Health Systems & UHC

Complete Study Guide

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1. DEFINITION OF A HEALTH SYSTEM (WHO)

According to the WHO, a health system consists of all organizations, people, and actions whose primary intent is to promote, restore, or maintain health. It includes efforts to influence the determinants of health as well as more direct health-improving activities.

A health system is broader than just public hospitals and clinics. It encompasses:

- A mother caring for a sick child at home
- Private providers
- Behavior change programs
- Vector-control campaigns
- Health insurance organizations
- Occupational health and safety legislation
- Inter-sectoral collaboration to improve health

2. FUNCTIONS AND OBJECTIVES OF A HEALTH SYSTEM

Functions the System Performs

These are what a health system DOES to achieve its goals:

- **Stewardship (Oversight):** The governing and regulatory function. It oversees all other functions and directs the system toward its goals.
- **Creating Resources (Investment & Training):** Developing human resources (training healthcare workers) and physical resources (building facilities, equipment).
- **Financing (Collecting, Pooling & Purchasing):** Raising funds, pooling risk, and purchasing services.
- **Delivering Services (Provision):** The actual delivery of health services to the population.

Objectives the System Aims to Achieve

These are what the health system PRODUCES:

- **Health:** Improving population health outcomes
- **Responsiveness:** Meeting people's non-medical expectations
- **Fair (Financial) Contribution:** Ensuring payments are equitable

Key Relationship: All four functions work together toward the three objectives. Stewardship oversees all functions.

3. WHAT MAKES A HEALTH SYSTEM GOOD?

According to WHO (2013), a good health system includes:

Strong

- A robust financing mechanism
- A well-trained and adequately paid workforce
- Reliable information on which to base decisions and policies
- Well-maintained facilities and logistics to deliver quality medicines and technologies

4. PERFORMANCE OF HEALTH SYSTEMS

To assess performance, we measure it against four key objectives:

Objective 1: Improving the Health of the Population

Measured by:

- Life expectancy
- Maternal mortality
- Infant mortality
- Distribution of health across population subgroups

Objective 2: Responding to People's Expectations

Involves the interaction between the health system (policymakers, managers, service providers) and the population (individuals, families, communities).

People's experiences include:

- Dignity → الكرامة → يُعامل بإحترام
- Autonomy → الإستقلالية → هو قرار الإجراء الطبي بدون ما يُفرض عليه
- Confidentiality → السرية
- Prompt attention → السرعة في الإستجابة
- Access to social support networks → يقدر يرتن على أهله في المستشفى
- Quality of amenities → رفاهة المرافق

- Choice of provider — يقدر يختار المستشفى والدكتور
- Trust → الثقة

All of this occurs within a broader context (historical, political, cultural, social, economic).

Objective 3: Financial Protection Against Costs of Ill Health

- Healthcare costs are unpredictable and potentially catastrophic
- Universal coverage protects from the financial burden of healthcare costs
- Barriers like co-payments and coverage ceilings may prevent patients from using insurance
- **Payment should be PROGRESSIVE:** related to ability to pay — those who earn more pay more; those who earn less pay less


3. Barriers like co-payments and coverage ceilings

العوائق مثل المشاركة في الدفع وسقف التغطية

- Co-payment = أنت تدفع جزء من فاتورة العلاج من جيبك
- Coverage ceiling = التأمين يغطي لحد مبلغ معين بس — لو تجاوزته تدفع الباقي أنت

المشكلة: هذه العوائق ممكن تخلي الفقير يتجنب الذهاب للطبيب حتى لو عنده تأمين!

Objective 4: Equity and Fairness

Distribution of all three objectives must be equitable across population subgroups.

- **Horizontal Equity:** Similar treatment for people with similar needs
- **Vertical Equity:** Different treatment for people with different needs (those with greater need get more resources)

5. FINANCING OF HEALTHCARE

Financing is one of the central functions of a health system. It encompasses three components:

A. Revenue Collection

The process of raising money from different sources. Primary sources include:

- Taxpayers
- Businesses
- External funders (donors)

B. Pooling

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Accumulating revenue to spread financial risks across the population.

