



كلية الطب والجراحة



National Health System (1)

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Learning Objectives:

- 1) Define Health system
- 2) List objectives of health system
- 3) Describe each component of health system
- 4) Identify the types of health systems in Egypt

Definition of Health

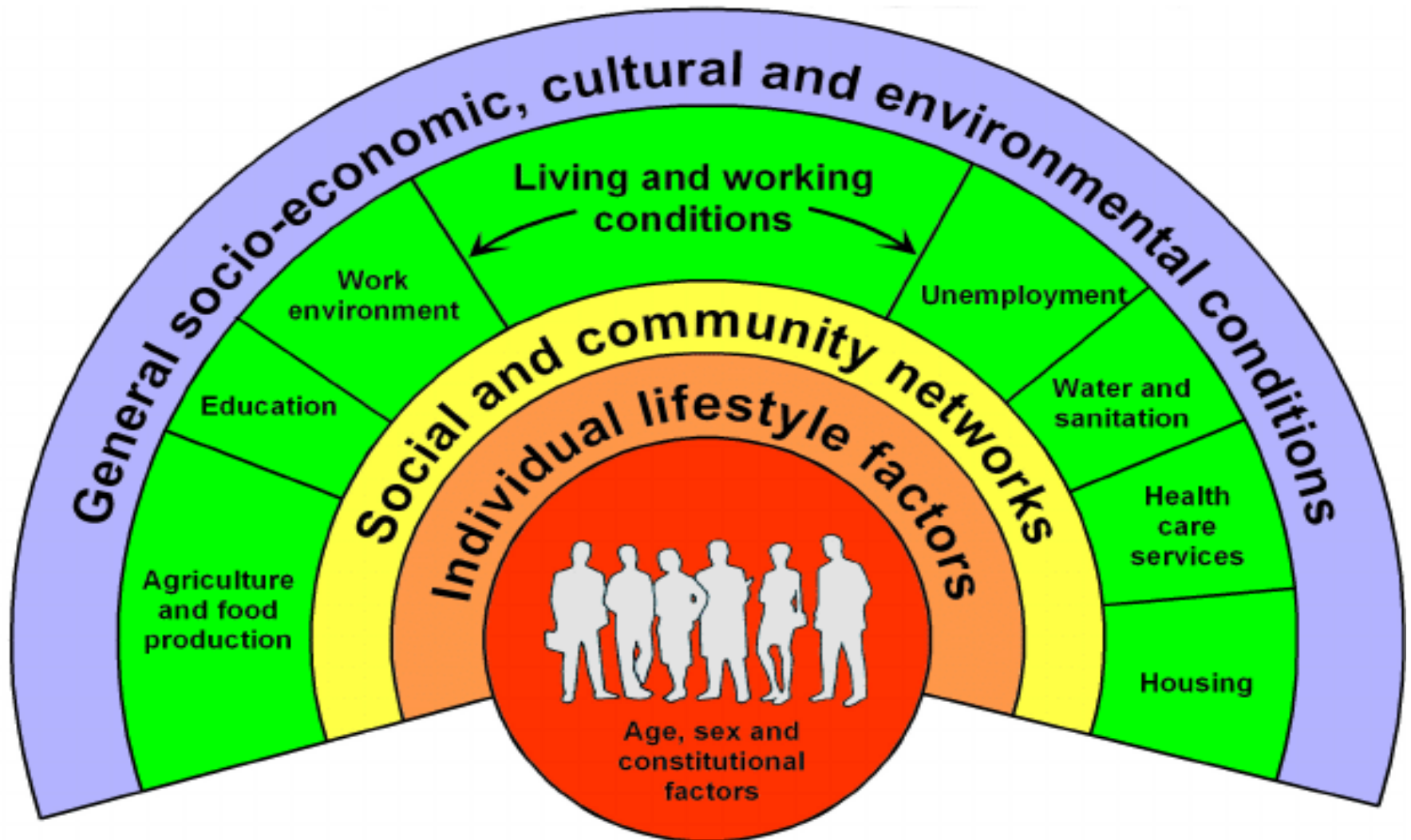
- **Health:** As officially defined by the World Health Organization,
“A state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity”.



Determinants of Health

- Refer to the various factors that influence the health outcomes of individuals or populations.

Determinants of Health



Source: Dahlgren and Whitehead, 1991

These factors
can be
categorized as:

Biological Determinants

Behavioral Determinants

Social Determinants of Health (SDOH)

Environmental Determinants

Healthcare Access and Quality

Political and Policy Determinants

Cultural Determinants

1. Biological Determinants:

Genetic predisposition (e.g., hereditary diseases)

Age, sex, and physiological status

Immune function and microbial diversity

2. Behavioral Determinants:

Dietary habits and nutrition

Physical activity levels

Smoking, alcohol, and drug use

Adherence to medical advice and health screenings

3. Social Determinants of Health (SDOH)

Education level and literacy

Employment and working conditions

Income and social status

Social support networks

Discrimination and social inclusion/exclusion

4. Environmental Determinants

Exposure to pollution (air, water, and soil)

Availability of safe housing and sanitation

Climate and geographic factors

Exposure to toxins (e.g., pesticides)

5. Healthcare Access and Quality

- Availability and affordability of healthcare services
- Health insurance coverage
- Access to preventive care and emergency services
- Quality and cultural competence of care

6. Political and Policy Determinants

- Public health policies and regulations
- Governmental investments in healthcare infrastructure
- Food and drug regulations
- Social welfare policies

7. Cultural Determinants

Health beliefs, practices, and values

Cultural attitudes toward healthcare services

Traditional medicine usage

Health System



Universal Health Coverage (UHC)

- **Definition:** all individuals and communities have access to quality health services without suffering financial hardship.

Principles of UHC

Equity: Everyone should have access to healthcare, regardless of their ability to pay.

Quality: Health services should be effective, safe, and patient-centered.

Financial Protection: No one should face financial ruin due to healthcare costs.

