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. Retrieved from http://www.unaids.org/globalreport/documents/HIV_Estimates_GR2010_2009_en.xls
3. UNESCO. (2011). UNESCO Institute for Statistics Data Center. Retrieved from http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=136&IF_Language=eng&BR_Topic=0
4. UNICEF. (2011). UNICEF Childinfo: Monitoring the situation of children and women. Retrieved from http://www.childinfo.org/index.html
5. WHO, UNICEF (2010). WHO/UNICEF Joint Reporting Form on Immunization for the period January - December 2010. Retrieved from http://www.who.int/entity/immunization_monitoring/routine/WHO_UNICEF_JRF_11_EN.xls
6. WHO. (2011). Global Health Observatory. Retrieved from http://www.who.int/gho/en/
7. WHO. (2011). Global HIV/AIDS Response: Epidemic Update and Health Sector Progress Towards Universal Access, Progress Report 2011. Retrieved from http://www.who.int/entity/hiv/data/tuapr2011_annex6_web.xls
8. WHO. (2011). The World Medicines Situation Report. Retrieved from http://www.who.int/entity/medicines/areas/policy/world_medicines_situation/Delivered_database_use_articleSep2011.xls
9. World Bank. (2011). The Worldwide Governance Indicators, 2011 Update. Retrieved from http://info.worldbank.org/governance/wgi/index.asp
10. World Bank. (2011). World Development Indicators, the World Bank. 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

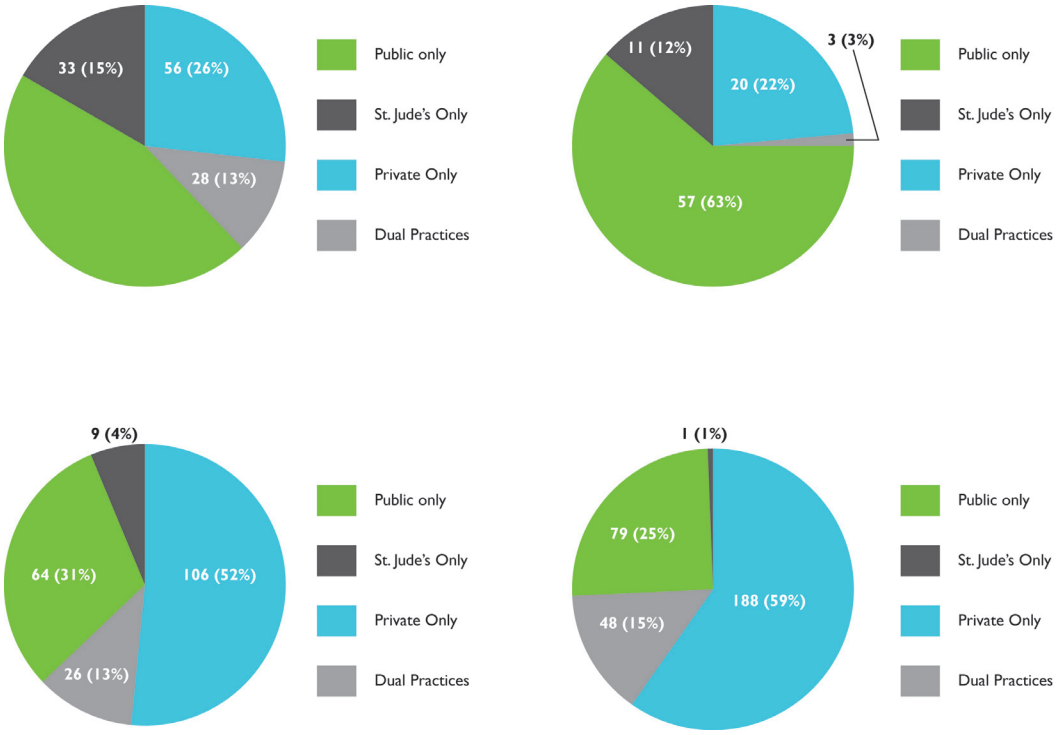
There are different ways to describe the HRH profile of a health system. The following four examples highlight several presentation models that can be considered. These include organizational charts and diagrams, and simple charts and tables that display the number of health workers by cadre, by sectors, 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%