- Without pooling: the sick individual bears the full cost alone
- With pooling: everyone contributes before illness occurs, and care is paid from the shared pool

C. Resource Allocation and Purchasing

How pooled funds are channeled to pay for service provision.

Provision (Service Delivery) includes:

- **Personal health services:** Individual-level care
- **Non-personal health services:** Population-level services (e.g., vaccinations, health campaigns)

All of the above operates under Stewardship and is supported by Resource Generation.

6. RISK POOLING — EXPLAINED

Without Risk Pooling:

- If 10 people exist and 1 gets sick, that 1 person must pay ALL costs alone
- If that person is low-income → they cannot afford care → worse health outcomes

With Risk Pooling:

- Everyone contributes money BEFORE anyone gets sick
- When illness occurs, care is paid from the shared pool
- Risk is distributed — no one individual bears the full financial burden

7. WHY IS HEALTHCARE SO COSTLY?

Multiple factors drive high healthcare costs:

- Use of expensive new diagnostic tests and treatments
- Increased costs of healthcare services overall
- Marketing of new drugs, devices, and procedures
- Overuse of specialists instead of primary care
- High administrative costs → أنظمة حاسوبية + فوترة وغيرة
- Doctor fees (عشان شايلوا وهم بيرسوا)
- Malpractice costs (legal liability insurance) → تأمين بإهمال الطبيب بدفعه عشان لو أخطأ وهيك بنعكس على سعر الخدمات
- Defensive medicine (ordering extra tests to avoid lawsuits)
- Aging of the population (older people require more care)

8. EFFICIENCY IN HEALTHCARE

Three types of efficiency:

Type	Definition	Also Known As
Technical Efficiency	Producing a given output with the LEAST inputs (minimizing wastage)	Operational efficiency
Economic Efficiency	Producing a given output at the LEAST cost	Productive efficiency
Allocative Efficiency	The pattern of output MATCHES the pattern of demand	—

9. COST-EFFECTIVENESS IN HEALTHCARE

Cost-Effectiveness Analysis (CEA):

- Used when it is inappropriate to assign a monetary value to health outcomes
- Examines both costs and health outcomes of one or more interventions
- Compares an intervention to another or to baseline by estimating cost per unit of health outcome
- **Common outcome measures:** DALYs (Disability-Adjusted Life Years) and QALYs (Quality-Adjusted Life Years)

Cost-Benefit Analysis (CBA):

- Assigns a monetary value to the measure of effect
- Unlike CEA, it converts health outcomes into money

Key Difference: CEA uses health units (DALYs/QALYs); CBA uses monetary units.

10. WHO PAYS FOR HEALTHCARE?

Three main payers:

- **a) Government programs** (e.g., taxes, public health systems)
- **b) Private health insurance plans** (some employer-based) شركات تأمين خاصة
- **c) Out-of-pocket** (individual's own funds) من جيبك

The Basic Idea:

When a government or hospital needs to decide:

> "Should we spend our money on treatment A or treatment B?"

They need a scientific method to compare — this is where CEA and CBA come in.

First: CEA — Cost-Effectiveness Analysis

The Idea:

Instead of converting health into money, we measure **how much it costs to achieve one unit of health improvement.**

Practical Example:

> You have a **vaccine against a disease:**
>
> - Cost: $1,000
> - Saves: 10 healthy life years
> - Therefore: each healthy year costs $100
>
> You have a **drug for the same disease:**
>
> - Cost: $1,000
> - Saves: 2 healthy life years
> - Therefore: each healthy year costs $500

to have the same number of life year but less cost → more cost effective.