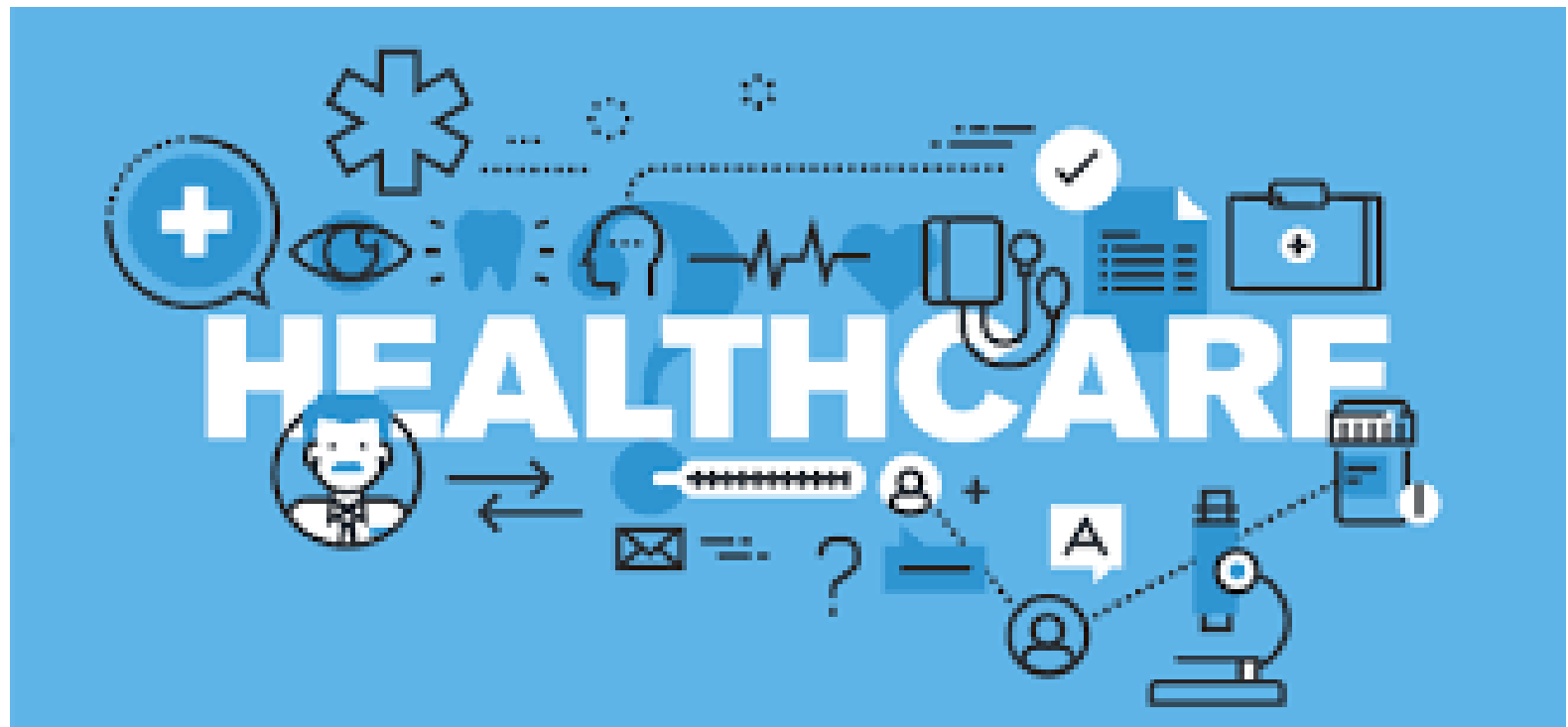
Definition of Health System

- The World Health Organization's (2000) definition

“All the activities whose primary purpose is to promote, restore or maintain health.”

- A health system consists of all the organizations, institutions, resources and people whose primary purpose is to improve health





Health System Goals



Access: Ensuring all individuals can obtain necessary healthcare services.



Quality: Providing high standards of care to improve health outcomes.



Efficiency: Minimizing waste and maximizing resource utilization.



Equity: Reducing disparities in healthcare access and outcomes among different populations.



Sustainability: Ensuring long-term viability and financial stability of health services.



Patient-Centered Care: Focusing on the needs and preferences of patients in treatment decisions.

Health systems framework **and building blocks**

WHO framework that describes health systems in terms of six core components or **“Building Blocks”**:

- (i) Service delivery,
- (ii) Health workforce
- (iii) Health information systems
- (iv) Access to essential medicines
- (v) Financing
- (vi) Leadership/Governance

Component of Health System

THE WHO HEALTH SYSTEM FRAMEWORK

SYSTEM BUILDING BLOCKS

SERVICE DELIVERY

HEALTH WORKFORCE

INFORMATION

MEDICAL PRODUCTS, VACCINES & TECHNOLOGIES

FINANCING

LEADERSHIP / GOVERNANCE

ACCESS
COVERAGE

QUALITY
SAFETY

OVERALL GOALS / OUTCOMES

IMPROVED HEALTH (LEVEL AND EQUITY)

RESPONSIVENESS

SOCIAL AND FINANCIAL RISK PROTECTION

IMPROVED EFFICIENCY

The six building blocks of a health system



1. Service delivery



Definition: Effective, safe, and quality health services delivered to those who need them



Ensuring availability of health services that meet a minimum quality standard and securing access to them are key functions of a health system



Good service delivery is a vital element of any health system

1. Service delivery



Networks of close-to-client primary care, organized as health districts or local area networks with the back-up of specialized and hospital services, responsible for defined populations



Provision of a **package** of benefits with a **comprehensive** and **integrated range** of clinical and public health interventions, that respond to the full range of health problems of their populations, including those targeted by the Millennium Development Goals

Characteristics of Good Service Delivery

1. **Comprehensiveness:** appropriate to the needs of the target population, including preventative, curative, palliative and rehabilitative services and health promotion activities.
2. **Accessibility**
3. **Coverage:** All people in a defined **target population** are covered,
4. **Continuity:** **across the network of services**, health conditions, levels of care, and over the life-cycle
5. **Quality:** effective, safe, centered on the patient's needs and given in a timely fashion.
6. **Person -centeredness:** Users perceive health services to be responsive and acceptable to them.
7. **Coordination:** Local area health service networks are actively coordinated, across types of provider, types of care, levels of service delivery, and for both routine and emergency preparedness. The patient's primary care provider facilitates the route through the needed services, and works in collaboration with other levels and types of provider.
8. **Accountability and efficiency:** Health services are well managed so as to achieve the core elements described above with a **minimum wastage of resources**.

2. Human resources

- The health workforce includes all individuals engaged in the delivery of health services, such as doctors, nurses, pharmacists, and related health professionals.
- **Importance:** A strong health workforce is critical for delivering quality healthcare and achieving Universal Health Coverage (UHC).

2. Human resources

- A **well-trained**, competent, **motivated**, and **equitably distributed** Health workforce
- The health workforce is essential to achieve health **(The backbone of any health system)**
- A well performing workforce is one that is responsive to the needs and expectations of people

2. Human resources

1. Global and local shortages of healthcare workers.

Challenges

2. Unequal distribution (urban vs. rural).

3. Low motivation and burnout.

2. Human resources

1. Increase investment in training institutions.

2. Implement policies to attract and retain workers in underserved areas.

Regulatory mechanisms to ensure system wide deployment and distribution in accordance with needs

3. Improve working conditions and career development opportunities.

Establishment of job related norms, deployment of support systems and enabling work environments

Strategies for Improvement

Egypt's Health Workforce



Total Health Workforce: Approximately 1.2 million health workers



Doctors: ~220,000 (1 doctor per 1,000 population, below WHO recommended ratio of 1:1,000).



Nurses: ~400,000 (1 nurse per 1,000 population, below WHO recommended ratio of 3:1,000).



Pharmacists: ~150,000.



