Chapter Five

An Introduction to Health Systems

What is a Health System?

Health system – component parts:

- Agencies that plan, fund and regulate health care
- The money that finances health care
- Those who provide preventive health services
- Those who provide clinical services
- Those who provide specialized inputs into health care, such as the education of healthcare professionals and the production of drugs and medical devices

The Functions of a Health System

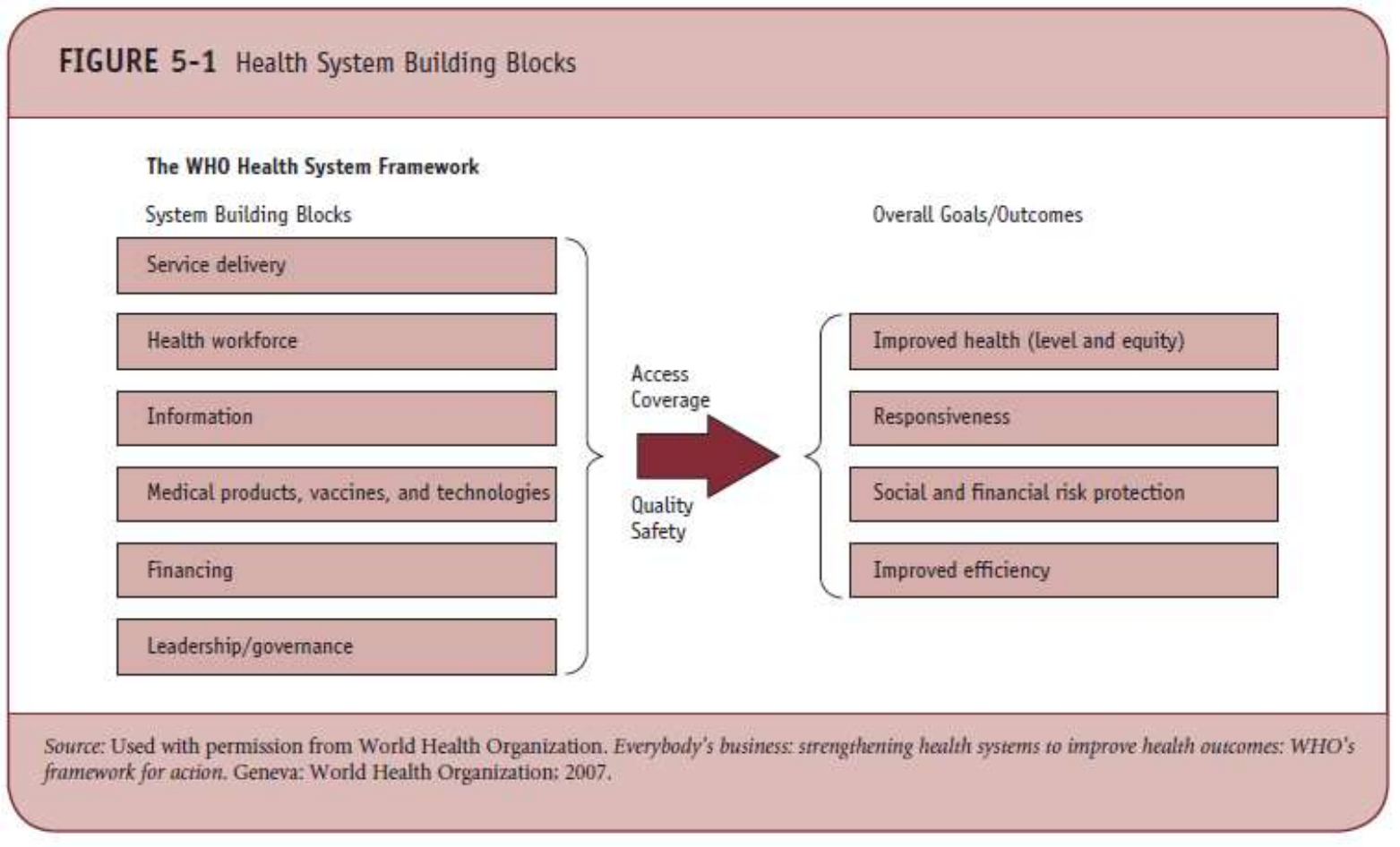
Goals:

- Good health
- Responsiveness to the expectations of the population
- Fairness of financial contribution

Functions:

- Provide health services
- Raise money that can be spent on health, referred to as "resource generation"
- Pay for health services, referred to as "financing"
- Govern and regulate the health system, referred to as "stewardship"

Figure 5.1: Health System Building Blocks



How are Health Services Organized?