Decision: The vaccine is more cost-effective ✓

CEA Measures — DALYs & QALYs:

DALY — Disability-Adjusted Life Year

> Measures **how many years of healthy life were LOST** due to disease or early death
>
> Example: A person dies at age 40, expected to live until 70 = lost **30 DALYs**
>
> **Fewer DALYs = Better outcome**
>
> Goal = **Prevent as many DALYs as possible at the lowest cost**

QALY — Quality-Adjusted Life Year

> Measures life by **both quantity AND quality**
>
> - One year in perfect health = **1 QALY**
> - One year living with chronic pain = **0.5 QALY**
> - One year in a coma = **0 QALY**
>
> Example: A treatment gives you 5 years at 80% health = **4 QALYs**
>
> **More QALYs = Better outcome**

Second: CBA — Cost-Benefit Analysis

The Idea:

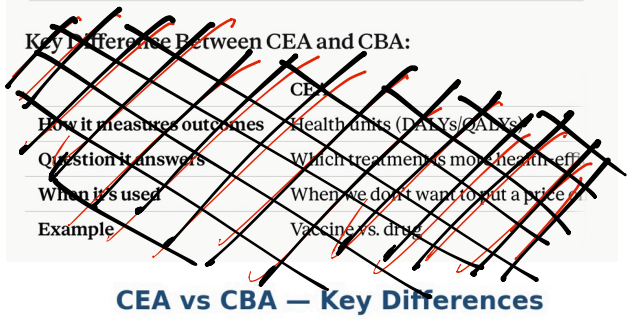
Here we **convert everything into money** — including health and life itself.

Example:

> A smoking cessation program costs **$1 million**
>
> But it will save hospitals **$5 million** in treating lung diseases
>
> Therefore **the benefit outweighs the cost ✓**

Key Difference Between CEA and CBA:

	CEA
How it measures outcomes	Health units (DALYs/QALYs)
Question it answers	Which treatment is more health-effi
When it's used	When we don't want to put a price
Example	Vaccine vs. drug



CEA vs CBA — Key Differences

	CEA (Cost-Effectiveness Analysis)	CBA (Cost-Benefit Analysis)
How it measures outcomes	Health units (DALYs / QALYs)	Money (Dollars $)
Question it answers	Which treatment is more health-efficient?	Is the financial benefit worth the cost?
When it's used	When we don't want to put a price on life	When comparing completely different projects
Example	Vaccine vs. Drug	Health program vs. Building a road

Key Principles:

- Because individual health expenditures are unpredictable, prepayment systems (a & b) with universal coverage protect from extreme poverty
- Prepayment based on ability to pay allows for cross-subsidy from rich to poor and from healthy to sick
- Government-financed health systems provide the greatest potential for risk pooling

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11. HEALTHCARE FINANCING MODELS

A. Beveridge Model (National Health Services)

- Named after William Beveridge
- Healthcare provided and financed by the government through tax payments
- Many hospitals and clinics are government-owned and run
- Private hospitals and doctors also exist but collect fees from the government
- Low costs per capita because government controls what doctors can do and charge
- **Examples:** Great Britain, Spain, Scandinavia, New Zealand, Hong Kong
- **Cuba:** The most extreme application — the world's purest example of total government control

B. Bismarck Model (Social Insurance)

- Named after Chancellor Otto von Bismarck, originated in Germany
- Insurance system with insurers called 'sickness funds'
- Multi-payer model (Germany has ~240 different sickness funds)
- Financed jointly by employers and employees through payroll deduction
- Covers everybody and is not-for-profit
- Doctors and hospitals are generally private
- Tight government regulation provides cost control
- **Examples:** Germany, France, Belgium, Netherlands, Japan, Switzerland, Latin America

C. National Health Insurance (NHI) Model

- Combines elements of both Beveridge and Bismarck
- Uses private-sector providers but payment comes from government
- Government runs an insurance program that every legal resident pays into
- No marketing, no financial motive to deny claims, no profit
- Cost-effective and administratively simple
- Government (single payer) has considerable market power to negotiate lower prices and control costs
- **Downside:** Patient waiting times can be long
- **Examples:** Australia, Canada, Taiwan, South Korea

D. Mixed Health Systems

- Predominant in Low and Middle-Income Countries (LMICs)
- Most LMIC governments are too poor or disorganized to provide universal healthcare
- Characterized by out-of-pocket payments and market provision
- Public and private health delivery coexist

Problems:

  - Insufficient state funding for health
  - Weak governance
  - Private sector delivers services without appropriate regulatory framework
- These three factors together compromise quality and defeat the equity objective

