, planning, budgeting, or fundraising activities at all levels. These outputs are linked not only to a series of technical determinants such as data architecture and HIS resources, but also to organizational and environmental determinants that relate to the information culture within the country context, the structure of the HIS, and the roles and responsibilities of the different actors as well as 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 (Aqil, Lippeveld, and Hozumi, 2009).

Outputs

Indicator	Definition and Interpretation
21. Timeliness of reporting specified indicators	Note how recent the data are and any indications of data quality or completeness used in the calculation. Indicate whether the data value is at least within the last five years. The three standard health outcome indicators described below should examined in terms of the timeliness of their reporting. **Maternal mortality ratio** reported by national authorities, in years *Note:* Estimates derived by regression or similar modeling methods should NOT be considered. Measures the timeliness for reporting the annual number of deaths of women from pregnancy-related causes per 100,000 live births, a basic indicator of maternal health services. In most of the least-developed countries, routine HIS reporting systems do not or cannot produce maternal mortality ratio estimates because many births and deaths are not in health facilities and not reported. Such estimates can be reliably derived only from separate surveys. *The timeliness standards set by the HMN assessment tool for this indicator are: highly adequate if 0-2 years; adequate if 3-5 years; present but not adequate if 6-9 years; not adequate at all if 10 years or more (HMN 2008).* **Under age five mortality rate** (all causes), in years The timeliness for reporting 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 live births. Module link: Core Module, indicator 10 (mortality rate, under 5 [per 1,000]) *The timeliness standards set by the HMN assessment tool for this indicator are: highly adequate if 0-2 years; adequate if 3-5 years; present but not adequate if 6-9 years; not adequate at all if 10 years or more (HMN 2008).* **HIV prevalence** among pregnant women aged 15–24, in years A basic indicator of HIV/AIDS prevalence, measured by the percentage of blood samples taken from pregnant women aged 15–24 who test positive for HIV during anonymous sentinel surveillance at selected prenatal clinics. The timeliness standards set by the HMN assessment tool for this indicator are: highly adequate if 0–2 years; adequate if 2 years; present but not adequate if 3–4 years; not adequate at all if 5 years or more (HMN 2008). **Measles vaccination** coverage by 12 months of age (months since data were collected) Indicates the most recent vaccination coverage rate available. *The timeliness standards set by the HMN assessment tool for this indicator are: highly adequate if 0-11 months; adequate if 12-17 months; present but not adequate if 18-29 months; not adequate at all if 30 months or more (HMN 2008).* All these indicators are available via the health system database at: http://healthsystems2020.healthsystemsdatabase.org/

OUTPUTS CONT...

Indicator	Definition and Interpretation
22. Completeness of reporting, percent)	Percentage of disease surveillance reports received at the national level from districts compared to the number of reports expected. Indicate whether such data are available, and note the most recent compilations (by year or month). This is an indirect measure of the performance of the disease surveillance system. For example, a value of 70 percent would indicate that 70 percent of districts send surveillance data and reports to the central level. If this percentage is 10 percent, then only 10 percent of districts reported to the central level on disease statistics, which could be a sign of a weak HIS. It should be noted, however, that if the country has a passive reporting system, reports are submitted only when cases are identified and not necessarily routinely. The HMN assessment tool does not provide a standard for reporting of percentage of surveillance reports received at the national level from districts compared to number of reports expected. Instead, the standard for "percentage of districts submitting weekly or monthly surveillance reports on time to the next higher level" was used: highly adequate if 90 percent or more; adequate if 75 percent–89 percent; present but not adequate if 25–74 percent; not adequate at all if less than 25 percent. This indicator is used by the HMN to assess the dimension of Capacity and Practices (defined as: Does capacity in country exist to collect the data, and analyze and manage the results? Are standards applied for data collection? Is documentation available, accessible and of high quality?) of the Health and Disease records (including disease surveillance systems) (HMN 2008b). Also note if there are data on a specific item (e.g., cholera reported). The surveillance reports should be submitted on a regular, standardized basis from each location. If a facility does not report on a given (week, month), then it reduces the completeness of reporting.
23. Use of data for planning, budgeting, or fundraising activities in the past year	This measures the government's demonstrated use of HIS data (e.g., a change in budget levels, funding allocation/budgeting proposals utilizing HIS data for advocacy). These 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. Examine the presence of stakeholder cooperation mechanisms. For example, are meetings held to analyze disease patterns, trends, outbreaks, financial issues affecting health facilities, and/or performance of the health care delivery system? What is the promptness and adequacy of response measures? Mechanisms linking data/information to actual resource allocation (budgets and expenditure) • Indicator-driven, short-term (1 year) and medium-term (3–5 years) planning • Organizational routines where managers are held accountable for performance through the use of results-based indicators at all levels of the health system • A program addressing behavioral constraints to data use, for example through applying incentives for data use, such as awards for best service delivery performance, best/most-improved district, or best HIS products/use • A supportive organizational environment that places a premium on the availability and use of well-packaged and well-communicated information and evidence for decision making. *Module link:* Leadership and Governance Module, Indicator 19 (Policy changes based on performance review)
24. Data or results of analyses are fed back to data providers to inform them of program performance	Feedback (written or oral) indicating if management uses information at various levels. Search for evidence of feedback in documents or communications • What is the promptness and adequacy of response measures to a noted lack (or problem) of performance? • Are the data reported up through the system utilized in any sort of supportive supervision mechanism between health system levels? • Does any sort of benchmarking of facilities or districts take place based on the reported data? *Module link:* Leadership and Governance, Indicator 17 (use evidence toimprove service delivery)

Key Indicators Table

Table 3.7.2 identifies eight indicators from the HIS indicator list that are particularly useful to: (1) monitor and track HIS performance over time; and (2) guide a team with severe time constraints to focus on the most important measures of health information systems. Depending on the scope and time and resources available for your particular assessment, you may modify this table and create your own list of key indicators.

Table 3.7.2: Key Indicators

No.	Indicator
2	Availability at each level of a sufficient number of qualified personnel and infrastructure to operate, compile and analyze health information.
4	National HIS strategic plan consistent with resources available developed in broad consultation with key stakeholders, and widely accepted
7	Existence of policies, laws, and regulations mandating public and private health facilities/providers to report indicators determined by the national HIS
9	Availability of minimum core indicators at national and subnational level
13	Percentage of private health facility data included in reported data
17	Availability of a national summary report (i.e., annual health statistics report) that contains HIS information, analysis, and interpretation (most recent year)
23	Use of data for planning, budgeting, or fundraising activities in the past year
24	Data or results of analyses are fed back to data providers to inform them of program performance

7.4 Summarizing Findings and Developing Recommendations

Section 2, Module 4, describes the process that the HSA 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 in the assessment report (see Annex 2.1.C for a suggested outline for the report). This process is iteractive; 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.

Analyzing Data and Summarizing Findings

Using a table that is organized by the topic areas of the chapter (see Table 3.7.3) may be the easiest way to summarize and group your findings. (This process is part of Module 2.4). 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 2.9.A. In anticipation of working with other team members to put findings in the SWOT framework, you can label each finding as either an S, W, O, or T (please refer to Section 2, Module 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, efficiency, access, quality, and sustainability. Additional guidance on which indicators address each of the WHO performance criteria is included in Table 3.7.5

Table 3.7.3 Template: 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]

[a] List how HIS findings affect the ability of policymakers and health system stakeholders and workers to measure, analyze, and improve system performance with respect to the five health systems performance criteria (equity, efficiency, access, quality, and sustainability) and list any links to other modules, as well as cross-cutting findings.

Table 3.7.4 is an example of how the Table 3.7.3 might look once completed and adapted to a country environment.

Table 3.7.4 Key Findings in the HIS module from St Lucia

Strengths	Weaknesses
• Electronic HMIS system has been purchased • Strong project management team leading efforts to roll out electronic HMIS • Routine reporting taking place across public health facilities, generating data • Good technical infrastructure in place across health facilities to support SLUHIS	• Limited staff to support needs of a nationally implemented electronic HMIS • Absence of unique patient identifier nationally limits capacity of SLUHIS to track patients • Poor timeliness of data consolidation and dissemination limits effectiveness of data driven decision policy making • Limited funding to complete all projected phases of SLUHIS rollout
Opportunities	**Threats**
• Leverage the E-GRIP work plans and team to move the dialogue on a national identifier forward • Timely data from health facilities using the SLUHIS increases the ability to drive demand for data • Leveraging fledgling telemedicine efforts at Tapion hospital for broader purposes (internal and external to Saint Lucia)	• Weak functional specifications process at early stages of SLUHIS acquisition limiting ability to match functions to needs • Delayed focus on reporting capacity of the SLUHIS may lead to further delays in consolidating data • Unknown data quality may weaken value of SLUHIS rollout (GIGO) • Technical support requirements of the SLUHIS will be beyond the manpower capacity of the HMIS unit

Source: Rodriguez et al. (2011)

As discussed in Section 1, Module 1, WHO's health system performance criteria can also be used to examine the strengths and weaknesses of the health system. Table 3.7.5 summarizes the HIS indicators that address some of the five key performance criteria highlighted by WHO: equity, efficiency, access, quality, and sustainability (WHO 2000).

Table 3.7.5: List of Suggested Indicators Addressing the Key Health System Performance Criteria

Performance Criteria	Suggested Indicator from HRH Module
Efficiency	23. 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)
Quality (including Safety)	16. 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
Sustainability	1. Availability of financial and/or physical resources to support HIS-related items within MOH/central budget (or other central sources), regional budgets, and/or district budgets

Developing Recommendations

After summarizing findings for the chapter, it is time to synthesize findings across modules and develop recommendations for health systems interventions. Section 2, Module 4, suggests an approach for synthesizing findings across modules with your team and for crafting recommendations.

The objective of this module is to develop a comprehensive evaluation of the ability of current HIS systems and subsystems to provide timely and relevant information for use by decision makers at all levels (not necessarily only within the health sector) in order to make recommendations to improve the system. In interpreting the information gathered, reflect on results and group findings (many of which will be subjective) and focus your recommendations on improving data completeness, timeliness, integration, and management of information, and enhancing use of information for decision making. Some generic solutions or recommendations are provided in Table 3.7.6 if the system is deemed deficient in a particular area.

Table 3.7.6 Illustrative Recommendations for Strengthening Health Information Systems

Health Systems Gap	Possible Interventions
Inputs	
Data often incomplete Data not analyzed Data not shared on a regular basis	Implement data quality audit to improve processes. A first step is to evaluate the existing data quality (for timeliness, completeness, accuracy, etc.), then structure a routine process for reviewing and improving data quality by utilizing a data feedback loop. Include in the HIS data on the private sector, to expand reporting coverage. While this is challenging – few countries require the private sector to submit reports and data, and private sector data collection capacity varies – engaging the private sector raises its awareness of its responsibility to report. Also, reaching agreement between public and private sectors on the types of data the private sector should report and designing user-friendly report formats will facilitate and encourage private sector reporting.
Data not produced regularly and on time to meet planning and policy needs	Timeliness of data collection, transmission, analysis, and reporting might be improved by the following generic activities: • Build capacity, support, and/or supervise staff to improve compliance with MOH requirements and guidelines. • Improve means of data transmission at all MOH levels to facilitate timely data flow. • Strengthen data handling and analysis (often this improvement implies computerization or upgrading of existing means of electronic analysis). • Revise HIS guidelines to better align the needs of data and information users with existing data collection, communications, and analytic capacities. Include private sector stakeholders in this revision process • Revise 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?).

Table 3.7.6 Illustrative Recommendations for Strengthening Health Information Systems cont...

Health Systems Gap	Possible Interventions
Processes	
No linkages exist between the results and outputs of the various subsystems	To what extent are the various subsystems integrated or linked? In many instances, 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 ensuring that routine and non-routine data sets are combined to provide a comprehensive understanding of the health system and population health • Improving data handling and analysis (often this improvement implies computerization or upgrading of existing means of electronic analysis) • Harmonizing indicators and consolidating data collection tools to bring subsystems together and minimizing reporting burden on lowest levels in the health system • Increasing 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)
Outputs	
Data not consistently used for decision making and planning	Improve information availability in the form of an annual "National Health Data or Statistics Report" Engage in a dialogue between data producers and information users across public and private sectors to clearly define their information needs, resource capacities, and requirements and adaptation of the HIS to fill those defined needs Provide data feedback to all levels and sectors in the health system on relevant domains of performance

7.5 Assessment Report Checklist: Health Information Systems Chapter

- **Profile of Country Health Information Systems**

  A. Overview of HIS

  B. Create HIS description (should include):

  a. Management

  b. Distribution

  c. Selection

  d. Procurement

  e. Decentralization

- **Health Information Systems Assessment Indicators**

  A. Inputs

  B. Processes

  C. Outputs

- **Summary of Findings and Recommendations**

  A. Presentation of findings

  B. Recommendations

Annexes

Annex I
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Notes

Annex 2

Section I
Introduction to The Health System Assessment Approach and Manual

Annex 1.2.A The Health System Assessment Approach: A How-To Manual

Health Systems 20/20 has produced this Version 2.0 through a consultative process of reviewing the original manual, gathering expert opinions on the latest developments in HSS, compiling lessons learned from applications of the approach, and updating the text and formatting. The evolution of the HSAA manual since its inception is shown in table 2.1.1 At the same time, USAID is developing a similar approach to assess the private health sector called "Assessment to Action". These two efforts reflect not only a more holistic approach to health systems but a recognition that most developing countries' health systems consist of many actors, not only the MOH.

Table 2.5.1 HSA Report Review and Revision Process

Countries	Year	Methodology	Contributed to update HSAA
Angola	2005	Project led. National level interviews, select site visits, coordination with PMI team assessment. MOH and NGO debriefing and participation in development of recommendations before departure.	Version 1.0
Azerbaijan	2005	Project led. National level. Collected health system data with a focus on the pharmaceutical system.	
Benin	2006	Joint Project-USAID. National Level interviews, Select site visits	
Pakistan	2006	USAID led. National Level interviews, Select site visits	
Yemen	2006	MoH led. MoH adapted methodology for their internal assessment	
Malawi	2006	Project led. National Level interviews, Select site visits	
Ghana	2006	Project led. National Level interviews, Select site visits	
S. Sudan	2007	Joint Project-USAID National Level interviews, Select site visits	Version 1.5
Vietnam	2008	Joint Project-local organization led. Provincial level; included a provincial level questionnaire; tested a scoring matrix; and incorporated capacity building to institutionalize the HSA in local Health Strategy and Policy Institute.	
Namibia	2008	Led by MoH. National level. 2 HSA team members contributed expertise as part of a broader national health sector review.	
Nigeria	2008	Project led. National level review and state level questionnaires. Due to country size – the HSA team gathered data from state representatives at a workshop in Abuja through individual interviews and focus groups.	

TABLE 2.5.1 HSA REPORT REVIEW AND REVISION PROCESS CONT...