Related Health Professionals: ~430,000 (e.g., lab technicians, radiologists, etc.).

Strengths in Egypt's Health Workforce

Large Pool of Medical Graduates:

- Egypt has over 30 medical schools graduating ~10,000 doctors annually.
- Nursing and pharmacy schools also have a significant number of graduates.

Specialized Training Programs:

- Availability of postgraduate training in various medical specialties.
- Partnerships with international institutions for advanced training.

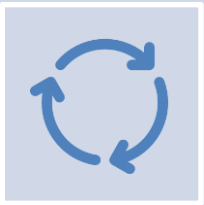
Government Commitment:

- Expansion of medical and nursing education infrastructure.
- Initiatives to improve working conditions and salaries for healthcare workers.

3. Health information systems



Definition: Health information systems (HIS) are systems for collecting, analyzing, and using health data to improve decision-making and health outcomes.



Importance: Evidence-based decision-making, planning and monitoring progress.

3. Health information systems

1. Data Collection:

- Surveys,
- registries,
- routine reporting
(epidemiological surveillance)

2. Data Analysis:

- Use of indicators and
- benchmarks.

3. Data Use:

- policies and
- programs.

3. Egypt's Health information systems

1. Data Collection:

- **Surveys:** Egypt conducts national health surveys, such as Demographic and Health Surveys (DHS).
- **Routine Reporting:** Health facilities report data on diseases, services, and resources to the Ministry of Health and Population (MOHP).
- **Registries:** Disease-specific registries (e.g., cancer, hepatitis C) track prevalence and treatment outcomes

3. Egypt's Health information systems

2. Data Management:

- Use of electronic health records (EHRs) and health management information systems (HMIS) in some facilities.
- Centralized databases for storing and managing health data.

3.Data Analysis and Use:

- Data is used to monitor health indicators,
- evaluate programs, and
- inform policy decisions.

2. Challenges

Egypt's Health information systems

1. **Fragmented data systems.**

2. **Poor data quality** (Incomplete, inaccurate, or outdated data in some systems)

3. **Limited capacity for data analysis**: Insufficient training and resources for data analysis and interpretation.

4. **Underutilization of Data**: Data is often not used effectively for decision-making due to lack of integration and accessibility.

5. **Infrastructure Gaps**: Limited internet connectivity and IT infrastructure in rural areas hinder digital health initiatives

2. Government Initiatives

Egypt's Health information systems

- 1. Egypt Health Issues Survey (EHIS):** A nationwide survey providing data on health indicators, including non-communicable diseases, maternal and child health, and healthcare access.
- 2. Universal Health Insurance System (UHIS):** Includes a digital health component to track patient records and service delivery under the new insurance scheme.
- 3. Electronic Health Records (EHRs):** Pilot projects to implement EHRs in selected hospitals and clinics.
- 4. Mobile Health (mHealth) Initiatives:** Use of mobile apps for data collection, reporting, and patient follow-up.
- 5. Partnerships with International Organizations:** Collaboration with WHO, and other partners to strengthen HIS capacity and infrastructure.

4. Essential medical products and technologies

- **Definition**: Ensuring the availability, affordability, and quality of essential medicines.
- Universal access to health care is heavily **dependent on access to** affordable essential medicines, vaccines, diagnostics and health technologies of assured quality, which are used in a scientifically sound and cost-effective way.
- Economically, medical products are the **second largest component of most health budgets** (after salaries) and the **largest component of private health expenditure** in low and middle income countries



4. Essential medical products and technologies

A. Supply Chain Management:

- Procurement,
- storage, and
- distribution.

B. Rational Use:

- Prescribing and
- dispensing practices.

C. Regulation:

- Quality control and
- pricing policies.

4. Challenges Essential medical products and technologies

Stockouts and supply chain disruptions.

High costs and affordability issues.

Non-Genuine and substandard medicines.

High Out-of-Pocket Spending: Despite subsidies, many Egyptians still face high out-of-pocket costs for medicines, especially for chronic diseases.

4. Egypt's Strategies for Improvement Essential medical products and technologies

Affordability:

- Price controls and subsidies make essential medicines affordable for most Egyptians.
- Local production of generics reduces costs significantly.

Availability:

- **Essential medicines** are widely available in public hospitals, primary healthcare (PHC) units, and private pharmacies.
- **The Universal Health Insurance Law (UHIL)** aims to expand access to medicines under the new insurance system.

Government Initiatives:

- **100 Million Seha Campaign:** Provided free screening and treatment for hepatitis C, including access to direct-acting antivirals (DAAs).
- **National Pharmaceutical Pricing Authority (NPPA):** Regulates drug prices to ensure affordability.

5. Health financing

- Mobilizing and allocating funds for health services.
- **Importance:** achieving Universal Health Coverage (UHC) and ensuring financial protection for all citizens.
- Health financing can be a key policy instrument to improve health and reduce health inequalities if its primary objective is to **facilitate universal coverage** by removing financial barriers to access and preventing financial hardship and catastrophic expenditure.

5. Health financing

- The following can facilitate these outcomes:

1. A system for **Revenue Collection**: Taxes, insurance premiums
2. A system to pool financial resources across population groups to share financial risks
3. A financing governance system **supported by** relevant legislation, financial audit and public expenditure reviews, and clear operational rules to ensure efficient use of funds

5. Challenges in Health financing

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5. Egypt's Health Financing

Total Health Expenditure (THE): Egypt's THE is approximately 5%

Sources of Health Financing:

- **Government Funding:** ~40% of THE, primarily through the Ministry of Health and Population (MOHP).
- **Out-of-Pocket (OOP) Payments:** ~50% of THE, one of the highest rates globally.
- **Private Health Insurance:** ~5% of THE, mainly for higher-income groups.
- **Donor Funding:** ~5% of THE, from international organizations and development partners.

Per Capita Health Spending:

- ~\$150 per person annually, which is low compared to global averages.

5. Challenges in Egypt's Health financing



High Out-of-Pocket Expenditure: OOP payments account for 50% of THE, placing a heavy financial burden on households and leading to catastrophic health expenditures.



Inequities in Access: Low-income and rural populations face significant barriers to accessing healthcare due to cost.



Fragmented Financing Mechanisms: Multiple funding sources (e.g., MOHP, social health insurance, private insurance)



Limited Coverage of Private Insurance: Private health insurance covers only a small percentage of the population, primarily higher-income groups.



Underfunding of the Health Sector: Health spending as a percentage of GDP (1.5%) is insufficient to meet the population's needs.

6. Leadership and governance

Effective oversight, regulation, and stewardship of the health system.

Importance: Ensures accountability, transparency, and equity.

