

Abderrahmane MIRA University, Bejaia
Faculty of Medicine
Department of Medical Sciences

Module

"Health, Society and Humanity"

COURSE

"HEALTH ECONOMICS

1^{ère} year Medicine (2024-25)

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COURSE 1 :

Introduction to health economics (purpose, methods and issues)

1. LEARNING OBJECTIVES

At the end of this course, students will be able to:

- understand the issues, areas of application and basic concepts of health economics ;
- identify the specific features of the "economic view" of health compared with the medical or epidemiological perspective.
- understand the importance of the concept of "opportunity cost" in determining collective choices.

2. PROGRAMME/CONTENT

The course is structured around four successive themes:

INTRODUCTION: Economics as the science of scarcity

1) **Economic science...**

2) **... to health economics**

3) **Differences and complementarities between medical, epidemiological and economic approaches**

CONCLUSION: Opportunity costs and collective choices

3. DURATION

02 hours.

INTRODUCTION :

Economics as the science of scarcity

- **Most of the needs that human beings have** for food, clothing, shelter, entertainment and culture **cannot be met spontaneously** by nature alone.
- People must therefore **devote time and effort** to exploiting nature and **producing goods to meet their needs**.
- A need is only economic if it **requires material, human or financial resources** to satisfy it.
- It is this **relative scarcity of resources** capable of directly satisfying their needs **that forces people to engage in economic activity** (work, production, etc.), and it is this economic activity that economic science is specifically interested in.
- The fundamental economic problem is therefore that of **RARITY** :
 - because **the resources available** to satisfy our needs and desires are **insufficient**, we cannot obtain everything we want and **we must necessarily make choices**, which forces us to **optimise our decisions**, i.e. to systematically seek and choose the **best possible use of** the resources available.
 - Economics is therefore the **science that explains the choices (trade-offs) made by social actors** (individuals, organisations or institutions) to deal with the problem of resource scarcity.
- This first course will introduce you, as a future healthcare professional, to **economic analysis applied to the healthcare field**.

- In our presentation, we will place particular emphasis on the **important role of the economic perspective in collective choices**.
- The economic approach thus helps to **inform public debate and political decision-making**, particularly by measuring and evaluating the effectiveness and efficiency of the healthcare system and programmes.

1. Economic science...

- In epistemology, a 'science' is defined by its **object of study** and its **method**.

⇒ DEFINITIONS 1: *By its subject matter*

- Economics is the science that studies how people **organise their activities to produce the goods and services they need to satisfy their needs**.
- It therefore studies the way in which humans manage **scarce resources** in order to satisfy **needs that are tending towards the infinite**.
- More specifically, it analyses the *production, distribution and consumption of goods and services (outputs)* that **have a useful purpose** and are produced through the use of **production factors (inputs)**: capital, labour and technical progress.

DEFINITION

Technical progress" is the **improvement of techniques** used in the **production of goods and services**. Technical progress is what **makes the use of labour and capital more efficient**.

Technical progress in healthcare refers to improvements in the techniques and technologies used to diagnose, treat and manage disease, optimising the use of resources and improving patient outcomes.

Examples: 1) **MRI** enables more accurate and less invasive diagnoses. 2) **Telemedicine** improves access to care. 3) **Electronic medical records** facilitate care coordination and reduce medical errors.

⇒ DEFINITION 2: *Through its method*

- It is the science of **optimising the use of the scarce resources** available to the community.
- **OPTIMIZING** means **managing the scarce resources available to the community as effectively as possible**; it means **obtaining the best result (efficiency) with the fewest resources possible**.