Countries	Year	Methodology	Contributed to update HSAA
West Bank	2009	Joint MOH-Chemonics led. National level. MOH conducted the assessment and created 6 technical working groups to collect data on the 6 building blocks; with TA from USAID through Chemonics.	Version 1.5
Senegal	2009	Joint Project-World Bank led. National level interviews and field visits to select facilities; MOH assigned the National HMIS director to accompany and assist the HSA team	
Vietnam	2009	Led by local research organization (HSPI) with Project support. Provincial level; Continued to institutionalize local capacity in HSPI; HSPI assess 6 provinces with minimal TA; used scoring and questionnaire as suited local context.	
Cote d'Ivoire	2010	Joint Project-World Bank led. Multiple Stakeholder training workshops at the National level. Technical work was conducted by national working groups and built local capacity.	
Lesotho	2010	Project led. National and subnational level. Tested extensive sub-national data collection; MOHSW representatives participated in data collection. Showed extensive field work was expensive for little value-added.	
Zimbabwe	2010	Project led. National and subnational level. Tested extensive sub-national data collection. Subnational data, in this case, was key to verify national level due to politics.	
Angola	2010	Project led. National level; limited site visits; Created draft zero and MOH and NGO debriefing and participation in development of recommendations before departure, USAID review of draft 1; No local team members; Quickest to complete the assessment.	
Kenya	2010	Project led. National level interviews with additional sub-national site visits to confirm central level data; Extensive stakeholder engagement, including Ministry ownership and leadership; Linked to country processes;	
Tanzania	2010	Project led. National level interviews with site visits; Emphasis on local stakeholder engagement in the process.	
Guyana	2010	Project led. National level interviews with MOH on Assessment team; Tested formal stakeholder engagement methodology; included capacity building as much as possible	
Uganda	2011	Joint Local research institute - Project led. National level. Conducted as 1st phase of capacity building and institutionalization of the HSAA in Makerere University; Defined a set of SMART indicators for measuring health system progress going forward.	Version 1.75
Ukraine	2011	Project led. National level interviews; with select site visits; Focused on HIV and TB planning; Looked at decentralization?	
Mozambique	2011	Project led. National level interviews with site visits;	
Ethiopia	2011	Joint Regional Research group - Project led. National level. Conducted as 2nd phase of capacity building and institutionalization of the HSAA in Makerere University	
St. Kitts and Nevis	2011	Project led. National level interviews with site visits; extensive private sector integration;	
Antigua	2011	Project led. National level interviews with site visits; extensive private sector integration;	
St. Vincent and the Grenadines	2011	Project led. National level interviews with site visits; extensive private sector integration;	
Grenada	2011	Project led. National level interviews with site visits; extensive private sector integration;	
Dominica	2011	Project led. National level interviews with site visits; extensive private sector integration;	
St. Lucia	2011	Project led. National level interviews with site visits; extensive private sector integration;	
Benin	2011	Joint regional research group – project led. National level interviews with site visits; Conducted as training to institutionalize the HSAA within INSP (National Public Health Institute)	

Annex 2

Section 2
Conducting the Assessment

Annex 2.1.A Documented Use of the Health System Assessment Approach

The United States Agency for International Development (USAID) Health System Assessment (HSA) approach was developed and piloted in 2005-2007 through assessments in Angola and Benin. The tool has been used in 29 countries for a variety of reasons, ranging from USAID-driven internal assessments of bilateral programs to Ministry of Health (MOH)-driven assessments to inform health systems strengthening planning and health sector strategic and investment plans.

The table below lists the documented use of the tool. Health Systems 20/20 has participated in 23 HSAs, in Angola, Antigua, Benin, Cote d'Ivoire, Dominica, Ethiopia, Grenada, Guyana, Kenya, Lesotho, Mozambique, Namibia, Nigeria, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Senegal, South Sudan, Tanzania, Uganda, Ukraine, Vietnam, and Zimbabwe.

Documented Applications of the USAID HSA Tool (as of October 2011)

Country	Year	Audience	Objective
Angola	2005	USAID	Pilot to inform the design of an integrated health project
Azerbaijan	2005	USAID	Input into pharmaceutical management strategy. No formal report
Benin	2006	MOH	Pilot to inform for 5-year health strategy
Pakistan	2006	USAID	Inform health system activities. No formal report
Yemen	2006	MOH	Framework for health system review. No formal report
Malawi	2006	USAID	Input into bilateral design. No formal report
Ghana	2006	USAID	Input into assessment of insurance. No formal report
S. Sudan	2007	MOH	Input into GAVI Alliance HSS proposal
Vietnam	2008	PEPFAR,MOH	Assess 2 provinces and build local capacity for future province assessments
Namibia	2008	MOHSS	Adapted for use in health sector review, cited in successful Global Fund proposal. Country led process
Nigeria	2008	Sec PHC, PEPFAR	State performance assessment
Senegal	2008	MOH,USAID	Input for health strategy
West Bank	2008	MOH, USAID	Input for 5-year health strategy. Conducted by Chemonics
Vietnam	2009	MOH	Subnational assessment of 6 provinces. Used as a baseline for monitoring HSS. Informed Vietnam's Partnership Framework
Cote d'Ivoire	2009	PEPFAR	Input for country action plan
Lesotho	2010	PEPFAR, MOHSW	Input for USAID and PEPFAR planning and the MOHSW HSS plan
Zimbabwe	2010	PEPFAR, MOH	Input for National Investment Plan, USAID/PEPFAR COP planning
Angola	2010	MOH, USAID	Follow-up on progress since 2005 HSA, input for health sector planning
Kenya	2010	MOMS, MOPHS, USAID	Input for health planning and health policy reviews
Guyana	2010	MOH, USAID	Input for MOH and Global Fund HSS intervention planning
Tanzania	2010	MOH, donor groups	Input for health partner planning and health finance review
Uganda	2011	MOH, USAID	Develop a set of SMART indicators for measuring health system progress
Ukraine	2011	MOH, USAID	Inform MOH health reform agenda, HIV and TB planning, and Partnership Framework development
Mozambique	2011	TBD	Inform planning for next MOH 5 year strategic plan
Ethiopia	2011	TBD	Inform implementation of current MOH 5 year strategic plan
St. Kitts and Nevis	2011	MOH, USAID	Support implementation of the US-Caribbean Regional HIV and AIDS Partnership Framework
Antigua	2011	MOH, USAID	Support implementation of the US-Caribbean Regional HIV and AIDS Partnership Framework
St. Vincent and the Grenadines	2011	MOH, USAID	Support implementation of the US-Caribbean Regional HIV and AIDS Partnership Framework
Grenada	2011	MOH, USAID	Support implementation of the US-Caribbean Regional HIV and AIDS Partnership Framework
Dominica	2011	MOH, USAID	Support implementation of the US-Caribbean Regional HIV and AIDS Partnership Framework
St. Lucia	2011	MOH, USAID	Support implementation of the US-Caribbean Regional HIV and AIDS Partnership Framework
Benin	2011	MOH, USAID	TBD

Note: HSS=health system strengthening; PEPFAR=U.S. President's Emergency Plan for AIDS Relief; MOHSS=Ministry of Health and Social Services; PHC=Primary Health Care; MOHSW=Ministry of Health and Social Welfare; COP=Country Operating Plan; MOMS=Ministry of Medical Services; MOPHS=Ministry of Public Health and Sanitation

Annex 2.1.B Assessment Options for Kenya

Since 2004, USAID'S Health System Assessment (HSA) Approach has been applied in over 20 countries for a variety of audiences with varying objectives. The objective of the assessment determines how the methodology is applied in terms of the size and composition of the team, the number of trips to the country, the health system levels to be addressed (central, province, and district), and the manner and degree of local country counterpart participation.

Health Systems 20/20 prepared the following options for HSA coverage to fuel discussion of the most appropriate HSA approach for Kenya.

Options for Health Systems Assessment Coverage, Kenya

Proposed Options for Breadth of Health System Assessment, Kenya						
Type of Assessment	**# of Provinces**	**# of Districts**	**# of District Hospitals**	**# of Health Centers**	**Total # of Visits**	**Approximate Budget**
Option A – National	2	2	2	2	8	$XXX
Option B – Partial subnational	3	6	6	6	21	$XXX
Option C – All districts	8	16	16	2	42	$XXX
Option D – Provincial/ decentralization	2	18	18	36	74	$XXX

Option A: National Level for Strategic Planning

To inform national-level program planning for health system strengthening via the national health policy review and the strategic planning process for the 2011–2015 health strategy.

- Planning/preparation: HSA scope and schedule determined through communications with central Ministry of Health (MOH) and USAID mission via emails, conference calls, and discussions with HSA implementer. MOH and other stakeholders help determine priority questions and issues to be explored, key informants to be interviewed, other stakeholders to be involved, and sites to visit.
- In-country: One trip of 15–20 days with extensive MOH and stakeholder engagement to include:
  - Stakeholders/ consensus-building meeting in preparation for selected interviews and meetings at both the national and subnational levels (through select site visits).
  - National-level interviews: Health Systems 20/20 team and advisors spends approximately five days interviewing selected national-level health officials.
  - Subnational/facility-level data collection: team site visits to two provincial health offices, two district health management teams (DHMTs) and district hospitals, and two health facilities.
  - At the end of the trip, the team presents initial findings to the MOH, USAID mission, and local stakeholders.
- Post-trip: A first draft of the HSA report will be delivered within 4–6 weeks of the end of the field work for a detailed review by the MOH, USAID mission, and other stakeholders. Once all review comments are received, the report will be finalized in approximately four weeks, depending on the number of reviewers, the extent of changes requested, and how quickly editing and formatting can be completed.

- Local stakeholders' role: At a minimum, as partners, informants, and advisors to the assessment team to vet HSA findings and ensure consistency with country priorities. Select stakeholders could be actively involved as team members, participating in the assessment, data analysis, and writing, as time allows.
- Team of two project staff, 2–3 local consultants and collaborators, and 1–2 Kenyan MOH advisors. Total time estimated to be 2–4 months from planning to report.
- Approximate budget: $XXX

Option B: National and Subnational, Small Sample

To inform both national and subnational program planning for health system strengthening. Same as above except:

- Subnational/facility-level data collection: three provincial offices, six DHMTs and district hospitals, and six other facilities during 3-5 days of data collection
- Data collection team: 3-6 Health Systems 20/20 staff, consultants, and MOH advisors
- Approximate budget: $XXX

Option C: National and Subnational, 8 Provinces, 16 Districts

To inform subnational program planning for health system strengthening (larger subnational-level collection). Same as above, except:

- Subnational/ facility-level data collection: Eight provincial health offices, 16 district health offices and hospitals, and two other district facilities over 8–10 days
- Data collection team: Nine data collectors for 10 days
- Approximate budget: $XXX

Option D: National and Subnational, 2 Provinces, 18 Districts

To inform health system strengthening for decentralized functions (provincial/decentralization assessment). Same as Option A, except:

- Provincial-level data collection: Two provincial offices, 18 districts health offices and hospitals, plus 36 facilities within those districts during 8–10 days of data collection/facility-level interviews
- Data collection team: 15 data collectors for 10 days
- Approximate budget: $XXX

Annex 2.1.C Suggested Outline for Final Assessment Report

Acronyms

Acknowledgments

Executive Summary (3–5 pages)

1. Background (1–2 pages)

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

2. Country Overview (3–5 pages)

   The Country Overview chapter should be drafted in advance of trip and revised after data collection.

3. Methodology (1–2 pages)

   - Framework for the Health System Assessment Approach (HSAA).
   - Description of tool and how it was used, including types of resources consulted, numbers and types of interviews conducted, dates of field work, regions/districts visited, types of facilities observed.

4. Summary of Findings (a.k.a. Building Block Chapters) (7–12 pages for each chapter)

   - Leadership and governance
   - Health financing
   - Service delivery
   - Human resources for health
   - Medicines, vaccines, and technologies
   - Health information systems

   See Section 3 of this HSAA Manual for guidance on constructing these chapters.

5. Cross-cutting Findings (5–10 pages)

   See HSAA Manual Module 2.4.5

6. Recommendations (8–10 pages)

   - Recommendations for strengthening the health system, based on the assessment
   - Drawing upon HSAA manual Section 2, Module 4, this subsection and recomended solutions tables from each building block module should propose areas that stakeholders might strengthen to address health system weaknesses. Each recommendation should discuss the relative time frame.

Stakeholder views on the priority intervention areas. This section may also discuss potential ways forward, based on stakeholder discussions.

Annex A. Contact list

Annex B. List of documents consulted

Annex C. List of sites visited

*Note: Assessment teams may choose to present a preliminary draft of recommendations for stakeholder validation. Therefore, this list may be shared and then revised to reflect stakeholder views and/or priorities discussed in validation and/or prioritization workshops.

Annex 2.1.D Health System Assessment Scope of Work

A clear scope of work (SOW) (also called Terms of Reference) is a key document agreed upon between the Health System Assessment (HSA) client and the team leader to clarify the expectations and specific approach of that HSA and to inform the budget. A basic outline for an HSA SOW is the following:

1. *Background – country context for this HSA, key issues that the HSA will likely address*
2. *Goal and Objectives of the Assessment*
3. *Activities*
4. *Schedule*
5. *Deliverables*
6. *Team Members – name, role, short biographical sketch for each*
7. *Client Role*

HEALTH SYSTEMS ASSESSMENT SOW: ANGOLA

1. Background

In 2005, the Partners for Health Reform*plus* project (PHR*plus*) conducted an HSA in Angola to inform USAID/Angola's health sector programming. Since then, numerous USG-funded health projects have been implemented. Other donors such as UNICEF, WHO, the World Bank and the EU have also carried out major activities in Angola with the Ministry of Health (MOH). These efforts have generated new information on the state of Angola's health system, and likely produced some results. Currently the MOH is in the process of developing a national health policy and a national health strategic plan, and USG/Angola is consolidating and improving an integrated approach to its health programming in the country. This is an opportune time to update the 2005 assessment and expand the scope of the proposed 2010 assessment to identify the main advancements of USG interventions and inform the MOH and USG/Angola's strategies moving forward.

2. Purpose

The purpose of this assignment is to update the HSA done for Angola in 2005. In particular, the assessment will:

- Review new sources of data that have become available since 2005
- Identify areas of national progress since the 2005 HSA and successful strategies, including a comparison of USAID intervention provinces with non-USAID provinces to measure the impact of USAID's investment
- Identify the continuing challenges to strengthening Angola's Health System, with particular attention to: human resources, health information systems (HIS), commodity security, donor coordination, and translating good planning into action
- Develop recommendations to help inform the MOH's health strategy
- Help inform USG/Angola's integrated health strategy
- Identify strategies that seek to leverage the resources and capacity of private sector actors
- Increase understanding of the role and possible contributions of private sector actors for health

3. Activities/Methodology

- Document Review and Client Consultations – *January-March 2010*

  Prior to arriving in country and conducting field work, the team will review various documents and reports including but not limited to: the 2005 Angola HSA, health project reports and surveys (not limited to USG), preliminary NHA and MICS results, if available, national health strategy and population reports; Government and other monitoring data; USG strategy documents. The team will consult USG agencies/Angola and USG support staff based in the US such as HIV/AIDS (PEPFAR), malaria (PMI), RH, TB, water and sanitation, democracy and governance. These consultations will refine this scope of work, the assessment methodology, and report outline.

- Team Planning Meeting in DC – *February 2010*

  A Team Planning Meeting (TPM) will be held, with the HSA team members only, prior to official onset of meetings and work with USG agencies and others.

- Preparation for Trip – *February-March 2010*

  After the TPM, the team will begin to coordinate with USAID/Angola to select and contact the key informants that should be interviewed, determine how to present the HSA concept to obtain their buy-in, draft the field schedule and begin setting up appointments.

- Arrival – Team Planning Meeting with USG Agencies/Angola – *April 2010*

  Upon arrival the team will meet with USG agencies/Angola to: review the priorities for the assessment and assessment methodology; finalize the key research questions and examine the field schedule (in which appointments will USG agencies/Angola staff participate? schedule check-in meetings or calls); review logistics, protocol for communications with USAID/Angola, other donors and government contacts, and for interviews during the field visits; and plan for stakeholder workshop.

- Field Visits/Key Informant Interviews – *April 2010*

  Site visits will be critical to understand health system performance at the service delivery level. Interviews with the key informants will include but not be limited to MOH officials, USG agencies, Implementing Partners, other donors, private and commercial partners, and civil society organizations.

- USG Agencies/Angola Debrief – *April 2010*

  Prior to the stakeholder workshop, the team will debrief USG agencies/Angola and discuss preliminary findings and recommendations, outstanding questions, and review draft presentation (ppt) for the stakeholder workshop.

- Stakeholder Workshop – *April 2010*

  A half-day workshop will be held with USG agencies/Angola and other key stakeholders after the site visit work is completed and prior to the departure of the team from the country. The mission might consider co-hosting with the MOH and/or WHO. In this meeting, the assessment team will present findings for comment and validation, and facilitate group discussion of recommendations for national health system strengthening. USAID and the MOH will send out the invitations and Health Systems 20/20 will cover expenses for this meeting, including meeting space.