Categorizing Health Services

Some dimensions used to examine health systems:

- Approach of each type of health system to providing a basic package of health services as a "right"
- Who owns health facilities
- Manner in which insurance is operated
- Manner in which insurance schemes are financed

Table 5.1: Health System Approaches

TABLE 5-1 Health Systems Approaches

	National Health Insurance	National Health Service	Pluralistic
Health as a Right	Fundamental	Fundamental	Health as a personal good
Ownership of Facilities	Public and private, not-for profit	Largely public	Public, private, for-profit and private, not-for-profit
Insurance	Largely universal public insurance	Overwhelmingly public insurance linked to the health services	Public insurance and private, for-profit and private, not-for-profit insurers
Financing	Largely employers and employees but some are tax-based	Overwhelmingly tax-based	Taxes, employers and employees, and out-of-pocket

Source: Adapted from Birn A-E, Pillay Y, Holtz TH. *Textbook of International Health.* New York: Oxford University Press; 2009.

How are Health Services Organized?

Categorizing Health Services

- Most low-income countries have fragmented health systems that include both public and private providers
- Many middle-income countries have a system organized around a national insurance scheme
- Almost all high-income countries have a national health insurance system

How are Health Services Organized?

Levels of Care

- Primary - first point of contact
- Secondary - provided by some specialist physicians and general hospitals
- Tertiary - provided by an array of specialist physicians and specialized hospitals

Many low- and middle-income countries have these levels organized by geographic area

Primary Health Care

Declaration of Alma-Ata

- Speaks of health as a human right
- Outlines content of primary health care as care that is essential and socially acceptable
- "Primary health care" as a movement and central tenet of global health

The Roles of the Public, Private, and NGO Sectors

Public

- Stewardship of the system
- Raising and allocation of funds
- Establishing approaches to health insurance
- Managing key public health functions

The Roles of the Public, Private and NGO Sectors

Private, For-Profit

- Provision of services including nonlicensed "medical practitioners"
- Operation of health clinics, hospitals, services, and laboratories
- Can partner with the public sector or work under contract to the public sector

The Roles of the Public, Private, and NGO Sectors

NGO, Private Not-For-Profit

- Community-based efforts to promote better health through education, improved water and sanitation
- Carry out health services
- Can partner with the public sector or work under contract to the public sector

Health Sector Expenditure

- Total health expenditure as a share of GDP varies across countries
- Wide range of private sector expenditure as share of total expenditure on health
- Poorer countries have the highest private expenditure

Table 5.4: Total Health Expenditure as a Percentage of GDP and Private Expenditure on Health as a Percentage of Total Expenditure of Health, Selected Countries, 2003

Country	Health Expenditure as % of GDP	Private Health Expenditure as % of Total Health Expenditure
Indonesia	2.0	44.7
Pakistan	2.9	70.3
Bangladesh	3.5	64.3
Sudan	3.6	63.4
Philippines	3.8	67.1
India	4.0	72.0
Sri Lanka	4.0	57.1
Thailand	4.0	24.9
Peru	4.5	40.6
Kenya	4.5	62.6
Nepal	4.9	61.0
Cameroon	5.5	71.6
Dominican Republic	5.5	66.1
Haiti	5.6	77.9
Egypt	6.4	61.7
Cambodia	6.6	76.9

Source: Data from WHO. Global Health Observatory. Health expenditure ratios. Available at: http://apps.who.int/ghodata/. Accessed December 28, 2010.

Table 5.4: Total Health Expenditure as a Percentage of GDP and Private Expenditure on Health as a Percentage of Total Expenditure of Health, Selected Countries, 2003 (cont.)