6. Leadership and governance

Policy Formulation: Setting strategic directions. . A formulation of the country's commitment to high level policy goals (health equity, people-centeredness, sound public health policies, effective and accountable governance)

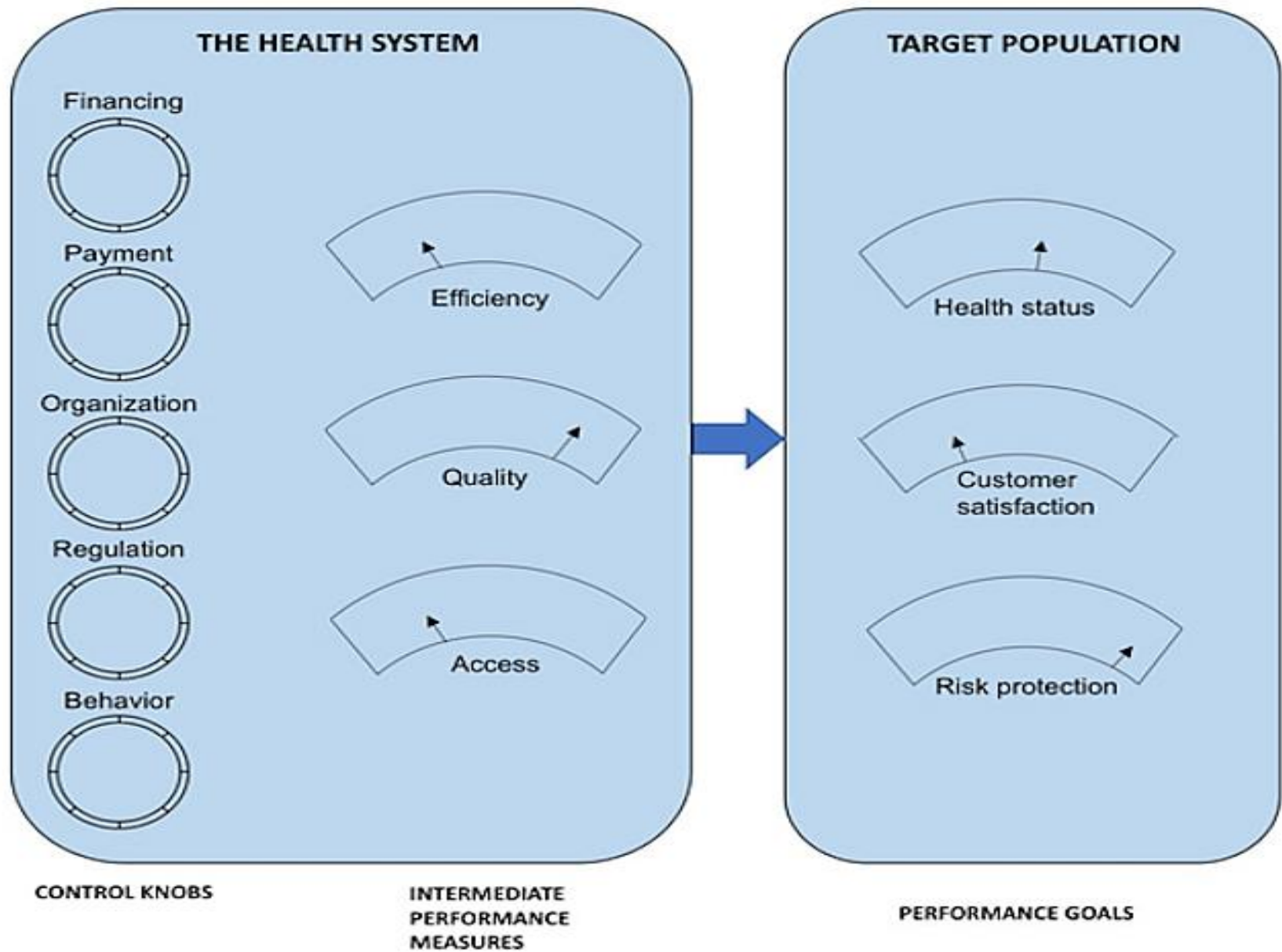
Regulation: Ensuring compliance with standards. . A strategy for translating these policy goals into its implications for financing, human resources, pharmaceuticals, technology, infrastructure and service delivery, with relevant guidelines, plans and targets

Stakeholder Engagement: Involving communities and partners.

- Without **strong policies and leadership**, health systems do not make the **most efficient use of their resources**
- Health systems are subject to powerful forces and influences that often override rational policy making.
- **These forces include:**
 1. Disproportionate focus on specialist curative care,
 2. Fragmentation in a multiplicity of competing programs, Projects and institutions, and
 3. The pervasive commercialization of health care delivery in poorly regulated systems.

Strengths in Egypt's Health Governance System

- 1.Strong Legal Framework:** Laws like the UHIL and Pharmaceutical Law provide a solid foundation for health system reforms.
- 2.Decentralization Efforts:** Increasing autonomy for local health authorities to improve responsiveness and efficiency.
- 3.Government Commitment to UHC:** The UHIL demonstrates strong political will to expand health coverage and improve service delivery.
- 4.Regulatory Bodies:** Institutions like the EDA and UHIA ensure quality control and oversight in the health sector.
- 5.Partnerships with International Organizations:** Collaboration with WHO, World Bank supports governance reforms and capacity building.