- Preliminary Draft Report – *April 2010*

  Based on all the information collected in country, including at the USG/Angola debrief and the Stakeholder Workshop, the team will submit a preliminary draft report including findings and recommendations upon completion of the field work and before the team departs Angola (April 17). The draft report will incorporate comments and feedback from the debriefings. This draft will include findings and recommendations for mission review. USG agencies/Angola will have two to three weeks to provide comments and suggestions to the assessment team, including comments from the MOH, which shall be addressed in the final report.

- Final Report – *May-June 2010*

  The team will submit a final report no later than one week after USG agencies/Angola provide written comments on the team preliminary draft report. Once the final report is approved, it will take an additional week to edit and format it. The report will be submitted in English electronically for dissemination among implementing partners and stakeholders. It will be subsequently translated into Portuguese.

4. Team Composition

The assessment team will consist of one Team Leader, one public health specialist, one USAID staff member (participant of the 2005 assessment), one international consultant, one local specialist, one staff from the MOH, and a Research Assistant. Collectively the team members should have strong backgrounds to comprehensively cover all six building block chapters: governance/stewardship, financing, service delivery, human resources, pharmaceuticals, and HIS.

- Team Leader – *name, affiliation*

  The Team Leader will be responsible for managing the team in conducting the assessment and in preparing and finalizing all deliverables. This individual will be responsible for achieving assignment objectives and will be the key liaison with USAID/Angola. The Team Leader is fluent in Portuguese and has more than 10 years of experience leading assessment teams. The Team Leader will:

  - Finalize and negotiate the HSA work plan with client
  - Establish assignment roles, responsibilities, and tasks for each team member
  - Facilitate the TPM or work with a facilitator to set the agenda and other elements of the TPM
  - Take the lead on preparing, coordinating team member input, submitting, revising and finalizing the assignment report
  - Take the lead with producing one or two building block chapters of the assessment
  - Manage the process of report writing
  - Manage team coordination meetings in the field
  - Coordinate the workflow and tasks and ensure that team members are working to schedule
  - Ensure that team field logistics are arranged

- Public Health Specialist – *name, affiliation*

  The Public Health Specialist will support the Team Leader in all of the above-mentioned tasks and will carry out one or two building block chapters of the assessment. The Public Health Specialist is a native Portuguese speaker and has five years of experience in public health programming, particularly reproductive health, HIV/AIDS and the private sector.

- USAID Staff Member – *name, affiliation*

  [Name] was part of the 2005 assessment team, is fluent in Portuguese and is a Quality Assurance expert. She will take the lead with producing two building block chapters, Service Delivery and Human Resources.

- International Consultant – *name, affiliation*

  This consultant is an expert of Pharmaceutical Systems and will be responsible for the pharmaceuticals chapter.

- Local Specialist – *name, affiliation*

  The Local Specialist has a background in public health and is very familiar with the Angola health system and stakeholder community. She participated in the 2005 assessment and will play the same logistics support role in this HSA. She will also provide feedback on assessment findings and recommendations, and facilitate part of the Stakeholder Workshop.

- Research Assistant – *name, affiliation*

  Because of the substantial requirements for assembly of materials required for the assessment as well as logistical arrangements, the team includes a Research Assistant for approximately 10 days over the assignment period. She will be responsible for:

  - Identifying, collecting and cataloging for easy retrieval by the team members relevant documents, surveys and other related background and historical reference materials as requested by the team
  - Assisting with identification of key informants
  - Providing scheduling support as required
  - Producing a final bibliography of all sources utilized in the assessment
  - Providing additional research support to the Team Leader, as required

5. Logistics/Role of Client

USAID/Angola will assist with arranging:

- Contact and meetings with key informants in-country
- Mid-assessment Meeting: mid-way through the team's field work the team and USG/Angola will discuss the findings to date and troubleshoot possible obstacles towards completing the assessment as planned
- USG Debrief Meeting to be held at the conclusion of the field work but prior to the Stakeholder Workshop
- Invitations for the Stakeholder Workshop to be held at the conclusion of the field work and following the USG debrief. Health Systems 20/20 will cover expenses for this meeting, including venue.

USAID/Angola will provide overall direction to the assessment team, identify key documents and assist in arranging and/or participate in meetings with key stakeholders as identified by USG prior to the initiation of field work.

USAID/Angola personnel shall be available to the team for consultations regarding sources and technical issues, before and during the assessment process

The Health Systems 20/20 assessment team is responsible for arranging other meetings as identified during the course of this assessment and advising USAID/Angola prior to each of those meetings. The assessment team is also responsible for arranging vehicle rental and drivers as needed for site visits.

6. Deliverables and Products

- Final SOW
- USG Debrief
- Stakeholder Workshop
- Preliminary Draft Report
- Final Report

Health Systems 20/20 will be responsible for editing and formatting the final report, which takes up to one week after the final unedited content is approved by USG agencies.

7. Cost Estimate

US$XXX

Annex 2.1.E. Illustrative Local Logistics Coordinator Scope of Work

The sample scope of work (SOW) below includes logistical tasks. In reality, a local logistics coordinator/consultant may also have a more technical role and contribute substantively to data collection, meetings, analysis, and report writing. Yet, if resources allow, it is ideal to separate this out into a full-time administrative position, responsible for the logistical tasks.

Background – Same as in main SOW.

Role of the Local Consultant

The local, short-term consultant will work as a full member of the assessment team to identify (with guidance of other team members) relevant sources of data and key stakeholders, and obtain data and documents. 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, and ensuring that local technical and logistic needs are met in a timely and effective way. The local consultant will be expected to help identify a professional translator if necessary.

Expected Specific Tasks [insert dates]

Prior to team arrival (level of effort or LOE: minimum 5 days)

1. Participate in team conference calls with the clients and key stakeholders.
2. Work with technical team to obtain reports and other data in advance, and provide guidance on appropriate key informants.
3. Manage logistical preparations:
   a. Interface with [client] regarding logistics for the team.
   b. Assist with invitations and arrangements for a workshop to be held on/near the last day of the visit.
   c. In consultation with [organization], prepare the schedule of appointments for the team members (each team member will have independent meetings and team or group meetings). Provide other logistical support as needed.
4. Coordinate with and/or hire local interpreters/translator(s) to work with the team to translate from [language] to English. The number of translators will depend on team requirements. Translators will:
   a. Accompany team members on interviews to provide interpretation services.
   b. Review and translate documents as required.
5. Provide guidance on local protocol including regular working hours, holidays, introductions, and language.
6. 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. Participate in initial briefing meeting with [client].
3. Participate in data collection, interviews, and facility visits.

4. Contribute to preparations, and participate in the stakeholder workshop. Confirm conference room arrangements (including availability of overhead digital projector, flipchart paper, markers, notepads and pens). Arrange for photocopies as requested by the team.

Post-team visit (LOE: expected 1.5 day)

5. Assist with arranging any follow-up calls or data collection needed after the field work has concluded.

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

- Experience in evaluation and/or health systems research, preferably at national level
- 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/Deliverables

- List of key informants and their contact information
- Draft schedule of appointments

Deadlines will be specified when the assessment schedule is finalized.

Attachments

- Brief description of the assessment tool/approach
- Health System Assessment scope of work for [country]

Annex 2.2.A Illustrative Health System Assessment Logistics and Task Checklist

Health System Assessment Logistics and Task Checklist

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

Task	Client	Team Lead	Coordinator	Local Consultant	Team Members	Date Due	Date Completed
Preparatory work							
General Coordination							
Identify scope of assessment and the extent of client/stakeholder engagement through discussions with the client							
Identify team composition							
Set dates for the assessment in coordination with the client – consider relevant holidays and events							
Prepare scopes of work (team and local consultant, as needed)							
Schedule and participate in team planning meeting(s) and discussions							
Schedule and arrange logistics for the HSA stakeholder workshop(s)							
Determine if in-country travel will be required							
Building block chapter prep work							
Prepare materials for first team meeting with country information, background materials, and other assessment information							
Assign building block chapters to team members							
Team members review assigned building block chapter(s) and prepare lists of documents needed and potential interviewees							
Identify team member responsible for stakeholder engagement							
Assessment coordinator compiles needed documents and facilitates translation as needed							
Compile Country Overview chapter data (available online)							
Complete Country Overview chapter							

Task	Client	Team Lead	Coordinator	Local Consultant	Team Members	Date Due	Date Completed
Review background documents and initiate desk review							
Request organizational charts for central-level Ministry of Health and relevant departments; each team member should identify departments relevant to their chapter 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							
Identify local travel options – select location and date							
Identify participants for the launch workshop; set time and date and send invitations; reserve room; work with client to coordinate and set agenda							
Hire translators (if needed)							
Hire drivers (if needed)							
Materials for travel: memory sticks, flipcharts, markers, name tags, paper, portable printer							
Field work							
Meet with team and participate in team planning meeting							
Conduct a small (8-15 people) workshop with key local stakeholders (if applicable)							
Conduct a launch workshop (if applicable)							
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 respond to client questions through document review and interviews							

Task	Client	Team Lead	Coordinator	Local Consultant	Team Members	Date Due	Date Completed
Using SWOT (strengths, weaknesses, opportunities, threats) analysis and root cause analysis (in Chapter 3), map possible interventions/reforms to address weaknesses identified in assessment							
Prepare preliminary analyses and draft relevant sections for the country assessment report, including recommended potential activity areas and interventions							
Schedule and conduct follow-up interviews as needed							
Liaise with any in-country program personnel to share and discuss findings and arrange a pre-departure debrief, if requested							
Travel to one or two subnational areas, as discussed in the assessment preparation							
Schedule and conduct a pre-departure stakeholder workshop (if applicable)							
Post-field work							
Finalize relevant sections for the country assessment report, including recommendations, based on input from the stakeholder workshop and mission staff							
Request feedback from a designated reviewer on draft report							
Edit and format final report for approval by relevant client/ stakeholders							
Schedule and conduct a prioritization workshop (if applicable)							
Disseminate report in some form (print /CD)							

Annex 2.2.B. Illustrative Team Planning Meeting Materials

Agenda

DATE

Participants:

Name, HSA Coordinator/Researcher (Team member)

Name, Team Leader

Name, Health Systems Specialist (Team member)

Name, Health Finance Specialist (Team member)

Name, Senior Consultant (Team member)

Name, Task Manager

Meeting Objectives:

1. Review and agree on HSA objectives and methodology
2. Clarify team roles and responsibilities
   - Agree on team roles and responsibilities in report preparation
   - Agree on tasks/roles while in field
   - How to work together
3. Draft HSA timeline, including schedule while in country
4. Hold a technical and planning discussion to share initial findings and data/information gaps across building block chapters
5. Identify action steps and outstanding questions for client and logistics coordinator

Meeting Schedule

9:00 **Welcome and Introductions** (Team Leader)

Objectives and overview of team planning meeting

9:15 **Objectives of the HSA** (Team Leader)

- How will the HSA results be used?
- Priority issues among and within technical areas
- Client/stakeholder engagement
- Questions about the HSA modules?
  - Identify how to use the HSAA manual

10:00 **Overview of the HSA Timeline and Process** (Assessment Coordinator)

- Discussion and clarification of key steps
- Update on current status of activity
- Discussion of timelines for the draft and final reports
  - Expectations for zero draft
- Dates/agenda for 2nd team planning meeting
- Team member roles and responsibilities
- Expectations for how the team will work together

10:30 **BREAK**

10:45 **Continued Discussion of Timeline and Process** (Team Leader, Group)

- Expectations for field work – what are you looking forward to?
- Travel outside of the capital city – why/where?
- Draft field work agenda/schedule
- Developing and using interview protocols

11:30 **How to Use the HSA Manual/Q&A** (Team Leader, Group)

12:15 **Team Member Summaries** (5-10 mins/each):

- Key findings to date and key technical issues
- Gaps in information and potential sources for these
- Initial thoughts on cross-cutting issues (if any)
- Initial thoughts client priority issues (if any)

1:00 **GROUP LUNCH**

2:00 **Team Member Summaries** (5-10 mins/each) (Continued if necessary):

- Key findings to date and key technical issues
- Gaps in information and potential sources for these
- Initial thoughts on cross-cutting issues (if any)
- Initial thoughts client priority response issues (if any)

2:15 **Data Collection** (Team Leader, Group) (approx. 15 minutes per topic)

- Library review – prioritization of documents, how to rationalize review (Assessment coordinator, group)
- Key informant identification/initial thoughts on interviews needed
  - Brainstorm – health stakeholders to meet with in country (group)
- Focus groups – are they needed? Purpose and composition (team leader, group)
- Site visits (team leader, group)
- Interview logistics, tips, and etiquette (team leader, group)

3:30 **BREAK**

3:45 **Summary of Next Steps**

Questions for client:

Questions/issues for in-country logistics coordinator:

4:15 **END**

Report Writing Assignments

Chapter	Author(s)	Page Length	Due Dates
1. Executive summary	Team Leader	5 pages	
2. Overview of country's health system	Assessment Coordinator	5 pages	
3. Methodology	Assessment Coordinator	1-2 pages	
4. Findings			
4.1. Governance	Team Leader	5-10 pages	
4.2. Health financing	Team member 1	10 pages	
4.3. Human resources for health	Team member 2	10 pages	
4.4. Service delivery	Team member 3	5-10 pages	
4.5. Medical products, vaccines, and technologies	Team member 3	5-10 pages	
4.6. Health information systems	Team member 2	5-10 pages	
5. Summary: Analysis (SWOT) and findings across health systems components	Team leader with team	5-10 pages	
6. Recommendations	Team leader with team	5-10 pages	
7. Conclusions /next steps	Team leader	1 page (?)	
8. Bibliography	Assessment Coordinator		
9. Contact list	Assessment Coordinator with team input		
10. Stakeholder workshop agenda	Team leader with team		
11. Stakeholder workshop presentations	Team leader & team member inputs		

TIP

Pre-departure Lessons Learned from Previous HSAs

- Communicate regularly (including phone calls) with client to build relationship and get country support for the HSA process.
- Establish a clear point of contact at the MOH for updates, information, and approval.
- Prepare as much background research as possible before reaching the country so that the team members arrive well-informed.
- Prepare a zero draft of the report. Zero drafts can help the team leader determine where the module leads are at in their preparation prior to departure. Sharing zero drafts among team members before departure encourages better overall understanding of the health system, understanding of knowledge/information gaps to be filled, as well as hypotheses to be tested, prior to arrival in country.
- Organize a team meeting four weeks in advance of field work for clarifying expectations and planning.
- Be careful to not underestimate the amount of LOE required particularly for the team leader, as he or she is responsible for the report in its entirety and may have to step in to produce missing pieces.

Annex 2.3.A. Illustrative Background Documents

The desktop review for the Kenya Health System Assessment 2010 compiled the following list of documents.