Nigeria	6.8	75.3
Afghanistan	7.3	78.8
Vietnam	7.3	61.5
Ghana	7.8	50.3
Israel	8.0	57.2
Costa Rica	8.2	23.1
South Africa	8.3	59.7
Brazil	8.4	56.0
Jordan	8.5	37.8
Ireland	8.7	18.0
Australia	8.8	32.0
Denmark	9.9	15.3
France	11.1	21.0
Cuba	11.9	3.8
United States of America	16.0	53.5

Source: Data from WHO. Global Health Observatory. Health expenditure ratios. Available at: http://apps.who.int/ghodata/. Accessed December 28, 2010.

Selected Examples of Health Systems

High-Income Countries

Germany

- "Social insurance scheme"
- Organized around insurance funds financed by employers and employees
- Funds serve as an intermediary to organize and pay for services
- Funds have contracts with associations of physicians and hospitals
- Government regulates health system

Selected Examples of Health Services

High-Income Countries

The United States

- Combination of public and private financing
- Overwhelmingly private provision of care
- 50% of financing comes from Medicaid, Medicare, Veterans Administration, and Worker's compenstaion
- Remaining 50% of financing comes from individuals and their employers
- Types of health insurance vary greatly
- Many people lack insurance

Selected Examples of Health Systems

Middle-Income Countries

Costa-Rica

- Federal government controls most of the health sector directly
- Country is divided into Health Areas served by health teams
- Social Security Administration owns most hospitals
- Financing provided by taxes
- Participants receive most services for free

Selected Examples of Health Systems

Middle-Income Countries

Brazil

- Publicly owned services at the federal, state, and municipal levels, as well as the military
- Private sector services contracted by the public sector
- Private sector services paid for by individuals or corporate health insurance

Selected Examples of Health Systems

Low-Income Countries

India

- Tiered public sector network including health subcenters, primary health centers, community health centers, and hospitals
- Large private sector which accounts for about 80% of all healthcare expenditures
- Two large government insurance schemes, but mostly for public sector employees
- Most people lack insurance

Selected Examples of Health Systems

Low-Income Countries

- Largely managed and provided by public sector
- System includes village health posts, dispensaries for primary care, health centers, district hospitals, regional hospitals, and tertiary hospitals
- Basic package of health services may be provided for free
- Some low-income countries, however, do have an active private sector

Key Health Sector Issues

- In general, health systems in high-income countries perform better than those in low- and middle-income countries
- Health systems of a small group of middle-income countries rate higher in the WHO ranking than countries with higher incomes
- All systems struggle with a variety of challenges and constraints

Table 5.5: Overall Health System Performance Ranking, Selected Countries

TABLE 5-5 Overall Health System Performance Ranking, Selected Countries

Country	Overall Performance Ranking	Country	Overall Performance Ranking
Afghanistan	173	Haiti	138
Argentina	75	India	112
Bangladesh	88	Jordan	83
Bolivia	126	Mexico	61
Cambodia	174	Morocco	29
Cameroon	164	Nepal	150
Canada	30	Niger	170
China	144	Pakistan	122
Costa Rica	36	Peru	129
Cuba	39	Philippines	60
Denmark	34	South Africa	175
Dominican Republic	51	Sri Lanka	76
Egypt	63	Turkey	70
France	1	United States of America	37
Germany	25	Vietnam	160
Ghana	135	Zambia	182

Source: Data from WHO. *The World Health Report 2000.* Geneva: WHO; 2000:Annex Table 1.

Key Health Sector Issues

Demographic and Epidemiologic Change

- People are living longer so societies will face a greater burden of noncommunicable diseases
- Cost of treating noncommunicable conditions is high
- Poor countries face burden of communicable disease, noncommunicable disease, and injuries simultaneously

Key Health Sector Issues

Stewardship

- Problems of governance in many low- and middle-income countries
- Penalize poor people in particular because they have less choice and power
- Governments unable to enforce health sector rules and regulations
- Weak management of human resources
- Poorly built facilities
- Substantial corruption

Key Health Sector Issues

Human Resource Issues

- Poorest countries do not have enough healthcare personnel to operate a system effectively
- Quality of training, knowledge, and skills is deficient
- Lack of incentives to perform jobs properly
- Staff not well distributed to poor and rural areas

Key Health Sector Issues

Quality of Care

- Health services should be safe, effective, patient-centered, timely, efficient, and equitable
- Evidence suggest that low-, middle-, and high-income countries have problems with quality
- Many countries have weak systems of monitoring performance