Summary Table: Financing Models

Model	Funding Source	Payer Type	Examples
Beveridge	Government taxes	Single (government)	UK, Spain, Cuba, Scandinavia
Bismarck	Employer + Employee payroll	Multi-payer (sickness funds)	Germany, France, Japan
NHI	Government insurance program	Single (government)	Canada, Australia, Taiwan
Mixed	Out-of-pocket + market	Mixed	Most LMICs

12. UNIVERSAL HEALTH COVERAGE (UHC)

> *"Universal health coverage is the single most powerful concept that public health has to offer" — Dr. Margaret Chan, WHO Director-General, 2012*

Historical Basis:

- Rooted in the WHO Constitution of 1948 declaring health as a fundamental human right
- Based on the Health for All agenda from the Alma Ata Declaration (1978)

Definition:

> *"All individuals and communities have the right to receive the health services they need without suffering financial hardships."*

UHC Covers the Full Spectrum of Health Services:

- Health promotion
- Prevention
- Treatment
- Rehabilitation
- Palliative care
- Across the entire life course

13. THE THREE PILLARS OF UHC

Pillar	Meaning
Equity in Access	Everyone who needs health services should get them — not only those who can pay
Sufficient Quality	Health services should be good enough to actually improve health
No Undue Financial Risk	Using health services should not cause financial harm

14. HEALTH AND WEALTH — DIRECT RELATIONSHIP

The Poverty-Illness Cycle (in the Global South):

1. People have no financial risk protection
2. They cannot pay out-of-pocket for health services
3. When they become ill, they either: (a) seek treatment → suffer financial hardship, or (b) don't seek treatment → remain ill and unable to work
4. This exacerbates financial hardships → cycle repeats

UHC Breaks This Cycle — The Triple Win:

- Improves people's health
- Reduces poverty
- Fuels economic growth

> *Health is both a fundamental human right AND the foundation of economic prosperity and security.*

15. GLOBAL COMMITMENT TOWARDS UHC

- **2010:** WHO released a call for all countries to move towards UHC
- **2015:** The 2030 Agenda for Sustainable Development Goals (SDGs), adopted by all UN Member States

SDG 3.8.1 — Achieve Universal Health Coverage by 2030, including:

- Financial risk protection
- Access to quality essential health-care services
- Access to safe, effective, quality, and affordable essential medicines and vaccines for all

16. GLOBAL NORTH vs. GLOBAL SOUTH (THE BRANDT LINE)

- **The Brandt Line** was developed in 1980 to visualize global inequalities
- It highlights disparities in development and wealth between the prosperous North and the poorer Global South
- **Rich North:** North America, Europe, Australia/NZ, Japan
- **Poor South:** Africa, South America, most of Asia

Is the Brandt Line Still Valid Today?

- Yes — evidence suggests it remains largely intact after 44 years
- Although economic power has risen globally, the North-South divide persists
- Despite pulling millions out of absolute poverty, the gap between richest and poorest countries is widening

17. HOW TO ASSESS PROGRESS TOWARDS UHC

Progress is measured along three dimensions (the UHC Cube):

Dimension	Question	Direction of Improvement
Population coverage	Who is covered?	Extend to non-covered groups
Services coverage	Which services are covered?	Include more services
Financial protection	What do people pay out-of-pocket?	Reduce cost-sharing and fees

The goal is to expand all three dimensions simultaneously to fill the entire cube — achieving true universal coverage.

18. EVIDENCE-BASED ACTIONS FOR UHC REFORM SUCCESS

- Political commitment toward equity and effective stewardship by government, synergized by engaging the private sector
- Investing in a strong, resilient, efficient health system that meets priority health needs through a people-centered integrated approach
- Collaboration of all stakeholders in knowledge sharing and engaging the community for the public good
- Priority setting using systematic, evidence-based processes with stakeholder agreement before determining the range of potential health services
- Bottom-up approach — start with the poor and progress step by step toward UHC
- Quality of services and accountability should be integral to UHC program design
- Focus on primary care gatekeeping and referral mechanisms for a more sustainable, accessible, equitable system at lower cost
- Sustainable financing system with effective financial management, monitoring, and oversight
- Novel financing mechanisms for revenue generation, risk pooling, procurement, contracting and purchasing
- Establishing a culture of evidence-based policymaking built on research and information technology

