Faculty of Medicine

Health Economics and Policies

(31505391)

The scope of Economics and Health Economics

By

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MD  MPH  JBCM  PhD

12+14  -02-  2018
Course Content 31505391

- **Week 1** Introduction to Course introduction to Health: health value, health determinants.
- **Week 2** Introduction to: Health care management Health Policy and Healthcare Delivery.
- **Week 3** The scope of Economics and Health Economics.
- **Week 4** Demand and Supply Demand for Medical Care. Supply of public health.
- **Week 5** The Market for Health Insurance.
- **Week 6** Financing health care Economic in Health Policy Cost and price.
- **Week 7** Health systems performance analysis. Measurement and evaluation in health care.
- **Week 8** Midterm assessment (Exams.) 21-3-2018
- **Week 10** Economic evaluation. Economics and efficiency cost analysis and cost effectiveness.
- **Week 11** Economic effects of Bad habits including smoking and alcohol consumption.
- **Week 12** Quality Improvements in healthcare delivery Methods to improve health care delivery.
- **Week 13** Human resources in Healthcare delivery.
- **Week 14** Health Markets and Regulation and Economic regulation of health markets.
- **Week 15** Final assessment (Exams.)
Week 3

• Introduction to and key concepts in Health Economics
• Scarcity, Opportunity cost, Marginal analysis, Self interest, Market, Supply and demand, Competition, Efficiency, Market failure
• Describe the fundamental tenets of economics.
• What is economics and its types.
• Transport economics, Welfare economics,
• Branches of economics: Macroeconomics versus microeconomics. Normative versus positive economics
• Why health economics is important?
• What is health economics; Choice under Scarcity;
• The Economics of Health Systems
• Macroeconomics and health
• What methods to economists use?
• Basic concepts in health economics (DALY, QALYs, cost-benefit, cost-effectiveness analysis).
• Health economics ‘map’
# Presentation outline

**12-2-2018**

<table>
<thead>
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<tr>
<td>Introduction to and key concepts in Economics</td>
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<tr>
<td>Fundamental tenets of economics</td>
<td>08:20 to 08:30</td>
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<td>Types and Branches of economics</td>
<td>08:30 to 08:40</td>
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<td>Macroeconomics versus microeconomics.</td>
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<td>Normative versus positive economics</td>
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<td><strong>GLOBALIZATION OF ECONOMIS</strong></td>
<td>08:40 to 08:50</td>
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What will a healthier world cost?
Increasing investments over 15 years up to
$371 billion
each year or $58 per person per year by 2030

SDG HEALTH PRICE TAG IS UP TO $371 BILLION/YEAR

World Health Organization
www.who.int
WHAT IS ECONOMICS?

- Economics is the **science of scarcity**.
- It analyses how choices are structured and prioritized to maximize welfare within constrained resources.
- Economics is the **study** of distribution of scarce resources commonly known as goods and services across a population.
WHAT IS ECONOMICS?

- The Economics is the science that deals with the consequences of resources scarcity.

- The discipline of economics deals with use of scarce resources to satisfy human wants and needs how best to use the resources available.
Definitions of Economics

– The study of **how men and society end up choosing to employ scarce resources that could have alternative uses.** (Samuelson)

– Economics is the study of **how people allocate their limited resources in an attempt to satisfy their unlimited wants.**
WHAT IS ECONOMICS?

• *Choosing between* which ‘wants’ we can ‘afford’ given our resource ‘budget’
Economics is because:

• Resources are scarce
• What we “want” is unlimited
• Therefore involves “choice”
• Maximize benefits / minimize resources = efficiency
• Weigh-up relative benefits of each course of action and choose the action which maximizes well-being
What is “Economics”? 

Economics is ...

• concerned with money?

• the same as accountancy?

• only practised by economists?

• objective???????????????????
Pessimist: bottle ½ empty

Optimist: bottle ½ full

Economist: bottle ½ wasted inefficient!
Economics and Money

ECONOMICS = costs (resource use)
benefits
choice
efficiency

MONEY = store of value
means of exchange
Economics ≠ Accountancy

ECONOMICS = costs (resource use)
  benefits
  choice
  efficiency

ACCOUNTANCY = monitor of financial transactions
Only Economists Practice Economics?

ECONOMICS = costs (resource use) benefits

CHOICE

efficiency

Weigh-up relative benefits of each course of action and **choose** the action which maximises well-being.
Economics ≠ Objective

All decisions are based on subjective value judgements.