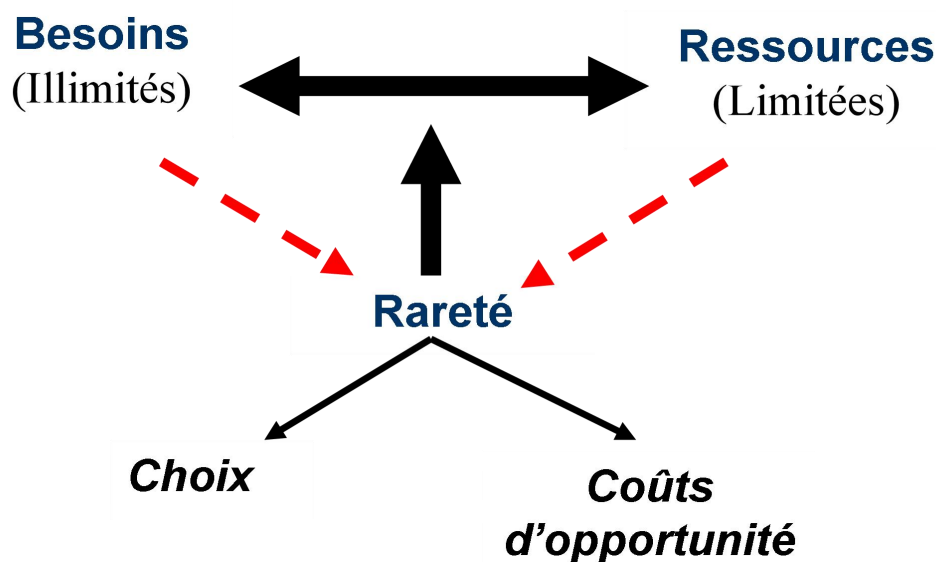
- More specifically, economics seeks to define the conditions for obtaining :
 - ✓ **maximum efficiency (results)** from a given volume of resources;
 - ✓ or the **minimum cost in resources** for a given level of efficiency (results).

N.B. In today's world, the economist is increasingly seen as a **PRESCRIBER OF RATIONALITY**... a particular form of rationality: **economic rationality**, which is increasingly tending to 'spill over' into other social fields (education, health, regional planning...).

BOX 1 :

Economics as the science of the efficient allocation of scarce resources

GENERIC DEFINITION: Economics helps to formalise the trade-offs required to resolve the constant tension between the (potentially) unlimited needs of human beings and the limited resources available.



2. ... to health economics

→ According to DEFINITIONS 1 (By its object of study)

- Health economics is concerned with the **acquisition, dissemination and use of 'health capital' in a population**, through *prevention, care and changes in attitudes*.
- This definition leads us to distinguish :
 - ✓ on the one hand, the **production of utility (output)**: the state of health of the population,

- ✓ and secondly, the **resources deployed**, the **production factors** (*inputs/inputs*): hospitals, outpatient medicine, drugs, prevention and attitudes influencing states of health.

→ **According to DEFINITIONS 2 (*By its method*)**

- Health economics aims to **optimise the use of resources allocated to health**.
- More specifically, it is looking for :
 - ✓ how to achieve the best **individual or collective state of health** using the **financial, technical and human resources** available;
 - ✓ or how to **minimise the cost of achieving a defined state of health**.
- Whatever the definition adopted, health and the resources mobilised for the sector are clearly part of the **economic approach**.
- Even if the "café du commerce" still asserts that "*health is priceless*", everyone must recognise that **the resources deployed** (which are by definition rare and limited) **have a cost to the community**.
- **Every healthcare system therefore has an economic dimension** that must be taken into account both in *collective choices and in the day-to-day practice of healthcare professionals*.
- The economic approach applies equally to the **analysis of medical techniques** (e.g. the dialysis/transplant trade-off in the treatment of kidney failure), the **selection of the best preventive programmes**, the **organisation of a hospital**, the **rationalisation of care networks** and the **appropriateness of granting marketing authorisation for a new drug** (pharmaco-economics).
- However, **the economy is often poorly perceived by healthcare professionals**. The reasons for this are many and varied:
 - ✓ In the collective unconscious, **the economy is still synonymous with resource rationing and budgetary austerity**;
 - ✓ **The economy is too often equated with trade and profit**, and applying economic reasoning to health means *devaluing life* and *neglecting suffering*;
 - ✓ **health is widely perceived as a right** and should therefore be excluded from **accounting or financial considerations**, etc.