Health system building blocks

Service delivery

Health workforce

Health information systems

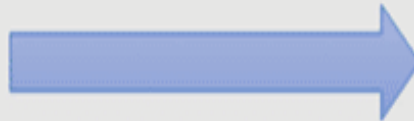
Access to essential

Financing

Leadership or governance

Health system goals

Desirable attributes



1. Access.
2. Coverage
3. Quality
4. Safety

Improved health (level

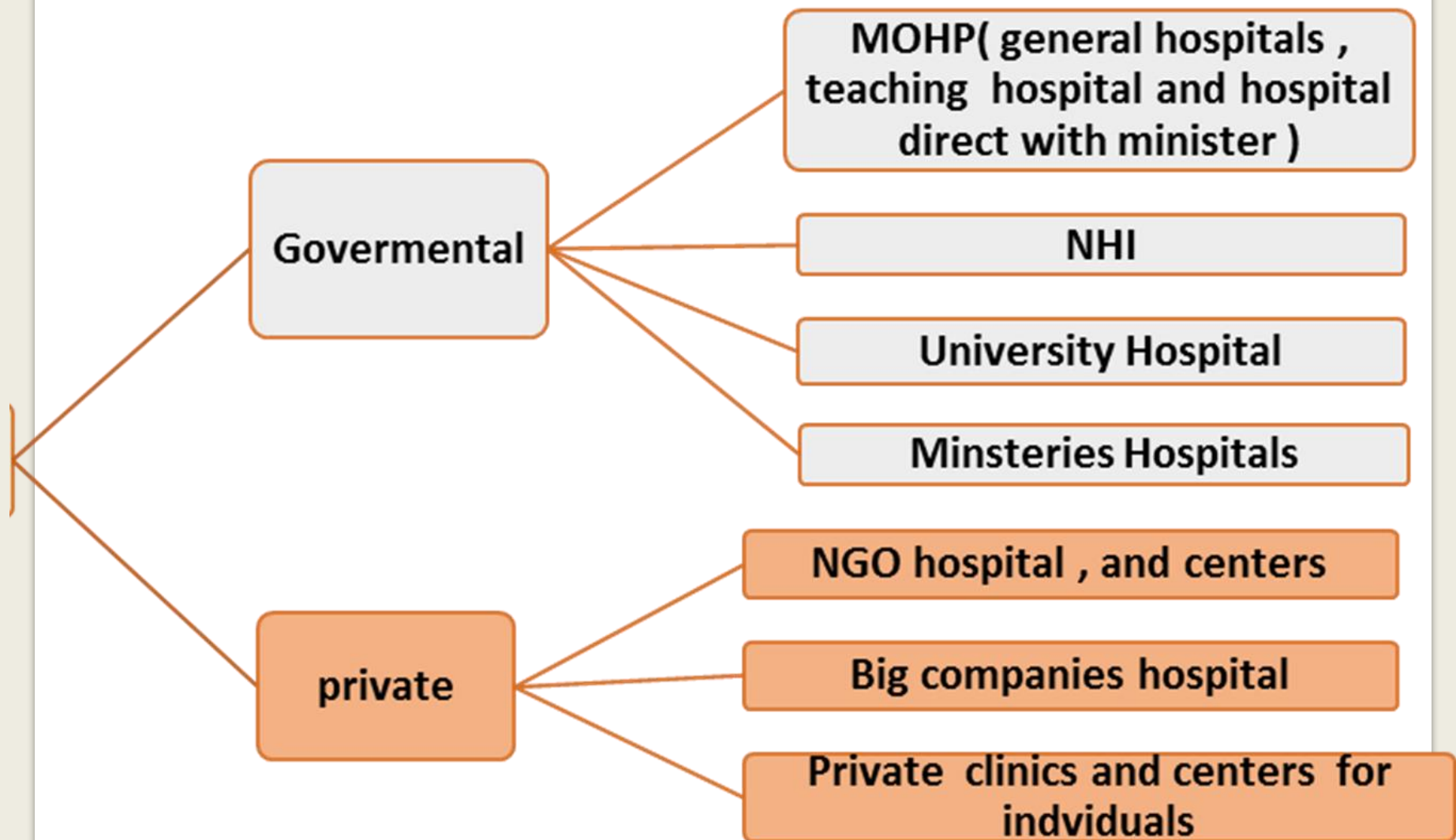
Responsiveness

Social and financial risk

Improved efficiency

Egyptian Healthcare System

- The Egyptian healthcare system consists of two sectors: public and private
- Government investment in the public healthcare system is 1.5 percent of the country's GDP.
- Egypt has a highly pluralistic healthcare system with many different public and private providers and financing bodies.



A. Overview of the Egyptian Healthcare System

I. Public Healthcare Sector (Governmental Health Sector)

- Ministry of Health and Population (MOHP)
- General hospitals and specialized medical centers
- Health Insurance Organization (HIO)
- University hospitals
- Hospitals related to certain ministries as interior , defense ,electricity ,real station

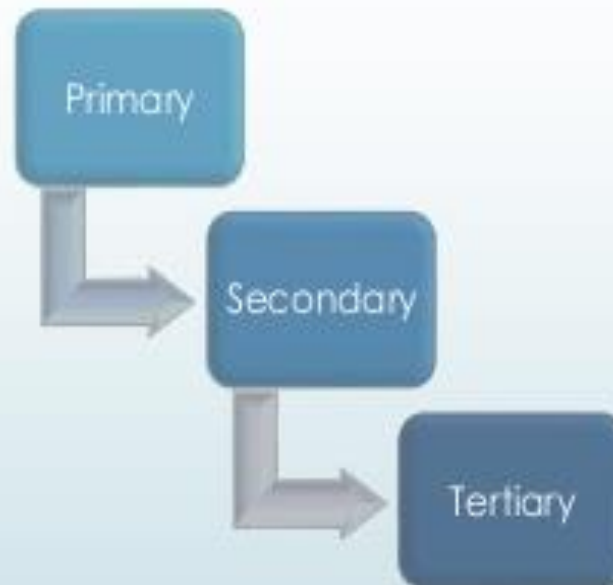
Overview of the Egyptian Healthcare System

II. Private Healthcare Sector

- Private hospitals
- Private centers / Specialized diagnostic centers
- Private clinic
- Hospitals related to nongovernmental organization as
 - ✓ Egyptian Catholic church hospitals ,
 - ✓ Hospital for mosques as Elfarouk hospital ,
 - ✓ Heart Hospital from Magdy Youkob foundation
 - ✓ Children cancer hospital from Egyptian children cancer foundation
 - ✓ Bahia from Bahia foundation ,
 - ✓ Ahl masr hospital
 - ✓ Alorman hospital

The Medical health system:

Public:



Private:

- Clinics
- Hospitals
- Pharmacies

Egyptian Healthcare System Levels

- The healthcare system is structured into three levels to provide a continuum of care, from basic preventive services to advanced specialized treatments.
- The **Egyptian healthcare system** is organized into **three main levels of care**:
 1. **Primary,**
 2. **Secondary,**
 3. **Tertiary**

Egyptian Healthcare System Levels

- A well-organized healthcare system ensures
 - Equitable access to services,
 - Efficient resource allocation, and
 - Improved health outcomes.

Primary Healthcare (PHC)

- The **first point of contact** for individuals and communities, focusing on preventive, promotive, and basic curative services.
- **Functions:**
 1. Health promotion and disease prevention (e.g., vaccinations, maternal and child health services).
 2. Management of common diseases (e.g., diarrhea, hypertension, diabetes).
 3. Referral to higher levels of care when needed.

Secondary Healthcare

- **Definition:** Provides specialized care for patients referred from primary healthcare facilities.
- **Functions:**
 1. **Diagnosis and treatment** of more complex conditions (e.g., surgeries, chronic disease management).
 2. **Inpatient and outpatient services.**
 3. **Laboratory and diagnostic services** (e.g., X-rays, ultrasounds).
- **Facilities:**
 1. **General Hospitals:** Provide a range of medical, surgical, and obstetric services.
 2. **Specialized Hospitals:** Focus on specific areas like cardiology,

Tertiary Healthcare

- **Definition**: Provides advanced, highly specialized care for complex and rare conditions.
- **Functions**:
 1. **Advanced diagnostics** and treatment (e.g., organ transplants, cancer therapy).
 2. **Research and training** for healthcare professionals.
 3. **Referral center** for cases requiring specialized expertise.
- **Facilities**:
 1. **Tertiary Hospitals**: Large, well-equipped hospitals in major cities (e.g., Cairo, Alexandria).
 2. **Research and Academic Institutions**: Hospitals affiliated with medical schools and research centers⁶².