GENERAL/CORE

- WHO Country Profile (2006)
- The Kenya Health System-Analysis of the situation and enduring challenges (2009)
- Overview of Kenya Health System, Chapter 2 of Kenya Service Provision Assessment (2004)
- UNAIDS Situational Analysis (2008)
- Kenya Health Policy Framework 1994 - 2010
- Analysis of Performance, Health Situation Trends & Distribution: 1994-2010, and Projections for 2011-2030, Ministry of Public Health and Sanitation and Ministry of Medical Services
- USAID/Kenya Five Year Implementation Framework for the Health Sector (2010-2015)
- National Health Sector Strategic Plan II (2005-2010)
- National Health Sector Strategic Plan II Mid-term Report (November 2007)
- Kenya Demographic and Health Survey Preliminary Report (2003)
- Kenya Demographic and Health Survey (2003)
- Launch of Kenya Demographic and Health Survey (2008)
- Assessment of USAID/Kenya's Health Portfolio (APHIA II)
- MSH. Health Systems Annual Report (2008)
- PSP-*One*/USAID- Kenya Private Sector Assessment (August 2009)
- Health Systems for Outcomes (HSO), The World Bank (2009) http://hso.worldbank.org/hso/
- UNICEF Country Program: Kenya (2009-2010)
- WHO Country Cooperation Strategy Brief May (2009)
- WHO Country Cooperation Strategy (2008-2013)
- WHO. Kenya Cooperation Strategy (2002-2005)
- WHO. Assessment of health systems' performance report of the Scientific Peer Review Group (2002)
- PEPFAR Public Health Evaluation: Care and Support - Phase 1 Kenya. (2009) (includes assessments of 60 PEPFAR-funded HIV care and support facilities: care provided, human resources available, pharmacy review, analysis of routine assessment/patient forms, staff interviews, and patient focus group discussions) http://www.cpc.unc.edu/measure/news/pepfar-public-health-evaluations-published
- Annual Operational Plan, year 4 review, received April 2010
- Presentation on the potential new HSS funding platform (Getting More Health for the Money: Establishing a Health Systems Funding Platform in Kenya)

FINANCE

- Towards a Health Financing Strategy for Kenya, Ministry of Public Health and Sanitation (2009)

- WHO. Health financing reform in Kenya – assessing the social health insurance proposal (2007)
- USAID/Health Policy Initiative (HPI). Investing Wisely Health Policy Initiative Helps Kenya Improve Health Financing Policies and Systems: Kenya (September 2009)
- USAID/Health Systems 20/20. Kenya National Health Accounts (2005/2006)

SERVICE DELIVERY

- Norms and Standards for Health Service Delivery, Ministry of Health (June 2006)
- Kenya Service Provision Assessment Survey (2004-2005)
- National Policy on Injection Safety (2007)
- Kenya Working Papers: Decentralizing Kenya's Health Management System: An Evaluation. Jan 2009 http://www.measuredhs.com/pubs/pub_details.cfm?ID=878&srchTp=advanced
- Kenya Working Papers: Influence of Provider Training on Quality of Emergency Obstetric Care in Kenya. Jan 2009 http://www.measuredhs.com/pubs/pub_details.cfm?ID=882&srchTp=advanced
- Using the 2004 Kenya SPA for Health Service Delivery Improvement. 2008 (attached, or go to http://www.cpc.unc.edu/measure/publications and search Kenya)
- Community health worker strategy documents (strategy, training manual, reference guide)

GOVERNANCE

- Decentralizing Kenya's Health Management, Republic of Kenya (2009)
- HD Governance Assessment, World Bank Institute (2009)
- Various health governing laws, regulations collected and referenced.

MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES

- SPS in Kenya http://www.msh.org/projects/sps/Global-Focus/Kenya.cfm
- Improving Access to HIV/AIDS Pharmaceuticals in Kenya and Zambia. Management Sciences for Health (current project, no date on brief)
- How to develop and implement a national drug policy. WHO (2003)
- Drug Management for Successful Public Health Outcomes. MSH (2005)

HIS

- Health Sector Strategic Plan for Health Information Systems (2009-2014)
- Health Metrics Network. Health Information Systems Assessment & Scores (2008)
- Ministry of Medical Services and Ministry of Public Health and Sanitation: Master Facility List Implementation Guide. (February 2010)
- Health Metrics Network. The Case for a National Health Information System Architecture; a Missing Link to Guiding National Development and Implementation.
- Health Metrics Network: Guidance for the Health Information Systems (HIS) Strategic Planning Process Steps, Tools and Templates for HIS Systems Design and Strategic Planning (March 2009)
- Use of HIV/AIDS Information in Kenya. 2007 (attached, or go to http://www.cpc.unc.edu/measure/publications and search Kenya)
- Decision Maker Perceptions in Kenya: An Assessment of Data Use Constraints. (2005) (the attachment includes an assessment for Kenya and an assessment for Nigeria. the Kenya

assessment can be found after the overall title, acknowledgements, and introduction pages.) http://www.cpc.unc.edu/measure/publications and search Kenya)

HRH

- Health Worker Recruitment and Deployment Process in Kenya: an Emergency Hiring Program 2008. Ummuro Adano.
- The Kenya Emergency Hiring Plan-Results from a Rapid Workforce Expansion Strategy, Capacity Project Brief, (September 2009)
- HIV and AIDS Policy in the Workplace (2005)
- USAID/Quality Assurance Project: Kenya: assessment of health workforce competency and facility readiness to provide quality maternal health services (2008)
- Human Resource Management Rapid Assessment Tool for Public and Private Sector Health Organizations: A Guide for Strengthening HRM Systems. MSH. (2005)
- The World Health Report 2006 - working together for health. The World Health Organization
- Competency Gaps in Health Management—an explanation (2009)
- Incentives for health worker retention in Kenya: An assessment of current practice (2008) David M Ndetei, Lincoln Khasakhala, Jacob O Omolo
- Africa Mental Health Foundation (AMHF)
- Institute of PolicyAnalysis and Research (IPAR), Kenya
- Nursing Human Resources in Kenya: Case study; Developed by Chris Rakuom for the International Centre for Human Resources in Nursing International Council of Nurses and Florence Nightingale International Foundation (2010)
- Distance Education Project Between Nursing Council of Kenya (NCK) and Africa Medical Research Foundation (AMREF), Commonwealth Regional Health Community for East, Central and Southern Africa (2006)
- Kenya, South Africa and Thailand: a Study to Improve Human Resource Policies. Health Exchange. (2009)
- Assessing Health Worker Performance of IMCI in Kenya. Quality Assurance Project (2000)
- HR Mapping of the Health Sector in Kenya: the Foundation for Effective HR Management; James J, Muchiri S, HLSP Institute, Ministry of Health (2006)
- Impact of HIV/AIDS on Public Health Sector Personnel in Kenya Commonwealth Regional Health Community for East, Central and Southern Africa (2003)
- The health worker recruitment and deployment process in Kenya: an emergency hiring program, Ummuro Adano (2008)
- Cost of Health Professionals' Brain Drain in Kenya (2006) http://www.biomedcentral.com/1472-6963/6/89
- Extended Service Delivery Project: Best Practices Series Report #2: A Description of the Private Nurse Midwives Networks (Clusters) in Kenya (May 2007)
- HR Crisis in Kenya: the Dilemma of FBOs; Mwenda S, HRH Global Resource Center, Interchurch Medical Assistance (2007). Description: This presentation was given as part of the Christian Health Association's Conference: CHAs at a Crossroad Towards Achieving Health Millennium Development Goals. It outlines FBO health services in Kenya and sources of and financial support for them. It also discusses the exodus of health workers from church health facilities, the reasons

behind this migration and how this problem is being addressed.

- Kenya Nursing Workforce (a presentation); Commonwealth Regional Health Community for East, Central and Southern Africa (2006)
- Stepping Up Health Worker Capacity to Scale Up Services in Kenya; Partners for Health Reformplus, Ministry of Health, Kenya (2006)
- Evaluation of DFID Country Programmes Brief: Kenya, 2000-2006 (2007)
- Evaulation of DFID Country Programmes Country Study: Kenya Final Report 2000-2006 (published 2007)
- Evaluation of a Rapid Workforce Expansion Strategy: The Kenya Emergency Hiring Plan. Capacity Project (2009)
- Kenya's Health Care Crisis: Mobilizing the Workforce in a New Way, Capacity Project, (November 2006)
- Making an Impact: Transforming Service at a Remote Hospital in Kenya, Capacity Project, (May 2007)
- Mid-Term Evaluation of the Kenya Emergency Hiring Plan, The Capacity Project, (February 2008)
- What about the Health Workers?: Improving the Work Climate at Rural Facilities in Kenya, The Capacity Project (January 2009)
- Strengthening Professional Associations for Health Workers, The Capacity Project (September 2009)
- Training Health Workers in Africa: Documenting Faith-Based Organizations' Contributions, The Capacity Project (November 2009)
- The Capacity Project in Kenya Country Brief (November 2008)
- Investing Wisely: Health Policy Initiative Helps Kenya Improve Health Financing Policies and Systems Kenya (September 2009)
- Absenteeism of Teachers and Health Workers http://econ.worldbank.org/external/default/main?theSitePK=477916&contentMDK=20562060&menuPK=546432&pagePK=64168182&piPK=64168060

HIV/AIDS

- Kenya National AIDS Strategic Plan (2006-2010)
- Kenya National AIDS Strategic Plan (2009/10-2013)
- HIV/AIDS Decentralization Guidelines (2009)
- National HIV/AIDS Testing and Counseling Guidelines (2009)
- Guidelines for PMTCT in Kenya (2010)
- Male Circumcision Policy (2009)
- Modes of Transmission Analysis (2009)
- Guidelines on Counseling and Testing (2007)
- Kenya AIDS Indicator Survey (2007)
- Guidelines for Field Implementation of NACC at the Decentralized Levels (2007)
- Socio-economic Impact of AIDS (2006)
- National M&E Framework (2005)

- HIV/AIDS Research Strategy (2007)
- HIV and Nutrition Guidelines (2006)
- Assessment of Kenyan Sexual Networks (April 2009)
- AIDS Control and Prevention Act (2006)
- Home and Community Based Care in Kenya, NASCOP (2008)

Annex 2.3.B. Illustrative Contact List/ Interview Schedule

The following table is excerpted from the Guyana Health System Assessment, Health Systems 20/20 and ministry of Health, 2011. The list of potential interviews in any one country is likely to be much longer.

Options for Stakeholder Workshops

Contact (name and title)	Contact Information	Organization	Interview Date	Interviewers	Overview	Leadership and Governance	Health Financing	Service Delivery	HRH	Medical Products etc.	HIS
Director	(Email address, phone, street address)	Regional Health Services, MOH	Mon 9:00	Team Leader, SD, HIS		X	X	X			X
Director		Materials Management Unit, MOH	Wed 10:00	HF, Medical Products			X			X	
Dean		University of Guyana Medical School	Mon 14:00	HRH, team					X		
TBD		World Bank	Thurs	HF, Core	X		X				
Director		Guyana Human Rights Association	Tues	Governance		X					
Director		Private Medical Professionals' Association		Team Leader, SD	X	X		X	X		X

Annex 2.3.C. Discussion Guides for the Subnational Level

The sample discussion guides below, adapted for this manual from the Health System Assessment (HSA) done in Kenya in 2010, are included here as a reference for future HSA teams working at the subnational level. The documents should be used to guide the discussion or interview, rather than as a structured questionnaire, and many of the questions should not be asked as written, but rather paraphrased.

Discussion Guide for Provincial or District Health Teams

District/ Province:_____ Date:_____

RESPONDENT(S) INTERVIEWED

FINANCE

Name	Designation

1. Are private providers contracted or reimbursed for providing government services in the district/ province?
2. Are NGOs/FBOs working in the districts/province disclosing funds available to the health sector during the annual planning? Are those funds finally disbursed for intended purposes?
3. Are AOPs (Annual Operational Plans) useful in mobilizing funds for health? If not what changes would you propose in the AOP preparation process?
4. Are you able to achieve the operational and investment funding needed to meet the service needs of this district? If not, why not? What would be needed for you to get the funding needed to offer the services promised/demanded?

HUMAN RESOURCES

5. Please tell us about the patterns of staff vacancies here: over time, what % of established posts are vacant?
6. What can you tell us about the level of staff motivation and satisfaction? What factors affect motivation and satisfaction the most (in both good and bad ways)?
7. When is the last time staff members received training? What kind of training was it, and by whom was it sponsored? (Probe for clinical vs. other, NGO/donor sponsored vs. MOH sponsored.)

   * **For private providers:** How many clinicians are available at this facility? What are their specialties and/or area of practice? What is the scope of any support personnel at the facility?

   *Private Providers: Do clinicians, nurses, and/or support personnel at this facility have access to in-service and/or continuing education trainings?

*What is the percentage of time clinicians at this facility devote to private or public practice (100%? 50%)? Are there any clinicians at this facility engaged in dual-practice?

HEALTH GOVERNANCE

8. What mechanisms are in place to allow for your involvement in health policy development and planning (public or private)?
9. Health information is important for planning, transparency, and accountability in the health sector. Do you think the Government and the Ministry of Health in particular ensure that there is availability of health information especially to the public?
10. What mechanisms are in place for the public, especially the community, to provide feedback to health providers?
11. What would you recommend to achieve the goals of the health sector at both national and local levels?
12. Are clinicians here members of any professional associations, councils, or unions?

SERVICE DELIVERY

13. What is the total number of facilities that are private and public sector in the district? How do you interact with private/NGO/faith-based facilities? (These questions check knowledge about the private sector.)
14. What is the availability of telephones, transport, or other means of communication between levels of care?
15. Is there a district standard for the frequency of supervision visits to primary care facilities? What is the frequency of supervision visits?
16. To what degree is supervision integrated between programs (primary health, TB, HIV, malaria)? Do vertical programs such as HIV, malaria, and maternal health, have their own individual supervisors or do they share them? Do supervisory teams conduct supervisions using a single supervision tool?
17. What other processes assuring quality of care besides supervision are in place?
18. Is there a formal procedure for referrals and follow-ups between levels of health care facilities? If so, what data do the health system track to monitor referrals between facilities of different referral levels?
19. What types of specialist equipment exist at the facility? Are laboratory, ultrasound, x-ray, surgical facilities available?

HIS

20. What is the referral process for services unavailable at this facility? That is, to hospital and/or private providers and/or for diagnostics unavailable at the facility?

Provincial Level ONLY

21. Data within the FTP system [FTP = File Transfer Protocol - MOH system for reporting data from district to national level] should be available to the Provincial Health Office and/or Provincial Health Records and Information Officer, through aggregated, provincial-level data spreadsheets.
    a. Do you access provincial-level data spreadsheets through the FTP?
    b. If yes, how do you use this information?

District Level ONLY

22. The FTP requires facilities to submit monthly service summary forms to the district level (via the District Health Records and Information Officer or DHIRO), and for the district level to submit aggregated summary data to the national level.
    a. In general, are facilities in your district able to fulfill this requirement? What are the major barriers?
    b. In general, do nongovernmental (private, NGO, faith-based, etc.) facilities adhere to this requirement? What are your thoughts on why or why not?
23. Does this district produce summary health service and status reports?
    a. If yes, please describe what is produced, frequency, and method of dissemination.
24. Does this district organize opportunities for stakeholders to share, review, and discuss district health service and status statistics/data?
    a. If yes, please give an example (from previous 12 months), including type and stakeholder groups represented.
    b. If yes, can you provide an example (within the previous 12 months) of a service delivery/ health sector management decision that resulted from the multi-stakeholder review/ discussion of district-level data?

MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES

a. Have there been stock-outs of the following in the past three months?

Type of Commodity	Enter Y/N/NA	Comments (reason for stock-out and action taken)
1. Essential medicines		
2. Essential medical supplies		
3. Reproductive health/ family planning commodities		
4. HIV/AIDS medicines		
5. TB/leprosy medicines		
6. Vaccines		
7. Laboratory supplies		
8. Dental supplies		
9. X-ray supplies		

Briefly comment on the following issues stating your achievement, challenges, and needs:

- Infrastructure/Equipment/Materials Key Issues
- Human Resource Capacity Key Issues
- Record-Keeping Practices Key Issues
- Availability and Use of Guidelines/ Rational Use Issues e.g. Medicine and Therapeutics Committees Key Issues
- Supplies (Essential Medicines and Medical Supplies) Key Issues
- General Comments Specific Program Related Issues (Are there specific problems relevant to a group of commodities e.g. TB, ARV, RH, Laboratory etc)

Discussion Guide for Facility-level Data Collection

Facility Name:

District: Province:

Level of Care[1]: _____ Ownership[2]: _____

Respondent(s) Interviewed at the Facility

Name	Designation

FINANCE

2. Have you heard of the HSS Fund? Are committees in place to oversee implementation of this Fund?
3. How do you receive funds allocated to your facility by the GoK [government of Kenya]?
4. Are the user fees charged compliant to the 10/20 Policy? If not, how do you determine the level of fees to be charged?
5. (If a private provider) what are the reporting requirements for revenue and/or costs related to service? Do you accept private insurance? Do you have contracts with private companies to provide services? What % of your revenue is from private out of pocket payment? Do you have to provide credit to your customers? Do you get credit from your suppliers of drugs (and how does this arrangement or lack of impact availability and stability of supplies)?