*Economics makes these explicit.*
Task of Economics

Descriptive = quantification
Predictive = identify impact of change
Evaluative = relative preference over situations
Three Major Tasks Of Economics.

i. **Descriptive Economics**;

- Refers to the identification, definition, and measurement of phenomena.
- Concerned with determining the nature of the phenomena as well as obtaining estimates of their magnitudes.
- No explanation.
Three Major Tasks Of Economics.

ii. **Explanatory Economics**;

- Involves explaining and predicting certain phenomena.
- Conducting an analysis in a cause-effect format.
- Performed with the aid of models that classify various causal factors in a systematic framework (e.g. the health status and the price of the medical services).
Three Major Tasks Of Economics.

iii. **Evaluation**;

- Involves judging or ranking alternative phenomena according to some standard.
- An acceptable standard must be obtained.
- Based on this standard, alternative ways of using scarce resources are then ranked.
- In choosing the standard, one major criterion is acceptability.
KEY ECONOMIC CONCEPTS

• **Resources.** These represent inputs into the process of producing goods. They can be classified into three main elements:
  - labor, capital and land.

Resources are generally **valued in monetary terms.**

• **Utility.** The happiness or satisfaction an individual gains from consuming a good.

• **Welfare (or social welfare).** The economic criterion on which a policy change or intervention is deemed to affect the well-being of a society.
KEY ECONOMIC CONCEPTS

Efficiency

• the allocation of scarce resources that maximizes the achievement of aims. A general term used to describe the relationship between inputs and outputs. It is concerned with maximizing benefits with the resources available, or minimizing costs for a given level of benefit.

three types

• Technical efficiency --relationship between resource inputs and outputs.

• Economic efficiency --Technical efficiency is only concerned with how many inputs are used in production, while economic efficiency is related to the cost of those inputs.

• Social efficiency is a much broader concept. Both technical efficiency and economic efficiency concern production, and if the supply side of the market achieves economic efficiency in every market, there is allocative efficiency in production for the economy as a whole.
KEY ECONOMIC CONCEPTS

Equity

• Equity is always an important criterion for allocation of resources

• equal use of health services for equal needs for health care

• equal use of health services for equal willingness to pay for that use

• equal health outcomes for equal merit

• equal health care payments by people for equal ability to pay for that health care

• equal expenditure on people for equal health deficit
KEY ECONOMIC CONCEPTS

• **Scarcity** addresses the problem of **limited resources and the need to make choices**. Rationing is unavoidable because not enough resources are available for everyone’s needs. Therefore we are to choose among competing objectives—as result of scarcity.

• **Opportunity cost** recognizes the role of **alternatives**. The cost of any decision or choice made is measured in terms of the **value placed on the opportunity foregone**.
KEY ECONOMIC CONCEPTS

• **Self-interest** is the **primary motivator** of economic actors. People are motivated to pursue efficiently in the production and consumption decisions made.

• The **Market** accomplishes its tasks through a system of prices, *or the invisible hand*. The invisible hand can allocate resources because everyone and everything has a price. **Prices increase when more is desired, and decrease when less is desired.** The price mechanism becomes a way to bring a firm’s output decision into balance with consumer desires, which is the role of equilibrium.
• **Supply and demand** serve as the foundation of economic analysis. Pricing and output decisions are based on forces underlying these two economic concepts. Rationing using prices comes about when goods and services are allocated in the market based on the consumers’ willingness to pay and the suppliers’ willingness to provide at a given price.

• **Competition forces resource owners to use their resources** to promote the highest possible satisfaction of society: consumers, producers, and investors. If the resource owners do this well, they are rewarded. If they are inefficient, they are penalized. Competition takes production out of the hands of the less competitive and places into the hands of the more efficient.
KEY ECONOMIC CONCEPTS

• Efficiency measures how well resources are being used to promote social welfare. Inefficient output wastes resources while efficient use of scarce resources promotes social welfare. Social welfare is promoted through the competitive markets via the relatively independent behaviors on the part of thousands of decision makers.

• Consumers attempt to make themselves better off by allocating limited budgets. Producers maximize profits by using cost-minimizing methods.

• Market failure arises when the free market fails to promote efficient use of resources by either producing more or less than the optimal level of output. Sources of market failure include: natural monopoly, oligopoly, externalities of production or consumption, and public goods. Other market failures can occur through violations of the competitive market, such as incomplete information and immobile resources (Santerre and Neun, 2004).
MODELS

- to establish cause and effect in a scientific manner

POSITIVE ECONOMICS

- establishing the means by which socially desirable outcomes can be achieved

NORMATIVE ECONOMICS
MODELS

• Positive economics is **objective** and fact based, while
  normative economics is **subjective** and value based.

• Positive economic statements must **be able to be tested and proved or disproved**.

• Normative economic statements are **opinion based**, so they **cannot be proved or disproved**.

• In fact, many widely-accepted statements that people hold as fact are actually value based.
MODELS

• For example, the statement, "government should provide basic healthcare to all citizens" is a normative economic statement.

• There is no way to prove whether government "should" provide healthcare; this statement is based on opinions about the role of government in individuals' lives, the importance of healthcare, and who should pay for it.