3. Differences and similarities between medical, epidemiological and economic approaches

- In what follows, we will try to grasp the **specific features of the 'economic view' of health** compared with the medical and epidemiological perspectives.
- When faced with a health problem, **different rational approaches** can be used to resolve it. In any healthcare system, at least three types of "rationality" can be identified:
 - **Medical logic**, which focuses on the *diagnosis and treatment of illnesses at an individual level*. It aims to treat each patient as effectively as possible.
 - **Epidemiology**, on the other hand, is concerned with the *health of the population as a whole*. It seeks to identify risk factors and implement preventive measures to reduce the incidence of disease.
 - Finally, there is the **economic and insurance logic**, which is concerned with the *cost of care and how it is paid for*. It aims to optimise available resources and ensure the viability of the healthcare system.
- These rationalities are **often complementary**, i.e. they agree with and reinforce each other. Sometimes, however, they are **contradictory**, in other words, they oppose each other.
- These three logics *interact* constantly and *influence the decisions* taken in the healthcare field. **Understanding how they interact** is essential if we are to grasp the complex issues facing those involved in the healthcare system.
- The table below systematically compares these three approaches and provides an overview of the **different perspectives and methodologies** that structure the healthcare sector.
- This comparative analysis will highlight the fundamental differences between these approaches in terms of the **subjects studied**, the **methods employed**, the **products generated** and the **expected results**.

BOX 2 :

Medical/epidemiological rationale *versus* economic/health insurance rationale

| <i>Approach</i> | Medical | Epidemiological | Economical / Health insurance |
|-----------------------|---|--|--|
| Scale of intervention | Individual | Population | Systemic |
| Object | <ul style="list-style-type: none"> - Medical cases - Individual patient | <ul style="list-style-type: none"> - Patient groups - Population at risk - Pathology | <ul style="list-style-type: none"> - Financial resources - Healthcare systems |
| Methods | <ul style="list-style-type: none"> - Medical history - Diagnosis - Treatment | <ul style="list-style-type: none"> - Carrying out epidemiological surveys - Collecting and analysing epidemiological data | <ul style="list-style-type: none"> - Estimating and analysing costs - Cost-effectiveness analysis - Economic modelling - Management of financial flows (allocation of resources) |
| Products | <ul style="list-style-type: none"> - Order - Hospitalization | <ul style="list-style-type: none"> - Epidemiological study report - Health action plans - Public health programmes | <ul style="list-style-type: none"> - Economic study - Budget plan - Health organisation plan |
| Expected results | <ul style="list-style-type: none"> - Support - Healing - Improving the patient's quality of life | <ul style="list-style-type: none"> - Explanation of causes - Reducing the incidence and prevalence of disease - Control of programmes within the population - Recommendations for implementing or revising health programmes | <ul style="list-style-type: none"> - Optimisation (rational allocation) of resources - Efficiency (result/cost) - Improving access to care - Sustainability of the healthcare system |

A) Medical logic

⇒ This approach focuses on the **individual** and the **specific medical case**. It is characterised by :

- ✓ A focus on the **individual patient** and his or her **particular medical case**.
- ✓ **Clinical methods** such as history-taking, diagnosis and treatment.
- ✓ Concrete products such as **prescriptions** and **hospital admissions**.

- ✓ Expected results focused on **care, cure and improving patients' quality of life.**

B) Epidemiological logic

⇒ This approach **broadens the perspective to include the whole population:**

- ✓ It focuses on **patient groups, at-risk populations and diseases as a whole.**
- ✓ Its methods include **epidemiological surveys and large-scale data analysis.**
- ✓ It produces **research reports, health action plans and public health programmes.**
- ✓ The targeted results include **explaining the causes of diseases, reducing their incidence and prevalence, and improving health programmes.**

C) Economic logic/health insurance

⇒ This approach adopts a **dual systemic and financial perspective:**

- ✓ It focuses on **financial resources and healthcare systems as a whole.**
- ✓ Its methods include **cost estimation and analysis, cost-effectiveness analysis and economic modelling.**
- ✓ It generates **economic studies, budget plans and healthcare organisation plans.**
- ✓ The expected results are to **optimise resources, make the system more efficient, improve access to care and ensure the sustainability of the healthcare system.**

- It should be noted that there is a **difference in scale** (individual / population / system) between these three approaches, which underlines their **complementary nature** in the management and structuring of modern healthcare systems.

- Each logic brings a **unique and essential perspective:**

- ✓ The medical approach ensures that **each patient receives individualised, high-quality care.**
- ✓ Epidemiology provides a **broader understanding of health issues at a population level and guides public health policies.**
- ✓ The economic/health insurance rationale aims to **ensure the viability and efficiency of the healthcare system as a whole.**

- Ultimately, this comparative analysis highlights the importance of an **integrated approach to health** that takes account of these different rationales in order to develop balanced and effective health policies.