HRH

6. Please tell us about the patterns of staff vacancies here: over time, what % of established posts are vacant?
7. What can you tell us about the level of staff motivation and satisfaction? What factors affect motivation and satisfaction the most (in both good and bad ways)?
8. When was the last time staff members received training? What kind of training was it, and by whom was it sponsored? (Probe for clinical vs. other, NGO/donor sponsored vs. MOH sponsored.)

[1] DH = District Hospital; SDH = Sub-District Hospital; HC = Health Center; D = Dispensary; C = Clinic; H = Hospital

[2] GoK = Government; FBO = Faith-Based Organization; CBO = Community-Based Organization; NGO = Nongovernmental Organization; P = Private; O = Other (Specify)

GOVERNANCE

9. What mechanisms are in place to allow for your involvement in health policy development and planning?
10. Health information is important for planning, transparency, and accountability in the health sector. Do you think the GoK and the Ministry of Health in particular ensure that there is availability of health information especially to the public?
11. What mechanisms are in place for the public, especially the community, to provide feedback to health providers?
12. What would you recommend to achieve the goals of the health sector at both national and local levels?

HIS

13. Does this facility submit monthly service summary forms to the district level?
    a. If so, to whom is this facility reporting every month (i.e. to the DHIRO, to donors/funding mechanisms)?
    b. Who in your facility normally completes and submits monthly service summary forms (i.e. is it the nurse/service provider rather than a data/information clerk)?
    c. Does this facility / that person experience regular challenges/barriers to submitting summary forms on a monthly basis? If so, please describe.
13. Does this facility receive feedback, supervision, or training from the district or national level regarding the quality (including timeliness, completeness, accuracy) of data collected and submitted monthly?
    a. If yes, please provide an example (within previous 12 months).
14. Does this facility have access to district health service and status summary reports?
15. Does this facility (or a representative) participate in district-level stakeholder meetings to share, review, and discuss district health service and status statistics/data?
    a. If yes, please give an example of such a meeting/forum (from previous 12 months).
16. Does this facility review its monthly service summary forms to inform service delivery or management (budget, HRH, etc.) decisions?
    a. If so, please provide an example (from the previous 12 months) of a service delivery or management decision that this facility implemented as a result of review of service statistics.

SERVICE DELIVERY

17. Are outreach services available for remote communities? If so, what is the frequency of these outreach visits and which services are included?
18. What mechanisms are in place to ensure that eligible people access waivers and exemptions and that non-eligible people do not?
19. What is the number of supervision visits to health centers planned that were actually conducted?
20. How frequently does the district level come for supervision vists and, when they do come, do they come as a team/individual for multiple programs or do they pay separate visits for separate programs?
21. How does the community participate in assuring that services offered meet community needs?

22. Are there any community health units in your catchment area? If so, how do you interact with the Community Health Extension Workers (CHEWs)? Has the system better enabled you to plan for the communities' needs?

23. What is the scope of private facilities in the community? Are there private clinicians offering services? Private laboratories and/or pharmacies?

MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES

24. What is the source of your facility's health commodities? (essential medicines, Reproductive Health/Family Planning medicines, HIV/AIDS meds, TB/Leprosy meds, vaccines, lab reagents, etc.)

Health Commodity Management Structures and Systems

25. Is there a functioning procurement committee?

26. Does the facility collect user fees for services rendered?

27. Are FIF funds utilized to procure medicines/supplies?

	Question (Answer Y/N)	Y/N	Comments
A	Is space sufficient (both bulk store/ dispensing area)		
b.	Is shelving sufficient?		
C	Is there a functional cold storage?		
d.	Is the cold storage temperature monitored?		
e.	Are physical stock counts done at least quarterly?		
f.	Do staff use a quantification procedure for replenishment?		
g.	Do all items have bin cards or stock control cards (SCC)?		
h.	Are commodity reporting and requesting (replenishment) forms/order books available?		

28. Are there guidelines for the utilization of FIF funds?

Guidelines and Policy Documents			
	Are the following available to staff	**Y/N/NA**	**Comments**
a.	Clinical Guidelines for Diagnosis and Treatment of Common Conditions in Kenya		
b.	National Guidelines for Diagnosis, Treatment and Prevention of Malaria for Health Workers in Kenya		
c.	Guidelines for Antiretroviral Therapy in Kenya		
d.	National Guidelines for Prevention of Mother-to-Child HIV Transmission		
e.	National TB/Leprosy Guidelines		
Medicines and Therapeutic Committees			
a.	Is there a functional Medicines and Therapeutics Committee?		
b.	How often does this committee meet?		

29. What proportion of FIF is utilized for procuring essential medicines and medical supplies?

Out-of-Stock Items

30. Which groups of health commodities or supplies are most commonly out of stock (e.g. general medicines, TB, malaria, laboratory reagents)?

31. Where do patients acquire out-of-stock items? What is done in the case of out-of-stock essential medications such as ART?

Infrastructure/ Equipment/storage

32. Answers to this checklist may be obtained through observation and staff interview. Y: Yes is a positive response, N: No is a negative response, N/A: Not applicable should be used if the response to a question does not apply.

Program Specific Challenges

33. Are there specific challenges/issues common to one group of commodities, e.g. RH/TB, ART? Describe.

Annex 2.3.D. Interview Techniques and Etiquette

STARTING THE INTERVIEW

- Introduce yourself.
- Start the interview by thanking the interviewee for his or her time.
- Make sure you note the name, position, and organization of interviewee. (This information is added to the contacts list that is annexed to the final report.). The interviewee may have this information on a business card; if not, be sure to get the correct spelling of his or her name, title, and organization). You may also ask for email address and phone number and if you may contact him or her later if you have any follow-up questions.
- Introduce the Health System Assessment (HSA), especially if the interviewee did not attend the launch workshop or is not aware of the HSA.
- State the purpose of your visit (which topic area[s] you are collecting information for).
- Ask for interviewee assistance in providing information.
- State approximately how long the interview will take.
- Explain that you will only collect information relevant to the assessment.

CONFIDENTIALITY ISSUES

- Information provided will be used among the assessment team only and will be kept confidential–no direct quotes will be used in the final report, that is, neither interviewee name nor title will be tied to any findings, although the name will be included in the annexed contacts list of all interviewees.

INTERVIEWER PRESENTATION

- Be prepared with key questions before arriving but also be flexible in your interview dialogue–be prepared to probe further if a relevant issue is raised (see below).
- Show a positive attitude.
- Always keep eye contact.
- Do not spend your time looking down at your questions/notes–rather, try to keep the interviewee engaged, even as you take notes.
- Use body language to acknowledge the responses.
- Turn your cell phone off.

PROBING RESPONSES

- If the respondent gives an answer that seems to be incorrect, try the following:
    - Do NOT say it is wrong.
    - Act surprised and ask the same question differently.
    - Ask why this is different from previous years and why.
    - Ask to see reference materials such as registers where this information is recorded.
    - Take note to yourself to triangulate the information with other interviewees/data sources.
    - As a last resort, ask if they would prefer a colleague cover this topic area.

Annex 2.3.E. Sample HSA Launch Workshop Agenda

LAUNCH WORKSHOP OBJECTIVES

- To discuss the health system assessment (HSA) process and the health systems strengthening landscape
- To provide input related to the strengths, weaknesses, and barriers within each HSA function/building block chapter
- To share expectations for the HSA process and implementation going forward

Set-up: Round tables, six people per table. Use pre-printed name tents on the tables to mix people from different organizations. Each table should have pens, notepads, markers, and a flipchart. Need PowerPoint (PPT) projector and screen.

LAUNCH WORKSHOP AGENDA

Time	Topic	Responsible	Materials
8:30	Coffee/registration		Registration sheet
9:00	Welcome	USAID/MOH	
9:15	• Introductions • Introductory activity where each person shares their name, organization, and role/concern with the health sector in [Country] • Overview of Objectives and HSA process • Concepts, Goals, and Landscape of Health Systems Strengthening • HSA Implementation Process and Data Collection (PPT Slide Presentation with Handout; and Structured Q&A Discussion Task at Tables)	Team Leader or Facilitator	Handout of agenda and objectives Guidelines (pre-prepared)
10:15	BREAK		

10:30	Stakeholder Input: Small Group Work (person responsible) – 45 minutes
	• Participants self-select their group of choice by Health Systems Function/ building block chapter. To ensure enough people per group, ask participants to have a backup in case one area has too many people.
	• Need facilitator for each session – ideally MOH point person with Health Systems 20/20 person as backup. Will include handout for small group facilitation to ensure that these facilitators are moving the discussion forward and allowing participants to generate ideas.
	• Exploration of strengths, weaknesses, barriers, and potential strategies – discussion questions related to:
	  • Strengths and weaknesses of this area in [Country]
	  • Cross-cutting linkages with other areas
	  • Gaps in programming
	  • Barriers to addressing gaps and recommendations
	  • Who to interview and anything to note for site visits
	  • Potential building block chapter-specific questions
	• Report-outs (person responsible) 45 minutes
	  • Option 1: Reporter from each group presents a three-minute overview of key areas for discussion, or two top areas for further investigation
	  • Option 2: Gallery walk, where participants read flipcharts from other groups
		Team Members	Presentation(s)
			Handouts of slides, write-up of options

12:00	Stakeholder Engagement Going Forward: Sharing of Hopes for Results of the HSA: Making it Meaningful Sharing of Hopes for Involvement in the Process • Pair or trio task to discuss each question, quick responses from each pair. • If lack of time, can write on notecard and leave on the tables.		Questions for discussion
12:30	Summary of Next Steps (person responsible)	Team	
1:00	Workshop Evaluation. Adjourn for Lunch		Evaluation form

Annex 2.4.A. Options for Synthesizing Findings

Three tables are presented below as options for presenting data in the final report. Based on the needs of the client, the team leader should select which tables the team will use before data collection starts. This will ensure that all team members are collecting relevant data.

Option 1. Presenting information on specific priority health issues

When analyzing data, consider how the findings are relevant to various donors or disease-specific groups; this can help the team craft recommendations that appeal to specific groups. The following matrix can be used to summarize information for priority areas identified by the client. (The matrix can be modified to suit individual HSA needs.)

Diagonal Health Systems Strengthening Matrix

	HIV/AIDS	TB	MNCH	Malaria	NTD	FP	Shared System Strengthening Activities
Governance							
Health finance							
Service delivery							
Human resources for health							
Medical products, vaccines, and technologies							
Health information systems							

Option 2: Summary of key health system findings by performance criteria

Another useful way to depict findings is by performance criteria, as shown in the following example from the 2010 Guyana HSA (Health Systems 20/20 and Ministry of Health 2011).

Illustrative Key Health System Findings by Performance Criteria from the 2010 Guyana HSA

Health System Building Block	Equity	Access	Efficiency	Quality	Sustainability
Governance	A few CSOs, particularly those focused on HIV/AIDS, have strong voices on health-related issues. Lesson learned can be transferred to non-HIV organizations.	The MOH has a good relationship with the media and uses them effectively to convey strong health promotion messages to the public.	Flexibility of GPHC and Region 6 to innovate, including task shifting and incentive programs, offers lessons for other regions.	Service agreements have the potential to improve accountability for service delivery and quality through performance-based targets and use of client satisfaction surveys.	There is strong political and senior-level ministerial leadership, including through the NHPC, on health systems issues.
Service Delivery	The PPGHS is currently being revised.	Outreach services, mobile clinics, and communication have improved in recent years.	The referral system has improved with increased communication.	Recent development of standard treatment guidelines holds promise for improved quality and consistency of services.	There is movement toward preventive care and increased advocacy and health promotion.
Health Financing	Provision of free services allows financial access for all; NIS mandates health insurance coverage for all employed, including self-employed.		Doubling of the government health budget over 2005-2009, with significant increase in external funding from development partners, should allow for increased efficiency in planning and providing health services.	Significant increase in capital investment to refurbish and renovate facilities in recent years makes it important to ensure that capital investment is not wasted and other needed inputs such as staff, drugs, and supplies are adequately available to improve overall quality.	There is growing donor support for HSS, opening opportunities for partners to help the MOH to address health system weaknesses as well as direct support for HSS.
Medicines and Medical Products	Transportation and general infrastructure challenges could continue to limit rural access to supplies and medicines	Central-level procurement, with bulk purchasing would improve efficiency.	Significant positive steps are already being taken in the area of quality assurance, but lack of strong coordination between donors and key stakeholders could reduce the assurance of access to quality products.	The government has already taken responsibility for many of the activities and services previously supported and/or provided by donors.	
Human Resources for Health	Data and standards exist on the HRH necessary to meet the PPGHS; but the overall shortage of health workers, particularly nurses, affects adequate distribution of workers at various levels.	Numbers of doctors are increasing with training abroad and availability of foreign doctors; foreign doctors often have difficulty integrating into the Guyanese health system and communicating with clients and colleagues.	The HRIS has been developed and is housed in the MISU and could contribute to more informed planning; however, the HRIS is not capturing current health worker information, nor is it being used to analyze workforce data and trends.	The MDP is improving the quality of health managers.	PSM rules and regulations lead to lengthy and cumbersome hiring processes.
Health Information Systems	More data and information are available than ever before, which offers the opportunity to inform planning across the health sector.		Data collection and analysis in recent years has been streamlined with better information flow, but data collection is still weak, particularly in rural areas and the hinterlands.	Data quality is much more reliable due to advances and investment in technology and infrastructure but needs to be better used to improve quality of clinical care.	HIS personnel have developed uniquely Guyanese hardware and software systems. Steps are being taken to take greater ownership and responsibility for IT and HIS.

Annex 2.4.B. 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
Bamako Initiative in West Africa (Ridde 2011)	Adopted by African ministers in 1987 with the support of UNICEF and the World Health Organization, the goal of the Bamako Initiative was to increase access to primary health care services and essential drugs in sub-Saharan Africa through community participation in the local management of health services, cost recovery of drugs, and community contributions to the financing of health services.	▲**Access:** Increased access to health services and wider geographic access to essential generic drugs (despite some stock shortages). ▼ **Quality:** Regional disparity in terms of access to health centers and drugs. ▼ **Equity:** Drug prices/user fees were never calculated according to capacity to pay, and the very poor were not given user fee exemptions. ▼ **Sustainability:** Low levels of cost recovery and community participation.	Access to antenatal care and use of generic, essential drugs have increased. Rates of immunization are higher. However, the poorest households perceived less value in the quality of health care than better-off households and were less likely to use the health services.
Manas and Manas Taalimi Health Reform Programs in Kyrgyzstan (Ibraimova et al. 2011)	Between 1990 and 1996, Kyrgyzstan's government spending on health decreased by 67%. In response to the funding crisis, the government implemented the Manas (1996-2006) and Manas Taalimi (2006-2010) reforms, which were linked to measurable health outcomes. The reforms led to the implementation of a basic benefits package, a shift from specialist-oriented care to family practice care, liberalization of the pharmaceutical market, and the introduction of a consolidated single-payer system. Kyrgyzstan has also benefited from an emerging civil society, a well-educated population (female literacy is almost 100%), and a more open political climate that has attracted international donors.	▲ **Access:** The family medicine model, introduced in 1997 and rolled out to the whole country in 2000, extended universal coverage of primary care. Reforms resulted in new processes, referral procedures, communication channels, and peer support. ▲ **Quality:** Continuity and transparency in policy and staffing as well as strong human resource capacity and accountibility in the health sector and in government (both clinical and managerial) have improved the quality of health services. ▲ **Equity:** The health system in Kyrgyzstan combines taxation and mandatory health insurance, which has resulted in universal coverage and free essential services for vulnerable populations. ▲**Efficiency:** The Mandatory Health Insurance Fund, which pools health funds and merges budget streams from insurance, has helped the government to address socioeconomic and health inequalities. ▼ **Sustainability:** Questions remain over Kyrgyzstan's ability to retain health workers due to growing internal and external immigration.	Improved contraceptive use has resulted in fewer unplanned pregnancies and longer intervals between births. Antenatal care coverage is only slightly less in rural than in urban areas, at 95.4 percentage points and 99 percentage points, respectively and childhood immunization coverage is high at 98–99 percentage points. The infant mortality rate has dropped from 66 deaths per 1000 live births in 1997 to 38 deaths per 1000 live births in 2006, while the under-5 mortality rate has fallen from 72 to 44 percentage points during the same period.