B. According to payment mechanism:

1. **Governmental payment**: The government allocates funds to the Ministry of Health and Population (MOHP) to finance public healthcare facilities from **general national budget**
2. **Social Health Insurance (SHI)**: Managed by the **Health Insurance Organization (HIO)**, which covers formal sector employees and their dependents. Contributions are shared between employees, employers, and the government.



**B. According
to payment
mechanism:**

3. From Ministries financial budget
like interior ministry , defense
ministry , electricity ministry , higher
education ministry

4. Out-of-Pocket (OOP)
Payments: Patients pay directly
for healthcare services at the
point of care.

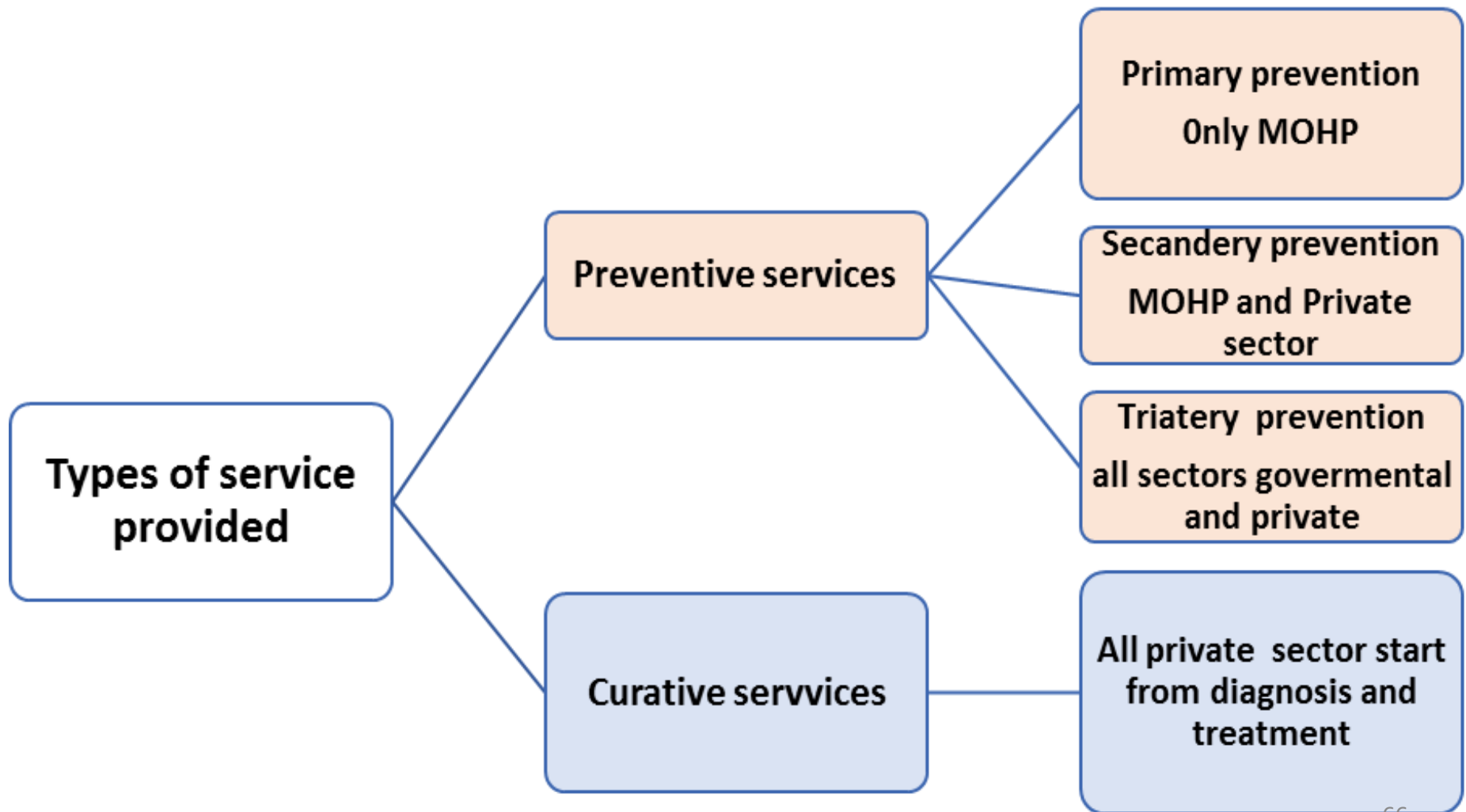
Accounts for ~50% of total health
expenditure (THE), one of the
highest rates globally.

B. According to payment mechanism:

5. Private Health Insurance:

- Covers higher-income individuals and families, primarily through employer-based schemes.
- Limited coverage and high premiums make it inaccessible for most Egyptians.

Types of services provided from private and governmental



1. Primary prevention



It aims to prevent disease or injury before it ever occurs.



This is done by preventing exposures to hazards that cause disease or injury, altering unhealthy or unsafe behaviors that can lead to disease or injury, and increasing resistance to disease or injury should exposure occur.

Examples include:



Legislation and enforcement to ban or control the use of hazardous products (e.g. asbestos) or to mandate safe and healthy practices (e.g. use of seatbelts and bike helmets)



Education about healthy and safe habits (e.g. eating well, exercising regularly, not smoking)

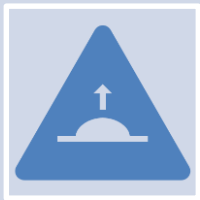


Immunization against infectious diseases

2. Secondary prevention



Aims to reduce the impact of a disease or injury that has already occurred.



This is done by early diagnosis (detecting) and treating disease or injury as soon as possible to halt or slow its progress,

Regular examination and **screening tests** to detect disease in its earliest stages (e.g. mammograms to detect breast cancer)

Daily, low-dose aspirins and/or diet and exercise programs to prevent further heart attacks or strokes

Suitably modified work so injured or ill workers can return safely to their jobs.