- However, this distinction also raises questions about **potential conflicts** between these approaches.

- Here is a series of examples illustrating the potential contradictions between the three logics (medical, epidemiological and economic) in the field of health, with a few historical examples:

⇒ **Medical logic vs. economic logic**

- **Length of stay:** A doctor may wish to keep a patient in hospital for longer to ensure that they make a full recovery, while the economic rationale is to reduce the length of stays to optimise costs.
- **Choice of treatment:** A doctor may prefer to prescribe a more expensive but potentially more effective drug, when economic logic would favour the use of cheaper generics.
- **Historical example - Thalidomide:** In the 1950s and 1960s, this drug was widely prescribed to pregnant women despite doubts about its safety, partly because of economic pressure from pharmaceutical laboratories.

⇒ **Epidemiological logic vs. economic logic**

- **Preventive measures:** Epidemiologists may recommend strict containment measures in the face of an epidemic, while economic logic worries about the consequences for economic activity.
- **Mass screening:** The epidemiological approach may recommend large-scale screening campaigns for certain diseases, while the economic rationale may consider such measures to be too costly in relation to the expected benefits.
- **Historical example - Smoking:** In the 1950s and 1960s, epidemiological evidence of the link between smoking and cancer came up against the economic interests of the tobacco industry.

⇒ **Medical logic vs. epidemiological logic**

- **Individual treatment vs. population approach:** A doctor may want to prescribe a broad-spectrum antibiotic for a specific patient, whereas the epidemiological approach is concerned with the risk of antibiotic resistance at population level.
- **Allocation of resources:** medical logic may lead to investment in costly treatments for rare diseases, whereas the epidemiological approach would favour interventions with a wider impact on public health.
- **Historical example - Vaccination:** In the 19th century, some doctors were opposed to compulsory vaccination against smallpox, arguing in favour of individual freedom of choice, while epidemiologists supported the measure for its collective benefit.

- These examples show that the three logics *can come into conflict*, often necessitating **complex trade-offs** in public health decision-making.

CONCLUSION: The concept of opportunity cost and its implication for collective choices

- In economics, the allocation of productive resources is based on the concept of "opportunity cost".
- The opportunity cost corresponds to the **set of goods and services** that an economic agent **must forego** if he chooses to consume a particular good or service, given that **the resources at his disposal are limited**.
 - ⇒ **Ex. 1:** *Buying a car* has an opportunity cost because you have to forego other expenses, such as travelling, buying clothes or repainting your flat.
 - ⇒ **Example 2:** A patient who is deciding between having *dentures* made for himself or offering *private lessons to his child*.
- Similarly, the **money allocated to healthcare** has an 'opportunity cost' in terms of **spending on education, infrastructure** and even **ordinary consumption**.
- So *how should resources be allocated?* This is the central problem facing economists.
- The same resources are in fact coveted by different needs or sectors of the national economy: *how should collective resources be allocated? What should be prioritised?*
 - ✓ **Agriculture**, to produce more food for the population?
 - ✓ **Hydraulics**, to connect all residents to the public drinking water and wastewater network?
 - ✓ **Industry**, to guarantee a job for every citizen of working age... or a car for every household?
 - ✓ **National defence**, with a view to modernising the country's defence 'shield' by buying more guns and aircraft?
 - ✓ **National education**, to raise the school enrolment rate and combat illiteracy?
 - ✓ ... **Health**, to bring health facilities closer to the population, improve the quality of care and enable Algerians to live longer?
- In a (normally constituted?) democracy, "**society**" imposes **strict controls** on what is known as **public spending** (which includes spending by the **central state, local authorities** and **social security administrations**).

- In today's healthcare systems, **funding is largely socialised** (*taxes and social security contributions make up the bulk of funding*).
- Based on this concept of 'opportunity cost', the aim of health economics is to **shed light on collective choices** in terms of :
 - ✓ **the allocative efficiency of public spending:** by indicating the various options for achieving an optimal distribution of resources between the various public services
 - ⇒ *How much should be allocated to the health system?*
 - ✓ and **the productive efficiency of healthcare expenditure:** by ensuring that the resources made available to the healthcare system are well used, providing the best possible return for society.
 - ⇒ *Are the resources allocated to the healthcare system being used wisely?*