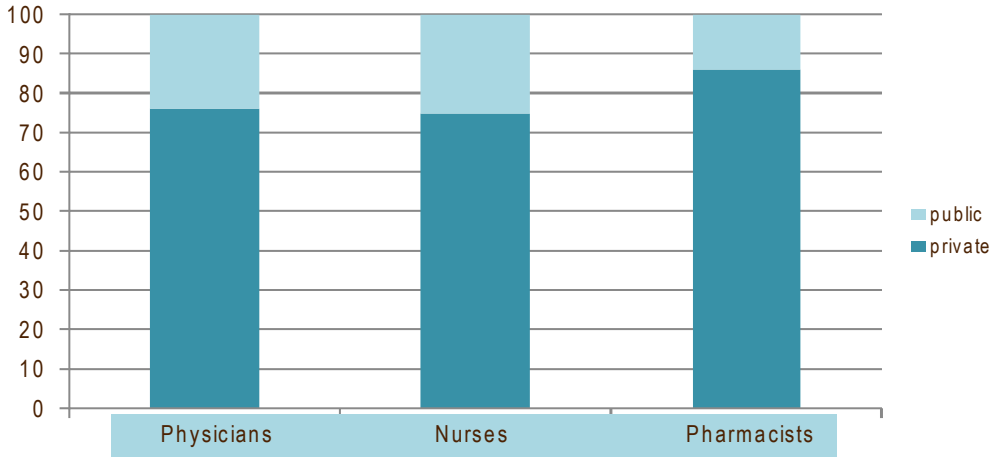
Source: Adapted from Ministry of Medical Services (2008: 44-45)
*Estimate ignores changes in registered numbers in 2008

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

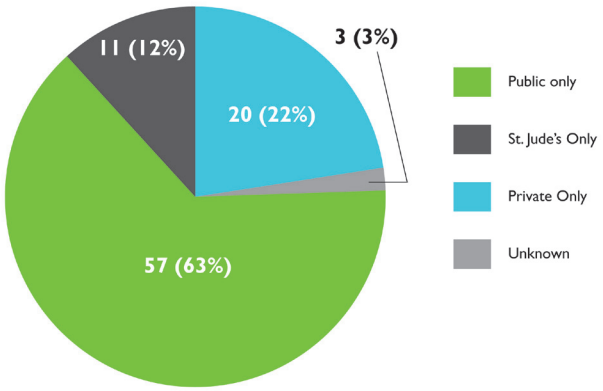
	Source of Data	St. Lucia	Year of Data	Latin America & Caribbean	Year
Total expenditure on pharmaceuticals (% total expenditure on health)	WHO-The World Medicines Situation-2004	16.1	2000	23.2	2000
Total expenditure on pharmaceuticals (per capita at average exchange rate) in US$	WHO-The World Medicines 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



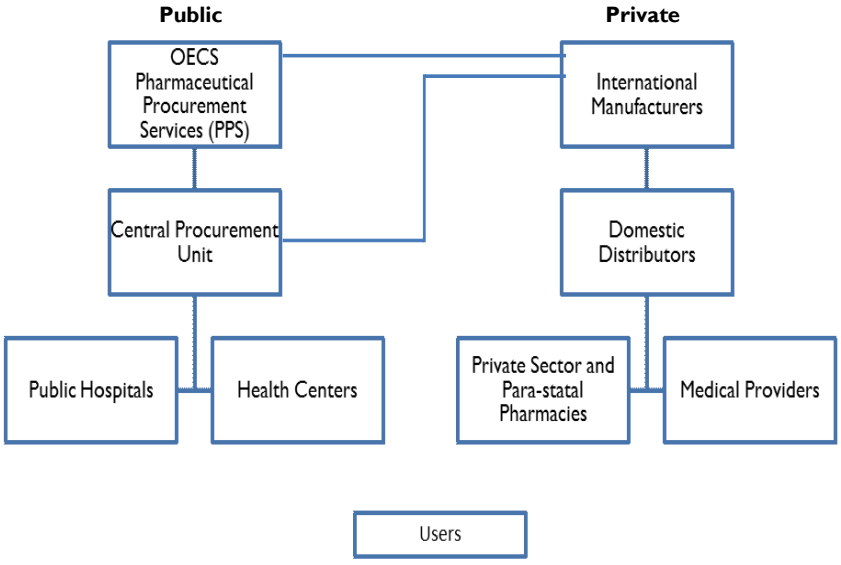
91 = Total # of Pharmacists in St Lucia

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)

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 & MULTISECTIORAL 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/adapted by major stakeholders • Financing aligned with priorities; donors, gov't private sector finding identified for medium-term
POLICY & REGULATORY ENVIRONMENT	• National polices at early stages • Overall picture of the relevant sectors not clear; policies need to be identified, complied and reviewed	• National polices emerging in priority areas; plan elaborated for additional areas • Sectorial policies under review for alignment, comprehensiveness; gaps identified for new or revised polices	• National polices adopted in priority areas, regular policy review established; impact being considered • Plan agreed for sectorial alignment; progress being made on new and revised polices.
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 • Oveall 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 taps 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/

Notes