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
Health extension workers and task shifting of health care workers in Ethiopia to expand and modernize health workforce (Banteyerga et al. 2011)	The Health Extension Programme was launched in 2003. The program trains women who have completed at least ten years of formal education to be community health workers. To continue to modernize and expand the health workforce, Ethiopia has enabled nurses to perform tasks traditionally assigned to doctors and invested in health care professional training programs. There has also been investment in data monitoring and evaluation tools.	▲ **Access:** Expansion of the work force has led to scaling up of treatment and prevention programs in areas where doctors are absent, particularly for maternal and child health, at a low-cost. ▲ **Quality:** Improved capacity of health workers and an investment in developing information systems to improve data gather for evaluation purposes. ▼ **Sustainability:** Development partners have provided considerable assistance to provide basic equipment and train health extension workers. Career progression of staff could also threaten sustainability.	In the five years following the introduction of the program, the percentage of births with a skilled attendant present doubled and the percentage of women receiving antenatal care and of infants receiving all immunizations increased by over 50 percentage points. Malaria-related deaths decreased significantly due to prevention education, use of malaria nets, and earlier diagnosis. There has also been significant progress in tackling the underlying determinants of health including access to water, sanitation, and nutrition.
Mutuelle de Sante: Rwanda's community-based health insurance scheme (Logie et al. 2008)	Rwanda introduced its community based health insurance (CBHI) scheme in 1999 and has since expanded it throughout the country. The scheme is run by community members and managed as an autonomous organization to pool health risks at village and district levels. The central government provides funds up to US$5,000 to be shared by the district and rural health facilities. The scheme provides basic services including family planning, antenatal care, deliveries, consultations, basic laboratory examinations, generic drugs, and hospital treatment for malaria. A central reserve fund can cover catastrophic health events. Each member of the scheme contributes 1000 Rwandan Francs (US$2) per year and also pays a 10% fee for each illness episode.	▲ **Access:** The CBHI scheme mobilizes financial resources to pay for health services. As of 2006, 73% of the population was covered by the scheme. ▼ **Quality:** While the CBHI scheme gives the poor access to basic health services, their package of health services could be improved and include tertiary care if the scheme for civil servants and the military insurance scheme were pooled with the Mutuelle de Sante to spread the risk across the entire population. ▼ **Equality:** While some individuals' contributions to the health fund are subsidized by donors, an elected village committee decides who needs the subsidy (unless the individual has HIV/AIDs and is in a PEPFAR program, automatically excusing them from contributing to the fund). An estimate in 2005 suggested that 15–30% of the poorest subset of the population needed to have their fees waived, yet a 2004 study found that only 10% of the poorest received the subsidy.	Health seeking behavior has increased significantly from the time when most health care was completely funded by patients. Infant mortaility, under-5 mortality, and maternal mortality rates have dropped.

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
Oportunidades in Mexico (Barber and Gertler 2008)	Oportunidades was introduced in 1997 as a large-scale conditional cash transfer program that rewards households for taking actions to improve the education, health, and nutrition of their children. To improve birth outcomes through better maternal nutrition and use of pre-natal care, the cash transfers are conditioned, in part, on pregnant women completing a pre-natal care plan, taking nutritional supplements, and attending an educational program.	▲ **Access:** Increased access to services through decreased financial barriers. ▲ **Quality:** Improvements in the quality of health care received and nutritional value of food through access to higher levels of cash. ▼ **Sustainability:** Questions remain about the long-term sustainability of cash transfer programs.	Beneficiary status was associated with a higher birthweight among participating women and a 4.6 percentage point reduction in low birthweight. Children in participating households have a reduced probability of anemia and fewer illness episodes (25.3 percentage point reduction) as well as an increase in age-adjusted height by 1.1 cm.

Sources:

Banteyerga, H, Aklilu, K, Conteh, L, and McKee, M. 2011. Ethiopia: Placing Health at the Centre of Development, in D. Balabanova, M. McKee, and A. Mills: Good Health at Low Cost 25 Years On: What Makes a Successful Health System? London: London School of Hygiene and Tropical Medicine.

Barber S and Gertler, P. 2008. The impact on Mexico's conditional cash transfer programme, Oportunidades, on birthweight. Tropical Medicine and International Health 13(11): 1405-1414.

Ibraimova, A, Akkazieva, B, Murzalieva, G, and Balabanova. 2011. Kyrgyzstan: A Regional Leader in Health System Reform, in D. Balabanova, M. McKee, and A. Mills: Good Health at Low Cost 25 Years On: What Makes a Successful Health System? London: London School of Hygiene and Tropical Medicine.

Logie, D, Rowson, M, Ndagije, F. 2008. Innovations in Rwanda's health system: Looking to the future. The Lancet 372: 256-261.

Ridde, V. 2011. Is the Bamako Initiative Still Relevant for West African Health Systems? International Journal of Health Services 41(1): 175-184.

Annex 2.4.C. Illustrative 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	• Develop risk-pooling strategies • Offer vouchers for specific health services (e.g. FP, RH, safe deliveries) that allow consumers to select provider of choice in public or private sectors • Public purchasing of privately provided services and offering providers incentives linked to services delivered • Leverage corporate funding for innovations and strategic problem solving • Publicly funded (or public-private co-funded) campaigns to inform consumers about health insurance market
Physical inaccessibility	Outreach for focal diseases	• Reconsideration of long-term plan for capital investment and siting of facilities • Contract FBO or NGOs to deliver services located in areas where MOH is not present • Improve coverage by offering providers incentives linked to coverage • Define scopes of work for health workers and generating more medical graduates • Leverage human resources in the private sector to deliver essential health services • Agreements or contracts with commercial drug marketers to market or distribute drugs, vaccines or other products to local markets
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 • Require CME for all health cadres in both public and private sectors • Address short-term skill shortages by subsidizing specialist services in the public sector • State mandate – through councils and/or boards – to define scopes of professional scopes of practice, pre-service or continuing medical education standards and facility licensing
Poorly motivated staff	Financial and non-financial incentives to reward delivery of particular priority services	• Institute proper performance review systems, creating greater clarity of roles and expectations as well as consequences regarding performance. • Review salary structures and promotion procedures • Offer public subsidies for education and regulate charges
Weak planning and management	Continuous education/ training workshops to develop skills in planning and management	• Restructure ministry of health • Recruit and develop cadre of dedicated managers • Create MOH capacity to engage and partner with the private sector • Develop new technologies to collect and manage health information, such as management contracts • Use privately developed cell phone/ information technologies to collect data, improve reporting of health information, prevent stock-outs (supplychain)

Constraint	Disease or Service-Specific Response	Health System Response(s)
Lack of intersectoral action and partnership	Creation of special disease-focused cross-sectoral committees and task forces at the national level	• Build local government capacity and structure to incorporate representatives from health, education, and agriculture, and promote accountability to the people • Create forum for dialogue between the public and private sector on health system issues of common interest • Policy forums and other processes (e.g., revise and update laws, strategic planning) that actively engage and consult private sector groups
Poor quality care of care	Training providers in focus diseases or services	• Develop monitoring, accreditation, and regulation systems that encompasses both the public and private sector and enforces regulations fairly across sectors • Create and enforce standards for private medical education • State mandate to educate consumers, create a mechanism for addressing consumer complaints and advocate with private insurance companies • Provide supportive supervision through professional councils or associations • Contract with high quality private sector institutions for the provision of laboratory or diagnostic services • Invest in primary research to identify new vaccines or treatments (both public and private sector). This could include funding to set up research institutions

Annex 2.5.A. Illustrative Validation Workshop Agenda

This agenda is based on one used for a Health System Assessment (HSA) validation workshop in a sub-Saharan country. It focuses on the first day of the four-day process.

Objectives

- Review the HSA findings and recommendations
- Revise the recommendations based on feedback from stakeholders from multiple sectors
- Identify recommendations that are closely linked to other categories

Materials

- 1 box of markers per table
- 2 rolls of masking tape to hang flipcharts on walls
- Name tents and name tags
- 2 packs of 5x7 notecards
- Handouts

Room Set-up

Ideally the room will have round tables that each seat about 6-8 people. Notepads and pens (one per person) are on the tables, as are note cards (15-20 per table). Instruct participants to sit with people they don't know or who are from different organizations. This can be done by hanging a flipchart sign instructing them to sit accordingly. It's also ideal to have name tags for participants and name tents for speakers.

Agenda (full-day meeting)

8:30 am **Welcome and Overview of the Workshop**

Welcome the participants. Have a senior MOH official welcome the participants.

Have participants introduce themselves quickly. "Please share" (PPT) slide

- Your name
- Organization
- Job title
- Number of years working the in the health sector in x country

Before reviewing the objectives, explain to the participants the overall process (PPT) for the week as follows:

- Full-day validation workshop (approximately 25-30 participants)
- Full-day prioritization workshop (25-30 participants)

Explain how these two events link together. Then say that the overall purpose of the today's workshop shop is to validate the HSA recommendations with stakeholders. While the report has been accepted by the MOH, the recommendations have not been fully validated with stakeholders. This is an essential step before we begin to prioritize the recommendations.

Review the objectives and agenda for today (PPTs).

Provide guidelines for today's workshop.

- Encourage active, focused participation (this is a working meeting and full engagement is required)
- Create opportunities for participation across sectors (i.e. mixed discussion groups)
- Focus on the benefit of the recommendation to the health system rather than focusing on the aspect of the health system you represent
- Ensure that everyone participates in the discussion
- Turn off cell phones during the session

9:30 Presentation of Findings and Recommendations

Ask how many have read the HSA report, especially the chapter pertaining to their direct area of interest. Remind the group that the recommendations are presented in the report by building block:

- Service delivery
- Financing
- Pharmaceutical management
- Governance
- Health information systems
- Human resources

Ask for overall reactions to the findings and recommendations, that is, whether they seem on target, sufficiently specific, and actionable. Do not let the discussion go to specific comments – that is the next step in the agenda.

Capture any of these reactions on flipchart.

10:30 Break

10:45 Small Groups – Discussion of Findings and Recommendations by Building Block

Say that the findings and recommendations will be discussed in six groups, each representing one of the health system building blocks.

Designate six tables, one for each of the building blocks. Ask for a show of hands of those interested in each building block to make sure that the groups are roughly equal in number. The number in each group doesn't have to be the same, but group size should not vary greatly – avoid having one group with 15 and another with three people, for example.

Explain clearly to participants that the purpose of the next activity is to make sure that the recommendations are on target and consistent with the findings of the HSA. The purpose is not to prioritize the recommendations since that will be done later in the week. Then give the following task on PPT:

Task

1. Ask everyone to take 10 minutes to review the findings and recommendations for their assigned building block.

2. Then, as a group, agree on your answers to the following questions:

- Are the recommendations consistent with the findings?
- Are there any recommendations that are not clear and need to be rephrased?
- Should any recommendations be dropped?
- Should any recommendations be added?

After answering these questions, suggest revised wording for each recommendation the group feels needs to be changed.

Capture your revised recommendations on a flipchart or PPT.

Appoint a spokesperson to present your revised recommendations.

You have 90 minutes.

12:30 Lunch

1:30 Report-outs

Ask each group to report out in 5-7 minutes.

After each report-out, allow for 10 minutes of plenary discussion. This means each group will have about 15 minutes in total.

3:00 Break

3:15 Plenary Discussion

Say that now that we have examined the recommendations by building block, we want to spend some time looking at the entirety of the recommendations.

Discuss the two following questions in plenary.

- Are there any overarching recommendations that are missing? These recommendations are not necessarily specific to a building block. Two examples are (1) the lack of a qualified office within the MOH that provides direction and leadership for HSS and (2) the lack of an interagency mechanism to coordinate work on interventions that go beyond the scope or capacity of any one national agency.
- What synergies do you see between the recommendations? Which ones are dependent on recommendations in other building blocks? An example is the financing needed to address HRH constraints and hire new health workers.

Capture the main points on flipchart.

3:45 Summary and Next Steps

Review the main points from the day's discussion and what was accomplished.

Review the process for the rest of the week – revising the recommendations tomorrow, sub-group on prioritization the day after to narrow down the list, and full stakeholder group on Friday to further prioritize.

Ask what advice the group has as we continue this process the rest of the week.

- Hand out evaluation form that answers the following questions:
- What was most effective about the workshop today?
- What was less effective about the workshop?
- What is the single most important thing to you about today's workshop?

4:30 Close

Notes

Annex 3

Section 3
Guidance on Assessing Health System Building Blocks

Annex 3.1.A. Template: The Level of Decentralization of a Health System

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 for the function.

Annex 3.1.B. 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 Mnistry of Health/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)

Annex 3.1.C. Health System Database: Full List of Database Sources (Updated June 2012)

1. MEASURE DHS. (2009). Demographic and Health Surveys.
2. UNAIDS. (2010). UNAIDS Report on the Global AIDS Epidemic.
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4. UNICEF. (2011). UNICEF Childinfo: Monitoring the situation of children and women.
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   Retrieved from http://www.who.int/entity/immunization_monitoring/routine/WHO_UNICEF_JRF_11_EN.xls
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   Retrieved from http://www.who.int/entity/hiv/data/tuapr2011_annex6_web.xls
8. WHO. (2011). The World Medicines Situation Report.
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9. World Bank. (2011). The Worldwide Governance Indicators, 2011 Update.
   Retrieved from http://info.worldbank.org/governance/wgi/index.asp
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    Retrieved from http://data.worldbank.org/data-catalog/world-development-indicators

Annex 3.1.D. Health System Database Summary Table–Sample Country (Updated June 2010)

Health Systems data							
	Country level data		Average value of regional comparator [1]		Average value for income group comparator [2], [3]		
	Source of Data	Benin	Year of Data	Sub-Saharan Africa	Year of Data	Low income	Year of Data
Core Module							
Population, total	WDI-2010	8,662,086	2008	17,431,745	2008	22,702,780	2008
Population growth (annual %)	WDI-2010	3.15	2008	2.35	2008	2.31	2008
Rural Population (% of total)	WDI-2010	58.80	2008	61.37	2008	68.07	2008
Urban Population (% of total)	WDI-2010	41.20	2008	38.63	2008	31.93	2008
Population ages 0-14 (% of total)	WDI-2010	43.21	2008	41.49	2008	40.51	2008
Population ages 65 and above (% of total)	WDI-2010	3.22	2008	3.26	2008	3.38	2008
Contraceptive prevalence (% of women ages 15-49)	DHS	17.20	2006	**	--	**	--
	WDI-2010	17.00	2006	23.41	2006	31.50	2006
Fertility rate, total (births per woman)	WDI-2010	5.45	2008	4.68	2008	4.66	2008
	DHS	5.70	2006	**	--	**	--
Pregnant women who received 1+ antenatal care visits (%)	UNICEF_ Chidinfo.org	84.00	2006	79.26	2006	73.94	2006
	DHS	88.00	2006	**	--	**	--
Pregnant women who received 4+ antenatal care visits (%)	UNICEF_ Chidinfo.org	61.00	2006	44.71	2006	32.17	2006
	DHS	60.50	2006	**	--	**	--
Prevalence of HIV, total (% of population aged 15-49)[4]	UNAIDS 2008	1.20	2007	5.75	2007	2.92	2007
Life expectancy at birth, total (years)	WDI-2010	61.38	2008	55.14	2008	56.56	2008
Mortality rate, infant (per 1,000 live births)	DHS	67.00	2006	**	--	**	--
	WDI-2010	76.28	2008	75.96	2008	76.18	2008
Mortality rate under-5 (per 1,000)	DHS	124.90	2006	**	--	**	--
	WDI-2010	120.70	2008	120.29	2008	117.98	2008
Maternal mortality ratio (per 100,000 births)[5]	WDI-2010	840.00	2005	832.16	2005	808.70	2005