19. NO ONE-SIZE-FITS-ALL RECIPE

- There is no single 'best practice' model that works for every country at every stage of development
- The best path corresponds to the needs of the population within the country's socioeconomic context
- The quality of UHC programs often improves during implementation as they mature
- Learning is essential — UHC skills are progressive capacities built during implementation
- Addressing social determinants of health through a comprehensive Primary Health Care (PHC) approach is essential

20. ETHICS AND GOVERNANCE IN UHC

- UHC is a powerful expression of fairness, solidarity, and recognition of health as a human right
- To achieve UHC by 2030, countries must recognize the role of Stewardship in ensuring strong, quality healthcare for everyone

Ethics and governance both play a central role in:

- Providing justification for UHC
- Identifying interests at stake in health system reform
- Providing guidance for building more robust health systems

21. CUBA AS A CASE STUDY (Extreme Beveridge Model)

Cuba represents the world's purest example of total government control of healthcare.

Core Principles of the Cuban Health System:

- Healthcare is a right, available to all equally and free of charge
- Health care is the responsibility of the state
- Preventive and curative services are integrated
- The public participates in the health system's development and functioning
- Strong comprehensive primary health care addressing social determinants of health
- Health care is integrated with economic and social development
- Global health cooperation is a fundamental obligation

Activities of the Cuban Health System:

- Promote health through positive changes in knowledge, sanitary habits, and lifestyle
- Prevent emergence of diseases
- Guarantee early diagnosis, outpatient services, and hospitalization
- Develop community-based rehabilitation for disabled persons
- Improve neighborhood environmental conditions and home hygiene
- Improve social relations and family integration
- Develop health research responsive to population needs

22. TAKE-HOME MESSAGES

1. ETHICS MATTERS:

Governance must have ethical commitment to the public good and to health as a basic human right.

2. PRIORITIES MATTER:

Government's political commitment — the share devoted to health — can make a big difference.

3. CONTEXT AND POLICY MATTER:

There is more to it than just spending levels; how you organize your health system is critically important.

KEY DEFINITIONS TO MEMORIZE

Term	Definition
Health System	All organizations, people, and actions whose primary intent is to promote, restore, or maintain health
Stewardship	Oversight and governance function of a health system
Risk Pooling	Accumulating revenue to spread financial risk across the population
UHC	All individuals and communities have the right to receive needed health services without financial hardship
Horizontal Equity	Similar treatment for similar needs
Vertical Equity	Different treatment for different needs
CEA	Examines cost per unit of health outcome (DALY/QALY)
CBA (Cost-Benefit)	Assigns a monetary value to the measure of effect
Technical Efficiency	Least inputs for a given output (minimize waste)
Economic Efficiency	Producing a given output at least cost
Allocative Efficiency	Output matches demand patterns
Progressive Payment	Payment related to ability to pay
Brandt Line	Divides wealthy Global North from poorer Global South (developed 1980)
SDG 3.8.1	Achieve UHC by 2030 — financial risk protection, access to quality services, medicines and vaccines for all
DALYs	Disability-Adjusted Life Years — years of healthy life lost to disease
QALYs	Quality-Adjusted Life Years — measure of health outcome combining quality and quantity of life
Beveridge Model	Government-financed and provided healthcare (e.g., UK, Cuba)
Bismarck Model	Employer-employee funded sickness funds (e.g., Germany, France)
NHI Model	Government-run insurance, private providers (e.g., Canada, Australia)
Mixed System	Out-of-pocket and market provision — common in LMICs
Alma Ata Declaration	1978 WHO declaration setting the Health for All agenda — foundation of UHC
PHC	Primary Health Care — first point of contact, addresses social determinants of health
Defensive Medicine	Ordering extra tests/procedures to avoid malpractice lawsuits, driving up costs

Good Luck on Your Exam!