3. Tertiary prevention

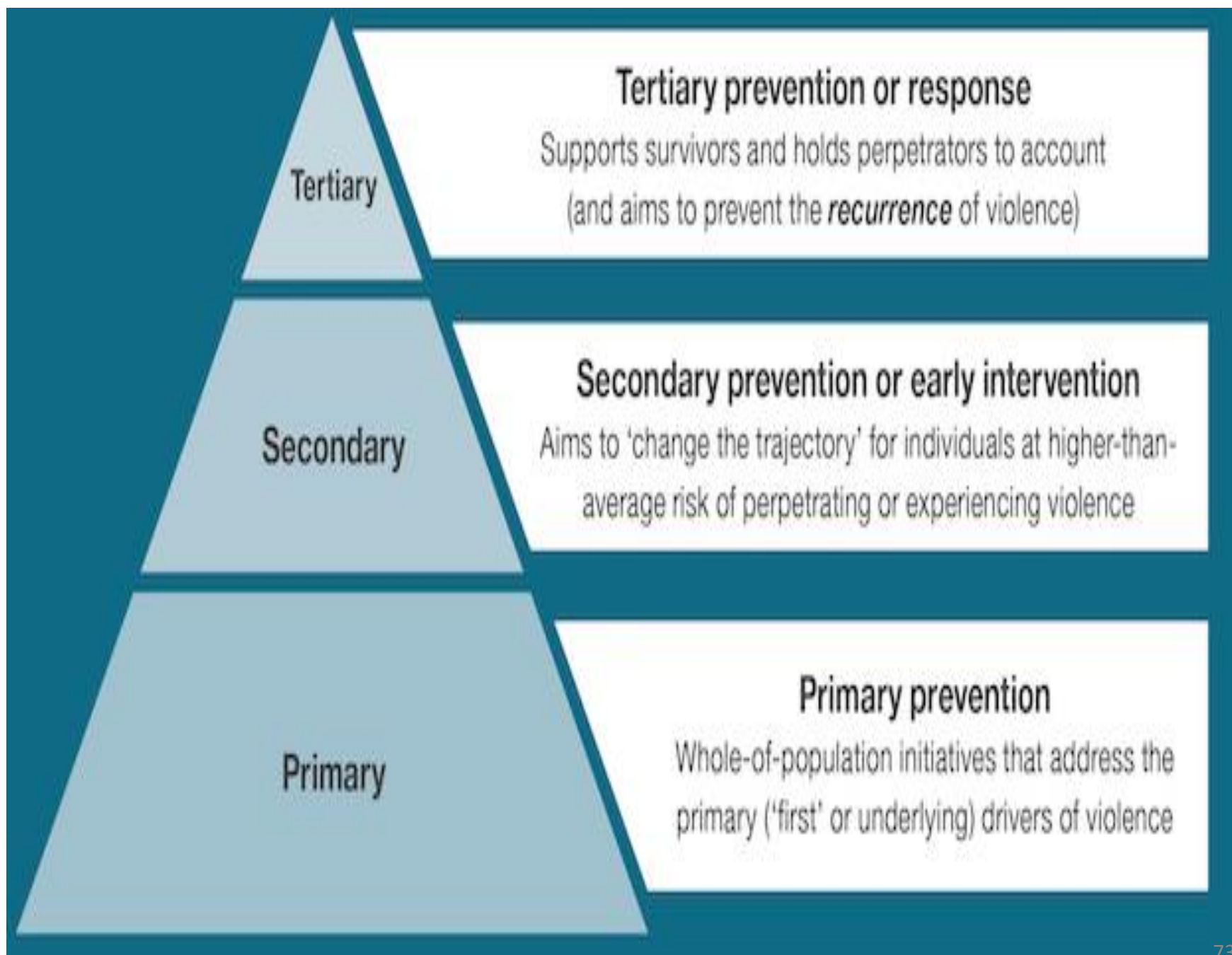
Aims: to soften the impact of an ongoing illness or injury that has lasting effects.

This is done by **helping people manage long-term**, often-complex health problems and injuries (e.g. chronic diseases, permanent impairments) in order to improve as much as possible their ability to function, their quality of life and their life expectancy.

Cardiac or stroke rehabilitation programs, chronic disease management programs (e.g. for diabetes, arthritis, depression, etc.)

Support groups that allow members to share strategies for living well

Vocational rehabilitation programs to retrain workers for new jobs when they have recovered



Organizational Structure of the MOHP

- The MOHP is organized into several **sectors**, **departments**, and **affiliated bodies**, each with specific roles and responsibilities.

1. Central Administration

- **Minister of Health and Population:**
 - The head of the MOHP, responsible for overall leadership and policy direction.
- **Deputy Ministers:**
 - Assist the minister in managing specific areas such as public health, curative care, and population affairs.
- **Technical Offices:**
 - Provide technical support and advice to the minister on specialized issues (e.g., epidemiology, health economics).

2. Sectors

The MOHP is divided into several key sectors, each focusing on a specific area of healthcare delivery and management:

- **Public Health Sector**: Responsible for disease prevention, health promotion, and epidemiological surveillance. Key programs include immunization, maternal and child health, and control of communicable diseases.
- **Curative Care Sector**: Oversees the delivery of medical services in hospitals and specialized centers. Manages secondary and tertiary healthcare facilities.
- **Primary Healthcare Sector**: Focuses on the delivery of primary healthcare services through PHCUs and family health centers (FHCs). Key programs include family planning, nutrition, and health education.
- **Pharmaceutical Affairs Sector**: Regulates the production, distribution, and pricing of medicines. Works closely with the **Egyptian Drug Authority (EDA)** to ensure drug safety and quality.
- **Population and Family Welfare Sector**: Addresses population issues, including family planning, reproductive health, and population growth.
- **Financial and Administrative Affairs Sector**: Manages the ministry's budget, procurement, and human resources.

Regional and Local Offices

1. **Governorate Health Directorates:** 'tpygE fo hcaEs 27 governorates has a health directorate responsible for implementing MOHP policies and programs at the local level.
2. **District Health Offices:** Manage healthcare services at the district level, ensuring coordination between PHCUs, hospitals, and other facilities.

Governorate Health Directorate

- The **Governorate-level health directorates** report to:
 1. The MOHP on **technical matters**,
 2. To the governorate administration headed by the governor **on administrative** and **day-to-day activities**.
- **Each governorate health directorate:**
 1. Is headed by an undersecretary or a general director who reports to the minister,
 2. **Supervises the health district directors.**