Health Systems data							
	Country level data		Average value of regional comparator [1]		Average value for income group comparator [2], [3]		
	Source of Data	Benin	Year of Data	Sub-Saharan Africa	Year of Data	Low income	Year of Data
Per capita total expenditure on health at international dollar rate	WHO	46.00	2006	147.78	2006	76.81	2006
Private expenditure on health as % of total expenditure on health	WHO	46.70	2006	48.94	2006	55.20	2006
Out-of-pocket expenditure as % of private expenditure on health	WHO	99.90	2006	78.02	2006	84.20	2006
Gini index	WDI-2010	38.62	2003	43.81	2003	42.06	2003
Adult literacy rate (%)	WDI-2010	40.80	2008	69.08	2008	67.99	2008
	UNESCO	40.50	2007	65.44	2007	60.51	2007
Population with sustainable access to improved drinking water sources (% total)	WHO	65.00	2006	66.36	2006	64.95	2006
Improved sanitation facilities (% of population with access)	WDI-2010	30.00	2006	32.39	2006	35.62	2006
TB prevalence, all forms (per 100 000 population)	WHO	135.00	2007	437.09	2007	398.63	2007
Percentage of children under five with low height for age (stunting)	DHS	38.10	2006	**	--	**	--
	WHO	43.10	2006	41.96	2006	37.20	2006
Diarrhea prevalence of children under five years	DHS	9.00	2006	**	--	**	--
Percentage of children underweight	DHS	22.50	2006	**	--	**	--
	WHO	18.40	2006	25.06	2006	21.85	2006
Measles coverage	DHS	61.10	2006	**	--	**	--
	WDI-2010	61.00	2008	75.57	2008	75.42	2008
Governance Module							
Voice Accountability - Point Estimate[6]	WB-Governance Indicators	0.34	2008	-0.54	2008	-0.86	2008
Voice and Accountability - Percentile Rank[7]	WB-Governance Indicators	57.60	2008	33.17	2008	25.06	2008
Political Stability - Point Estimate[6]	WB-Governance Indicators	0.35	2008	-0.56	2008	-0.83	2008
Political Stability - Percentile Rank[7]	WB-Governance Indicators	57.40	2008	33.33	2008	25.66	2008

Health Systems data							
	Country level data		Average value of regional comparator [1]		Average value for income group comparator [2], [3]		
	Source of Data	Benin	Year of Data	Sub-Saharan Africa	Year of Data	Low income	Year of Data
Rule of Law - Point Estimate[6]	WB-Governance Indicators	-0.54	2008	-0.74	2008	-0.96	2008
Rule of Law - Percentile Rank[7]	WB-Governance Indicators	33.90	2008	28.99	2008	21.84	2008
Regulatory Quality - Point Estimate[6]	WB-Governance Indicators	-0.46	2008	-0.70	2008	-0.92	2008
Regulatory Quality - Percentile Rank[7]	WB-Governance Indicators	35.70	2008	29.29	2008	23.49	2008
Control of Corruption - Point Estimate[6]	WB-Governance Indicators	-0.42	2008	-0.62	2008	-0.89	2008
Control of Corruption - Percentile Rank[7]	WB-Governance Indicators	42.00	2008	31.35	2008	22.12	2008
Health Financing Module							
Total expenditure on health as % of GDP	WHO	5.30	2006	5.30	2006	5.18	2006
Per capita total expenditure on health at average exchange rate (US$)[8]	WHO	29.00	2006	71.80	2006	21.35	2006
Government expenditure on health as % of total government expenditure	WHO	13.10	2006	9.59	2006	9.43	2006
Public (government) spending on health as % of total health expenditure	WHO	53.30	2006	51.06	2006	44.80	2006
Donor spending on health as % of total health spending	WHO	13.40	2006	22.39	2006	26.17	2006
Out-of-pocket expenditure as % of private expenditure on health	WHO	99.90	2006	78.02	2006	84.20	2006
Out-of-pocket expenditure as % of total expenditure on health	WHO	46.65	2006	39.05	2006	47.27	2006
Private expenditure on health as % of total expenditure on health	WHO	46.70	2006	48.94	2006	55.20	2006

Health Systems data							
	Country level data		Average value of regional comparator [1]		Average value for income group comparator [2], [3]		
	Source of Data	Benin	Year of Data	Sub-Saharan Africa	Year of Data	Low income	Year of Data
Percentage of births attended by skilled health personnel	WDI-2010	74.00	2006	54.19	2006	52.81	2006
	DHS	77.70	2006	**	--	**	--
DTP3 immunization coverage: one-year-olds (%)	DHS	67.00	2006	**	--	**	--
Contraceptive prevalence (% of women ages 15-49)	WHO	97.00	2007	85.22	2007	84.33	2007
	DHS	17.20	2006	**	--	**	--
	WDI-2010	17.00	2006	23.41	2006	31.50	2006
Pregnant women who received 1+ antenatal care visits (%)	UNICEF_ Chidinfo.org	84.00	2006	79.26	2006	73.94	2006
	DHS	88.00	2006	**	--	**	--
Life expectancy at birth, total (years)	WDI-2010	61.38	2008	55.14	2008	56.56	2008
Mortality rate, infant (per 1,000 live births)	DHS	67.00	2006	**	--	**	--
	WDI-2010	76.28	2008	75.96	2008	76.18	2008
Maternal mortality ratio (per 100,000 births)[5]	WDI-2010	840.00	2005	832.16	2005	808.70	2005
Prevalence of HIV, total (% of population aged 15-49)[4]	UNAIDS 2008	1.20	2007	5.75	2007	2.92	2007
Unmet need for family planning	DHS	29.90	2006	**	--	**	--
Children under five sleeping under insecticide-treated bed nets	WDI-2010	20.10	2006	20.37	2006	21.09	2006
Children under five years with diarrhea receiving oral rehydration	WDI-2010	41.70	2006	35.72	2006	36.35	2006
	DHS	23.30	2006	**	--	**	--
Children under five years with acute respiratory infection (ARI)	DHS	35.70	2006	**	--	**	--
ART coverage among people with advanced HIV infection (%)	WHO	42.00	2006	21.88	2006	21.16	2006
Pregnant women counselled for HIV during ANC visit	DHS	26.00	2006	**	--	**	--
Pregnant women tested for HIV during ANC visit	DHS	16.00	2006	**	--	**	--
Population (female) receiving HIV/AIDS test/results in the last 12 months (%)	DHS	6.00	2006	**	--	**	--
Population (male) receiving HIV/AIDS test/results in the last 12 months (%)	DHS	5.00	2006	**	--	**	--

Health Systems data							
	Country level data		Average value of regional comparator [1]		Average value for income group comparator [2], [3]		
	Source of Data	Benin	Year of Data	Sub-Saharan Africa	Year of Data	Low income	Year of Data
Nursing and midwifery personnel density (per 10 000 population)	WHO	7.70	2008	5.74	2008	4.34	2008
Pharmacists (density per 10,000 population)	WHO	--	--	3.75	2004	--	--
Lab technicians (density per 10,000 population)	WHO	--	--	2.21	2004	1.50	2004
Pharmaceutical Module							
Total expenditure on pharmaceuticals (% total expenditure on health)	WHO-The World Medicines Situation-2004	15.20	2000	27.52	2000	27.90	2000
Total expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines Situation-2004	2.00	2000	9.87	2000	4.12	2000
Government expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines Situation-2004	1.00	2000	6.12	2000	1.86	2000
Private expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines Situation-2004	1.00	2000	6.53	2000	3.72	2000
Health Information System (HIS) Module [10], [11]							
Maternal mortality ratio reported by national authorities (Timeliness of reporting, years)[9] [12]	WDI-2010	3-5 years	--	3-5 years	--	3-5 years	--
Mortality rate under-5 (Timeliness of reporting, years) [12]	WDI-2010	0-2 years	--	3-5 years	--	3-5 years	--
	DHS	0-2 years	--	**	--	**	--
HIV prevalence rate in total population aged 15-24 (Timeliness of reporting, years) [12] [13]	UNAIDS 2008	less than 2 years	--	less than 2 years	--	less than 2 years	--
Low birth weight newborns (Timeliness of reporting, years) [12]	DHS	0-2 years	--	**	--	**	--
	WHO	6-9 years	--	6-9 years	--	6-9 years	--
Number of hospital beds (Timeliness of reporting, years) [12] [14]	WHO	2-3 years	--	2-3 years	--	2-3 years	--

Health Systems data							
	Country level data		Average value of regional comparator [1]		Average value for income group comparator [2], [3]		
	Source of Data	Benin	Year of Data	Sub-Saharan Africa	Year of Data	Low income	Year of Data
Percentage of surveillance reports received at the national level from districts compared to number of reports expected (Completeness of reporting,%) [16]	WHO/ UNICEF Joint Reporting Form on Immunization	90% or more	--	90% or more	--	90% or more	--

NOTES:
** Averages are not calculated due to small sample size of the annual DHS data.
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.
--: 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

Annex 3.3.A. Summary of Health Financing Issues to Explore in Stakeholder Interviews

The table below provides a list of the types of stakeholders to interview in assessing the indicators and the issues to address with each stakeholder. This summary can help the technical team member in charge of finance in planning the topics to discuss in stakeholder interviews and developing the stakeholder interview guides.

Issues to Discuss in Health Financing Stakeholder Interviews

Stakeholders Profile	Issues to Discuss with Stakeholder
Ministry of Health (MOH) officials (including staff involved in National Health Accounts 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 social health insurance 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	Amounts and priorities of funding, sustainability of donor support; upcoming changes in donor support (e.g., mix of project and in-kind, sector-wide approach (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
Community-based health insurance (CBHI) committees	Details of CBHI schemes: population coverage, funding mechanisms, and provider payment mechanisms
Representatives of medical and nursing professional associations, nongovernmental organizations (NGOs), and other private providers receiving government funds for service delivery	Provider payment mechanisms by government
Health facility managers	Public sector facilities: user fee policies in the public sector (including exemptions), informal user fees. All: provider payment mechanisms
Representatives of private voluntary organizations, NGOs, the media	Overall perception of the government financing system, including user fees, fee exemptions, informal charges; rural and urban, outpatient and inpatient balances

Annex 3.4.A. Summary of Service Delivery Issues to Explore 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. The table below summarizes issues to be addressed in stakeholder interviews.

Stakeholder Profile	Issues to Discuss in Service Delivery Interviews	Indicators (when applicable)
Client staff and/or partners and programs that you or the client have identified via stakeholder analysis	• Determine the client's role. Elicit as much detail as possible on their needs for the assessment • Help the client to clarify its objectives for the assessment • Identify key documents and key stakeholders to understand how the current system works	n.a.
Ministry of Health (MOH) officials or departments responsible for licensing, maintaining, equipping, and infrastructure planning	• Explore issues regarding coverage, availability, access, and utilization of services • Determine extent and functioning of facilities and health staff	1–27
MOH statistical or planning division compiling service delivery data	• # of facilities by level and by geography • Explore utilization data • Determine data reliability • Understand the process of data collection, including coverage of private sector	2, 3, 4, 8, 11
MOH maternal health or reproductive health division, United Nations agencies, donors, nongovernmental organizations (NGOs) involved in maternal and reproductive 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 • Determine integration of health programs	n.a.
MOH child health or vaccine-preventable diseases division, World Health Organization, 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	n.a.
Regional health authority (including provincial, district) *or* MOH division(s) that conduct(s) supervision if regional level does not	• Explore the formal supervisory system, compare it to reality, and understand the barriers. Issues regarding management and supervisory capacity include the following: • 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 Integrated Management of Childhood Illness, Integrated Management of Pregnancy and Childbirth, Integrated Management of Adult and Adolescent Illness?	7, 8, 9, 26, 27

ANNEX 3.5.A. SUMMARY OF HRH ISSUES TO EXPLORE IN STAKEHOLDER INTERVIEWS

Which stakeholders are selected to interview depends on many factors, such as:

- *Is there a centralized human resources for health (HRH) function?*
- *Does this function resides in the Ministry of Health (MOH) or in another ministry?*
- *Is this a centralized or decentralized system?*
- *Who are the additional stakeholders and sources? Private sector? Professional associations? Donors? Academic institutions?.*

Cross-checking gathered information is an important step for determining appropriate and consistent answers. For example, if the managerial-level respondents say that employees are aware of HRH policies, speak with those employees to confirm this information.

In a centralized system, much of the information for this chapter can be obtained by interviewing a human resources manager. In a decentralized system, these data may be found at district levels or in some cases at local levels.

ISSUES TO DISCUSS IN HRH STAKEHOLDER INTERVIEWS

Stakeholder Profile	Issues to Discuss
Private provider associations (e.g., FBO network head offices), private clinics, private hospitals, nongovernmental organization	• All issues where private providers are concerned: training of professionals, salary levels, emigration of personnel, competition with public sector for staff, ability to establish private practices. Also, what human resources needs and systems they have

MOH officials	• Basic data
	• A broad range of human resources management, policy, and education questions as described above
	• Legal and regulatory mechanisms regarding private practitioners:
	  • Are there any?
	  • Which cadres of providers are regulated?
	  • Are rules/laws enforced?
	  • Are they enforced equitably across the sectors?

Donors	In some cases, it may be helpful to organize the description of the HRH situation and key findings along the lines of the HRH Action Framework. Depending on the amount of data collected and their importance (e.g. really a critical health system gap), some of the subheadings can be combined and/or eliminated. The headings correspond to the topical areas and include: • Current HRH situation (see Annex 3.5.B for examples on how to present the data) • HRH management systems • Policy and planning HRH • Financing HRH • Educating and training HRH • Partnerships in HRH • Leadership of entire HRH system
Professional associations for physicians, nurses, midwives, etc.	• 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	• It is important to understand labor relations and which unions represent which set of health workers. Often there is a public service union that represents public sector health workers and separate unions for private sector health workers.
Educational organizations such as medical and nursing schools in both the public and private sectors	• Pre-service training: how do schools ensure their curriculum meets the needs of the organizations where their graduates eventually work? • How do they give their graduates experience? • How often is their curriculum updated? • What mechanisms are in place to monitor the needs of the workplace for which they are preparing their students?

Annex 3.5.B. Examples of how to present HRH data

There are different ways to describe the HRH profile of a health system. The following four examples highlight several presentation models that can be considered. These include organizational charts and diagrams, and simple charts and tables that display the number of health workers by cadre, by sectors, and by geography.

Example 1: Table
Estimates of Health Personnel in the Public and Private Sectors (2007, 2008) Kenya Private Sector Assessment (2009)

Cadre	Total Registered (2007)	Public Sector (2008)	Public Sector (% of total)	Private, FBO, and Others*	Private Sector (% of total)
Doctors	6,271	1,605	26%	4,666	74%
Dentists	631	205	32%	426	68%
Pharmacists	2,775	382	14%	2,393	86%
Pharmaceutical technologist	1,680	227	14%	1,453	86%
Nursing officers	12,198	3,013	25%	9,185	75%
Enrolled nurses	31,917	11,679	37%	20,238	63%
Clinical officers	5,797	2,202	38%	3,595	62%

Source: Adapted from Ministry of Medical Services (2008: 44-45)
*Estimate ignores changes in registered numbers in 2008

Example 2: Pie Chart
Total Numbers of Health Cadres by Sector (2010): St Lucia Health System and Private Sector Assessment, 2011

Source:

Example 3: Bar Chart
Kenya HRH by Cadre and Sector

Source: Barnes, O'Hanlon, Feeley et al. (2010) based on Ministry of Medical Services data (2008)

Example 4: Trend Analysis Table
St Kitts and Nevis Health Personnel

Category/Year	1996	2000	2005	2009
Physicians				
Total # of Physicians	48	46	54	47
# of Private Physicians	15	13	12	15
Nurse				
Total # of Nurses		225	209	241
# of Private Nurses		N/A	N/A	N/A
Pharmacists				
Total # of Pharmacists	19	17	17	20
# of Private Pharmacists	11	9	9	11
Laboratory Technician				
Total # of Medical Technicians				5
# of Private Medical Technicians				2
Dentists				
Total # of Dentists	11	14	19	14
Total # of Private MDs	5	9	10	5

Source: Hatt, Vogus, O'Hanlon, et al. (2012)

Annex 3.6.A. Key Terminology for Medical Products, Vaccines, and Technology Chapter

For additional definitions and information, see Management Sciences for Health (MSH) (1995), MSH and WHO (1997), and WHO (2006).