Key Health Sector Issues

The Financing of Health Systems

- All systems have to ration services in some way
- Significant lack of public sector resources in low- and middle-income countries
- Many low-income countries do not provide the health sector with the public funds needed to ensure an appropriate basic package of services is provided

Key Health Sector Issues

Financial Protection and Provision of Universal Coverage

- Capacity of people to pay for health services is a barrier to access
- Catastrophic costs impoverish people in many settings
- Providing all people with an insured package of services is a key goal

Key Health Sector Issues

Access and Equity

- Lack of coverage of basic health services in areas where poor, rural and minority people live
- Service coverage that varies with income and education levels
- Unequal access to relatively expensive services

Addressing Key Health Sector Concerns

Demographic and Epidemiologic Change

- Reduce cardiovascular disease burden related to tobacco
- Strengthen health systems
- Adopt models of care that sustain more frequent contacts with patients

Addressing Key Health Sector Concerns

Stewardship

- National anticorruption programs
- Reform procurement systems
- Increase audits of the health system
- Improve transparency
- Oversight by communities
- Contract out services

Addressing Key Health Sector Concerns

Human Resources

- More shared global responsibility for resources
- More explicit strategies for workforce development focusing on coverage, motivation and competence
- Train lower level personnel to carry out functions usually reserved of higher-level staff
- Financial incentives

Addressing Key Health Sector Concerns

Financing Health Services

- Shift resources from other areas of the economy
- Shift expenditure within health sector to a selected group of low-cost, highly effective investments
- Improve efficiency
- Monitor investments more carefully

Addressing Key Health Sector Concerns

Financial Protection and Universal Coverage

- Raise additional revenue
- Improve efficiency of health sector expenditure
- Reduce dependence on out-of-pocket expenditures
- Enhance equity
- Provide basic primary care package
- Subsidize selected hospital services

Addressing Key Health Sector Concerns

Access and Equity

- Use data from national surveys to identify gaps in health status
- Specifically target health resources to the places most in need

Addressing Key Health Sector Concerns

Quality

- Carry out assessments of quality gaps
- Better professional oversight, supervision, and continuing training
- Use of clear guidelines, protocols, and algorithms
- Link payments with performance when contracting out services

Addressing Key Health Sector Concerns

Delivering Primary Health Care

- Focus services on the main burdens of disease
- Strengthen the health system to deliver services effectively and efficiently
- Deliver services as close to where people live as possible

TABLE 5-6 Model Primary Care Package of Essential Health Services Interventions

Maternity-related interventions
Prenatal care
Treatment of complications during pregnancy
Skilled birth attendants
Emergency obstetric care
Postpartum care
Family planning
Tetanus toxoid

Childhood disease-related interventions (prevention)
Bacillus Calmette-Guerin
Polio vaccination
Diphtheria-pertussis-tetanus vaccination
Measles vaccination
Hepatitis B vaccination
Haemophilus influenza type B vaccination
Vitamin A supplementation
Iodine supplementation
TB vaccination
Anthelminthic treatment
School health program (incorporating micronutrient supplementation, school meals, antihelminthic treatment, and health education)

Childhood disease-related interventions (treatment)
Acute respiratory infections
Diarrhea
Causes of fever
Malnutrition
Anemia
Feeding and breastfeeding counseling

Malaria prevention
Insecticide-treated nets
Residual indoor spraying

Malaria treatment

Tuberculosis treatment
Directly observed treatment short course (DOTS) for smear-positive patients
DOTS for smear-negative patients

HIV/AIDS prevention
Youth-focused interventions
Interventions with sex workers and clients
Condom social marketing and distribution
Workplace interventions
Strengthening of blood transfusion systems
Voluntary counseling and testing
Prevention of mother-to-child transmission
Mass media campaigns
Treatment for sexually transmitted infections

HIV/AIDS care
Palliative care
Clinical management of opportunistic illnesses
Prevention of opportunistic illnesses
Home-based care
HIV/AIDS HAART provision

Tobacco control program (taxes, legal action, information, nicotine replacement)

Alcohol control program

Source: Data used with permission from Tollman S, Doherty J, Mulligan J-A. General primary care. In: Jamison DT, Breman JG, Measham AR, et al., eds. *Disease Control Priorities in Developing Countries*. 2nd ed. Washington, DC and New York: The World Bank and Oxford University Press; 2006: 1193-1209.