District Health Offices

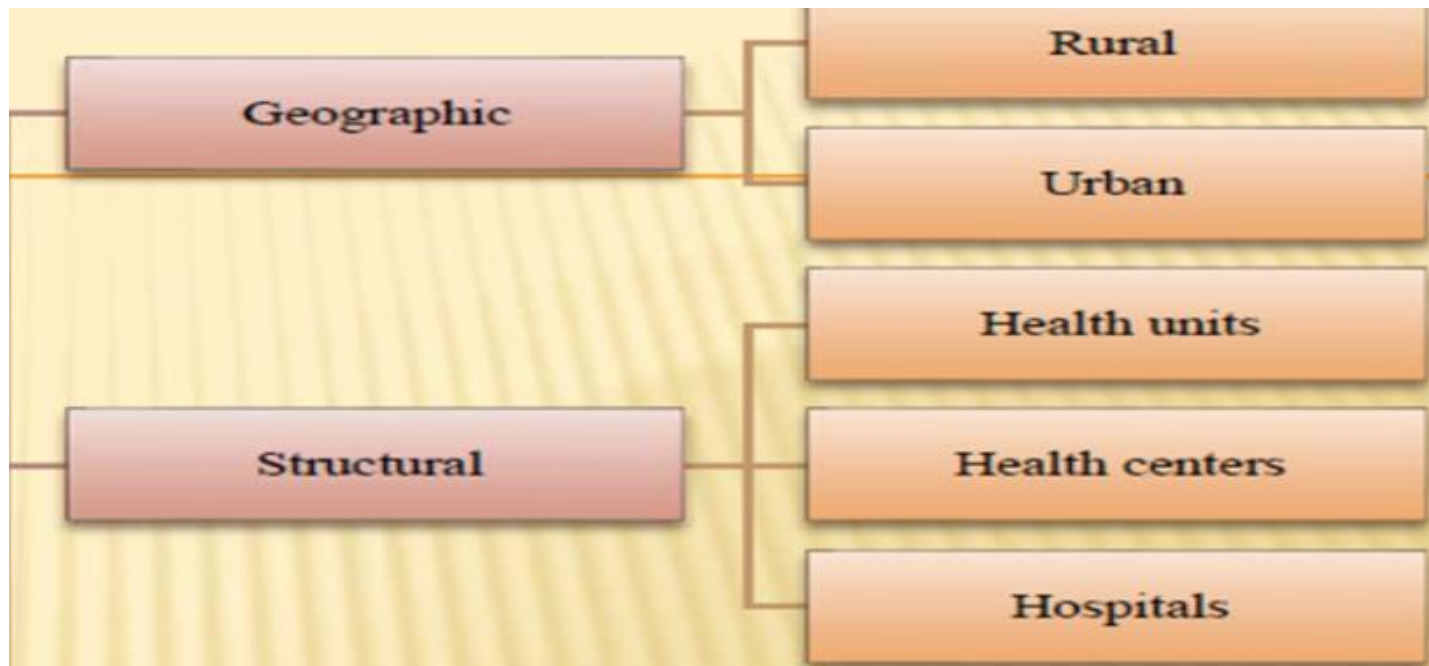
- 230 health districts
- Reporting to the governorate health directorates.
- Each district has a director, who is sometimes the district hospital director

Functions of the MOHP

1. **Policy Formulation and Planning**: Develops national health policies and strategies to address the population's health needs.
2. **Regulation and Oversight**: Regulates healthcare facilities, medicines, and health professionals to ensure quality and safety.
3. **Service Delivery**: Manages public healthcare facilities, including hospitals, PHCUs, and specialized centers.
4. **Health Promotion and Disease Prevention**: Implements programs to promote healthy behaviors and prevent diseases.
5. **Population and Family Welfare**: Addresses population growth and reproductive health issues through family planning and education programs.
6. **Emergency Preparedness and Response**: Coordinates responses to public health emergencies and disasters.

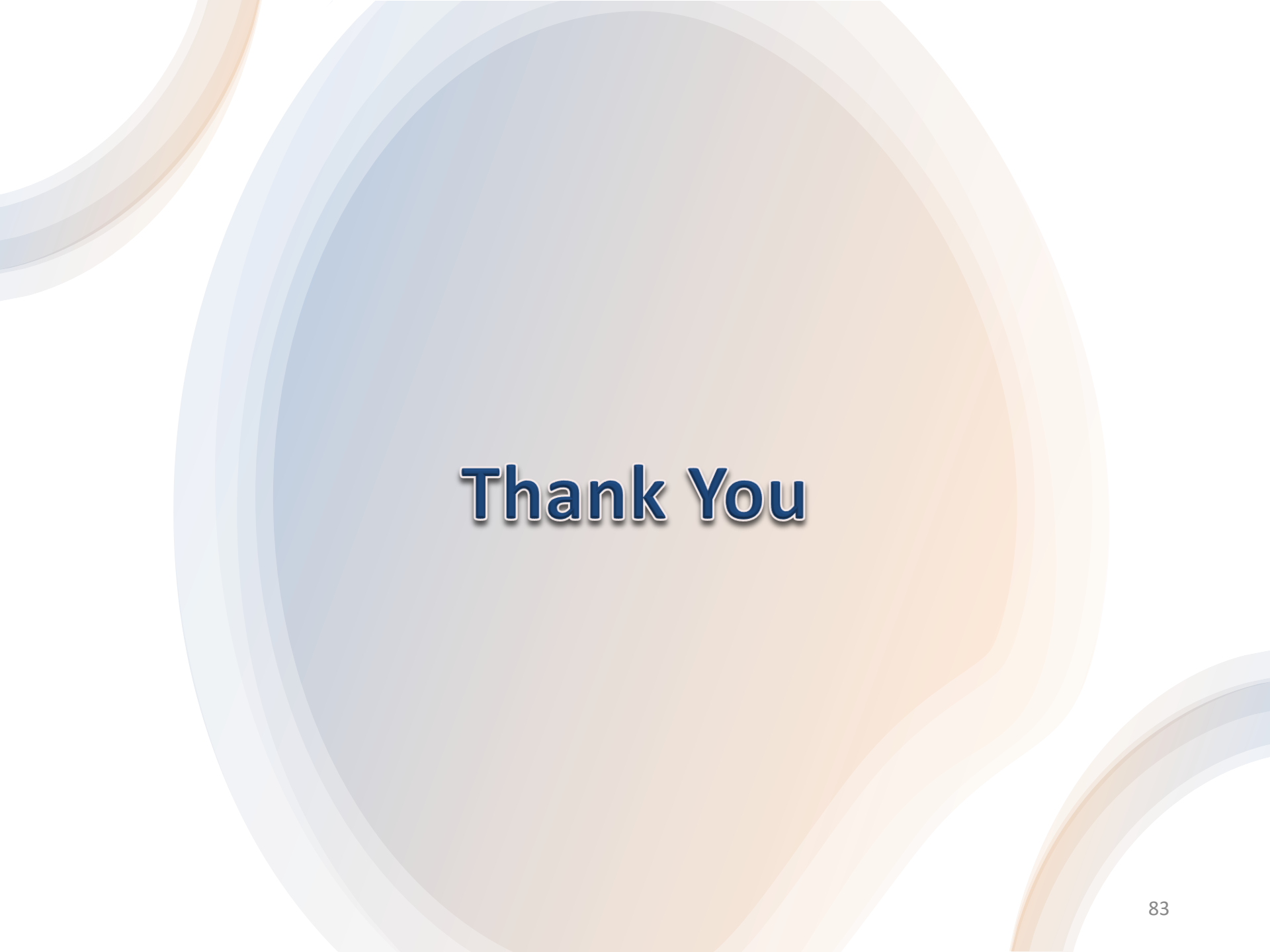
Ministry of Health and Population

- Major provider of Preventive Services
- Curative care in Egypt (5,000 health facilities and more than 80,000 beds spread nationwide).



Types of Services Provided by MOHP

- 1. Primary prevention** in form of health unit in urban or Maternal child health center or health offices while in rural in form of rural health unit or rural health or family center. It manage 80% of community health problems. “Cheap & cost effective”
- 2. Secondary prevention** in form of health center in urban or rural or to district hospital in rural or general hospital in urban areas. Manage 15% of complicated cases and it is “Expensive”
- 3. Tertiary prevention** in form of specialized hospitals as maternity hospital and it is “highly expensive”



Thank You