Term	Definition
Adverse effects	An injury related to medical management, in contrast to complications of disease. Medical management includes all aspects of care, including diagnosis and treatment, failure to diagnose or treat, and the systems and equipment used to deliver care. Adverse events may be preventable or nonpreventable. This harmful response may be manifested following the recommended usage of the medicinal product/vaccine or due to inappropriate use of the medicine.
Bid	A document that contains a price offer prepared in response to an expression of procurement needs (also known as a tender).
Cold chain	A distribution system used for the storage and transport of pharmaceuticals that require refrigeration. An unbroken cold chain is an uninterrupted series of storage and distribution activities which maintain a given temperature range. It is used to help extend and ensure the shelf life of temperature-sensitive products (e.g., certain vaccines). 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]).
Cost-effectiveness	Achieving a given level of output at a minimum cost, for example, using generic substitutes of drugs in place of branded products.
Counterfeit products	Products that are deliberately and fraudulently mislabeled with respect to identity and/or source. Counterfeit medicines may include products with the correct ingredients or with the wrong ingredients, without active ingredients, with insufficient or too much active ingredient, or with fake packaging.
Distribution	Includes clearing customs, stock control, store management, and delivery to drug depots and health facilities.
Essential medicines	WHO defines essential medicines as the limited number of medicines that satisfy the priority health care needs 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	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.
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*.
Logistics Management Information System (LMIS)	A system that generates, transmits, collates, analyzes and presents essential logistics data and information that support ordering, supply planning, procurement and other management decisions that govern the logistics system.
Pharmacovigilance	WHO defines pharmacovigilance as "science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other possible drug-related problems." A pharmacovigilance system comprises the structures and people that carry out the functions and activities to promote medicines safety.

Term	Definition
Pharmaceutical management information system	A system that integrates pharmaceutical data collection, processing, and presentation of information to enable evidence-based decision making for managing pharmaceutical services at all levels of the health system.
Post-marketing medical quality assurance	Monitoring the quality of products by inspection and laboratory testing to ensure that the storage is correct and that drugs are stable within their labeled shelf life.
Procurement	The process of acquiring supplies, including those obtained by manufacture, donation, or purchase from private or public suppliers or through purchases from manufacturers, distributors, or agencies (such as UNICEF, WHO) or bilateral aid programs. These sources may be used individually or in combination to meet the entire range of needs.
Purchase order	A written document issued by a buyer to a seller detailing the exact goods or services to be rendered from a single vendor. It will specify payment terms, delivery dates, item identification, quantities, shipping terms, and all other obligations and conditions.
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 quantities of supplies needed 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, that meets their clinical needs, in doses that meet their individual needs, for an adequate period of time, at the lowest cost to them, to their communities, and to the system, and when clients/patients take the medicines correctly and without interruption.
Selection	Involves reviewing the prevalent health problems and identifying treatment options based on national policies and guidelines. These should be guided by international standards, norms, and guidelines.
Standard treatment guidelines (STGs)	Disease-oriented guidelines that reflect a consensus on the treatments of choice for common medical conditions. STGs help practitioners make decisions about appropriate treatments and help to minimize variation in treatments offered by practitioners in the health care system.
Substandard products	Legal branded or generic product that does not meet generally accepted national or international standards for quality, purity, strength, or packaging (USP/DQI 2007).
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 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.
Vertical systems	Public health programs that focus on targeted interventions, such as family planning, immunization, or tuberculosis control, may operate pharmaceutical supply, procurement, and distribution systems that are set up outside a country's regular health and pharmaceutical supply system. Such program stock is not available on open request but is held for sole use by the particular program.

Annex 3.6.B. Illustrative Tracer 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
All antiretrovirals	
Antimalarials	
ACTs	
Anesthetic medicines	
Ketamine	Vial, 50 mg/ml
Antibacterial medicines	
Amoxicillin	Tablet, 250 mg
Metronidazole	Tablet, 450 mg
Benzylpenicillin 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
AntiTuberculosis Medicines	
Rifampicin + isoniazid	Tablet, 150 mg/100 mg
Rifampicin+Isoniazid+Pyrazinamide + Ethambutol	Tablet, 150mg/75mg/400mg/275mg
Antimalarial medicines	
Sulfadoxine-pyrimethamine	Tablet, 500 mg/25 mg
Quinine dihydrochloride	Ampoule, 300 mg/ml
Cardiovascular medicines	
Propranolol	Tablet, 40 mg
Hydroclothiazide	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
Contraceptives	
	Condoms
	Oral contraceptives
	IUDs, other implants

ANNEX 3.6.C. HOW TO PRESENT THE MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES DATA

There are different ways to present the medical products, vaccines, and technologies profile of a health system. The following examples highlight several presentation models that can be considered. These include organizational charts and diagrams, and simple charts and tables that display the number of health workers by cadre, by sectors, and by geography.

Examples 1-3: Tables

The presentation of health facilities – including pharmacies and laboratories – by public and private sectors can be done using a table. The table below, which lists all types of health facilities in a country, is found in the service delivery module. A similar table, listing only facilities with pharmacies, can be created as part of the general description in this module.

EXAMPLE 1 TABLE: TOTAL NUMBER OF HEALTH FACILITIES BY OWNERSHIP

Facility Level	Public +	Parastatal +	Private	Subtotal by facility
Health clinics	32	0	0	32
Consultation room (MDs only)	0	0	77	77
Polyclinic	3	1++	6++	10
District hospital	2	0	0	2
General hospital	1	1	1	3
Laboratories	2	1++	5++	8
Pharmacies	32++	1++	25++	58
Subtotal by sector	72	4	114	189

Source: MOH data

The following table is an example from St. Lucia of a tracer analysis comparing prices of the most commonly requested medicines by sector.

Price Comparison Between Public, Parastatal, and Private Sector for Selected Pharmaceuticals

Example 2 Table:
Price Comparison Between Public, Parastatal, and Private Sector for Selected Pharmaceuticals

Medication/treatment	Public Sector price (EC$)	St. Jude's Price (EC$)	Private Average Price (EC$)
Glyburide/diabetes	$.05/5 mg tablet	$.10/5 mg tablet	$.15/5 mg tablet
Amlodipine/hypertension	$.50/5 mg tablet	$.70/5 mg tablet	.60/5 mg tablet
Amoxicillin/antibiotic	$.30/500 mg capsule	$.60/500 mg capsule	$.60/500 mg capsule
Ciprofloxin/antibiotic	$1.00/500 mg tablet	$2.00/500 mg tablet	$2.00/500 mg tablet
Bendrofluazide/hypertension	$.05/2.5 mg tablet	$.10/2.5 mg tablet	$.12/2.5 mg tablet
Salbutamol/asthma	$10.00/100 mcg inhaler	$25.00/100 mcg inhaler	$14.95/100 mcg inhaler
Lisinopril/hypertension	$.50/10 mg tablet	$.25/10 mg tablet	$.62/10 mg tablet
Ibuprofen/fever-pain reliever	$.05/400 mg tablet	$.25/400 mg tablet	$.20/400 mg tablet

Source: Public sector price list; St. Jude's price list; private sector prices provided by pharmacists during interviews

Another table can be used for illustrating the regional comparison of health indicators on medicines.

Example 3 Table:
Financial Indicators for Medicines and Medical Products St. Lucia

	Source of Data	St. Lucia	Year of Data	Latin America & Caribbean	Year
Total expenditure on pharmaceuticals (% total expenditure on health)	WHO-The World Medicines Situation-2004	16.1	2000	23.2	2000
Total expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines Situation-2004	36	2000	41.79	2000
Government expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines Situation-2004	21	2000	12.21	2000
Private expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines Situation-2004	15	2000	32.45	2000

Source: Health Systems Database

Example 4: Pie Chart

A pie chart is useful for showing proportions of something at a glance. For example, a pie chart is usually included in the human resources for health (HRH) chapter of the assessment report to show to which sector (public, etc.) a country's health workforce belongs. A similar pie chart can be created to show the breakdown of pharmacists by sector. The pie chart here shows that the majority of pharmacists in St. Lucia work in the private sector, a situation that is common in many other developing countries.

EXAMPLE 4: PIE CHART
TOTAL NUMBERS OF PHARMACISTS, 2010

91=Total # of Pharmacists in St Lucia

Source: Rodriguez, Vogus, O'Hanlon, et al. (2011)

Example 5: Diagram

The diagram below presents an overview of the pharmaceutical system in St. Lucia. It illustrates the relationships between public and private entities throughout the system.

EXAMPLE 5: DIAGRAM
OVERVIEW OF THE PHARMACEUTICAL SYSTEM IN ST. LUCIA

Source: Rodriguez, Vogus, O'Hanlon, et al. (2011)

Annex 3.7.A. Information Flow

Stakeholder Interviews Catalogue

	Type of Information Handled by Each System										
Type of information system	Specific name, if any	Service Utilization	Occurrence of Selected Disease(s)	Disease Outbreak (immediate report)	Financial Information	Drug, Contraceptive, Vaccine, Stock	Human Resources	Equipment/ building	Vital Events	Others	Others
Routine service based reporting system											
Epidemiological surveillance for notifiable infectious diseases											
Specific program reporting systems (EPI)											
Special program reporting systems (TB)											
Special program reporting systems (Malaria)											
Special program reporting systems (HIV/AIDS)											
Special program reporting systems (MCH)											
Special program reporting systems (specify)											
Special program reporting systems (specify)											
Community based information system											
Administrative system (Finance)											
Administrative system (HRH)											
Administrative system (Training)											
Administrative system (Drugs, contraceptives, vaccines, logistics)											
Administrative system (Infrastructure, equipment, transport)											
Vital Registration											
Other system											

Source: http://www.cpc.unc.edu/measure/publications/pdf/ms-09-34.pdf

Information Flow Chart

Information Flow Sheet									
Levels	**Types of information systems**								
	HMIS	**EPI**	**TB**	**Malaria**	**HIV/AIDS**	**MCH**	**Contraceptive**	**Administrative system (Finance)**	**Community information system**
Central/ National Level									
Regional Level (Province)									
District Level									
Facility Level									
Community Level									

Annex 3.7.B. Summary of HIS Issues to Address in Stakeholder Interviews

Summary of Issues to Discuss in HIS Stakeholder Interviews

Stakeholder Profile	Issues to Discuss
Members of interagency health information system (HIS) task force	• Existence of a national HIS strategy and how it is being used • Effectiveness of the interagency body
Heads of disease control programs in Ministry of Heath (MOH) and stand-alone programs (i.e., Expanded Program on Immunization)	• Availability of financial resources • Guidelines for data collection • Availability of standardized tools • Integration of vertical systems into the overall HIS • Relevance of indicators to decisions to be made
Central statistics office; central-level MOH budget authorities	• Availability of financial and physical resources to support the HIS • Availability of staff for 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 • Legal/policy framework that endorses publishing statistics and sharing available data on a regular basis
Human resources officers at the MOH	• 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)	• Guidelines for data collection • Procedures to verify the quality of data • Availability of personnel, infrastructure, 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 • Demand and use of data and results for planning and decision making
Donor representatives; MOH department or unit responsible for donor coordination	• 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)

Stakeholder Profile	Issues to Discuss
District health management team	• Written guidelines for data collection • Procedures to verify the quality of data • Availability of personnel, infrastructure, and equipment for data collection, reporting, and analysis • Regular 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 • Use of data and results for planning and decision making
Facilities	• Number of reports they are required to submit and at what intervals • Availability of personnel, infrastructure, 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)	• Number of reports the unit is required to submit and at what intervals • Relationship between information unit and program management units • Availability of personnel, infrastructure, and equipment for data collection, reporting, and analysis • Availability of appropriate and accurate denominators
Private sector, nongovernmental, or faith-based organization health associations	• Degree to which private, nongovernmental, or faith-based organization facilities are trained in data collection for the HIS • Degree to which private, nongovernmental, or faith-based organization facilities are collecting and submitting data to the HIS

Annex 3.7.C. HIS Country Ownership and Leadership Continuum

One way of examining the degree of functionality within the HIS system is to look at the degree of country ownership. Note that the private health sector should be considered when investigating in all aspects of the health information systems (HIS) management.

HIS Country Ownership & Leadership Continuum

	Stages of HIS Systems development – Functional Baseline	Mid - Level HIS	High Level HIS
GOVERNANCE & MULTISECTORAL ENGAGEMENT	• National coordinating mechanism not established or at early stages, agencies & sectors operating independently • Priorities, projects: pilots, not usually linked, depend on donors and funds • Project stakeholders provide incentives for country/project data sharing & use • Stakeholders represented at project level	• National coordinating or approval mechanism for large projects; agencies/sectors linked on key projects, some shared priorities • Priorities, projects defined and linked to short and medium term goals • MoH provides limited incentives for data sharing and use • Stakeholders represented for large, cross-sector projects	• National coordination mechanism: active national body with oversight, control agencies and sectors involved • Priorities, major projects linked to medium-term goals, included in national plan • MoH provides broad and specific incentives for data sharing and use • Stakeholders participation in national planning process
STRATEGIC PLANNING/ FINANCING	• Planning specific to vertical projects, may not be led by or include MoH • Comprehensive national planning at early stages • Financing plan not established; funding linked to specific projects	• Planning includes MoH for major vertical projects, cross-linkages developed by MoH • National plan developed but not vested with all parties • Financing plan at early stages; project funds available, more sustainable sources of funding sought	• Planning led by MoH, includes major stakeholders and sectors • National plan developed/adopted by major stakeholders • Financing aligned with priorities; donors, gov't, private sector funding identified for medium-term
POLICY & REGULATORY ENVIRONMENT	• National policies at early stages • Overall picture of the relevant sectors not clear; policies need to be identified, compiled and reviewed	• National policies emerging in priority areas, plan elaborated for additional areas • Sectoral policies under review for alignment, comprehensiveness; gaps identified for new or revised policies	• National policies adopted in priority areas, regular policy review established, impact being considered • Plan agreed for sectoral alignment; progress being made on new and revised policies
INFORMATION USE	• MoH cannot meet international reporting obligations • Information primarily used by projects • Overall health information picture not clear, metrics not adopted	• MoH meets major international reporting obligations • Information used for specific or limited decision making • Information picture emerging, metrics adopted, efforts to transition/rationalize	• MoH meets all international reporting obligations • Information increasingly shared and used in broader decision making context • Overall information picture defined, metrics adopted, planning for transition and use
INFRASTRUCTURE	• ICT supports specific projects or vertical programs, broader infrastructure investment push by private sector, large donors	• Shared infrastructure between some projects, agencies or sectors; government policies increasingly support private sector investment	• Government investment in fundamental infrastructure, to be shared; efforts to stimulate investment and alignment of private sector donors
HUMAN CAPITAL DEVELOPMENT	• MoH expertise on ICT, policy and informatics at early stages; reliance on technical cooperation, required skills may not be available in private sector	• MoH increasing expertise, HR development plan in progress; tap technical cooperation and private sector for expertise	• MoH able to draw on internal expertise, technical cooperation and private sector as needed
SYSTEM & DATA INTEROPERABILITY	• MoH information flows and data processes not fully define, aggregation not feasible • Project-specific systems • Standards not in use; data sharing not possible	• MoH system has defined information flows and data processes, some aggregation • Parallel systems • Standards at early stages of adoption; some data sharing	• MoH system had defined information flows and data processes, aggregation at all levels • Major systems connect; planning is standards-based • Standards for data and interoperability adopted; data sharing increasingly possible

Source: Landry 2011 Presentation - http://hisforum.org/documents/