• The statement, "government-provided healthcare increases public expenditures" is a positive economic statement, as it can be proved or disproved by examining healthcare spending data in countries, where the government provides healthcare.
Branches of economics

Macroeconomics versus microeconomics

• A major distinction is made between macroeconomics, which studies the functioning of the economy as a whole,

• and microeconomics, which analyses the behavior of individual components like industries, firms and households.
Microeconomics

• Centers on the forces working at the individual level (e.g. individual firms and consumers)
• Focuses on the needs, desires and buying habits of the individual consumer
• An example: studying how firms react to increasing costs of production by raising the price and subsequently how consumer/household spending is adjusted when the price rises
• Name of the game: Supply, Demand and Markets
Macroeconomics

• The sum total of all micro parts
• Looks at the aggregate (sum or total) of individual markets
• The four main areas of study

(1) Growth (increase in total output)
(2) Price level (inflation)
(3) Labor Markets (unemployment)
(4) The balance in the foreign sector (exports/imports, exchange rates)
Examples of Micro vs. Macro

• MICRO
  Firm’s reaction to increased demand for its product

• MACRO
  Studying the effects on all firms in the economy due to a general increase in demand
Examples of Micro vs. Macro

• MICRO
  Decision of a worker to work less due to lower wages

• MACRO
  Total hours of labor (and unemployment)
Examples of Micro vs. Macro

• MICRO
  The effects on an industry (group of firms producing similar goods) due to higher labor taxes

• MACRO
  Effect on total production in the economy due to taxes
Examples of Micro vs. Macro

- MICRO
  Government legislation aimed at monopolies

- MACRO
  Government legislation aimed at increasing taxes on profits for all firms
From ECONOMICS to GLOBALIZATION OF ECONOMICS AND DEVELOPMENT

• Economics - The social science that deals with the production, distribution, and consumption of goods and services and with the theory and management of economies or economic systems.

• Macroeconomics - The study of the overall aspects and workings of a national economy, such as income, output, and the interrelationship among diverse economic sectors.

• Megaeconomics — It studies the interaction of national economies through comparative analysis of the economic systems.

• International Economics - A branch of economics that studies economic interactions among different countries, including foreign trade (exports and imports), foreign exchange (trading currency), balance of payments, and balance of trade. The study of international economics focusses on two related areas - international trade and international finance.
Conceptual framework for identifying the macroeconomic impact of disease
Some conclusions

• “Global” – a new scientific category, which treats the processes and events on a global scale
• “Globalization” – an approach which expands and deepens the economic theory as well as other scientific fields

• **Subject of globalizations are:**
  - global companies;
  - regional structures;
  - the state;
  - international economic organizations
GLOBALIZATION OF ECONOMIS

• Globalization – Interdisciplinary subject which relates to all branches and fields of knowledge

• Main objectives of the study of Globalization of economics and development: THINK GLOBALLY AND ACT LOCALLY!

So knowledge about globalization is important part of your academic knowledge!
Stop and THINK
## Presentation outline

**14 -2- 2018**

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<td>Why health economics is important?</td>
<td>08:00 to 08:20</td>
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<td>Health Policy Issues and economics</td>
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<td>Types of economic problems in the health sector</td>
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Economics is about choice

Good ‘A’

Good ‘B’

Budget
Topic Versus Discipline

**TOPIC** = area of study

**DISCIPLINE** = conceptual apparatus

Health economics is the *discipline* of economics applied to the *topic* of health.
Why is it important?

1. The size of the health economy is large and growing
2. Role of government in the health care markets
3. Medical Market is difference from other markets
Medical advances

Due to increase in life expectancy

Changes in family structure and norms

Advances in health research

Higher expectation among people

public awareness

NEED FOR HEALTH ECONOMICS
What will a healthier world cost?

Increasing investments over 15 years up to

$371 billion

each year or $58 per person per year by 2030

SDG HEALTH PRICE TAG
IS UP TO $371 BILLION/YEAR

SDG HEALTH PRICE TAG
www.who.int

World Health Organization
Investing in stronger health systems could add up to 8.4 years of life expectancy.
Countries are facing a financing gap of up to $54 billion a year to achieve the SDG health targets.
85% of the costs of reaching the SDG health targets can be met with domestic resources.

SDG HEALTH PRICE TAG
www.who.int
Investments in health systems could prevent 97 million premature deaths by 2030
What is “Health”?

World Health Organization:
Health is a “state of complete physical, mental and social well-being.”

“Health Economics” is often “Health Care” Economics.
Health care and economics

1. Which goods and services to produce?
   • E.g. How many resources should be allocated to the different specialties? Should cosmetic surgery or infertility treatment be provided at public expense?

2. How to produce the goods and services?
   • E.g. Will the mentally ill be cared for in small community based units or in large hospitals? What proportion of surgical procedures will be carried out on a day care basis?

3. Who receives the good and services?
   • E.g. Should the state provide health services only for the poor? When funds are scarce will preference be given to patients of fund holding practitioners?
Why it is important for the medical students or medical practitioner to have knowledge about Health economics?

I. Important similarities between physicians and economists:

• 1. Realistic approach to life’s problems, both are dealing with human life
• 2. Reliance on quantitative information (dealing with numbers).
• 3. Often must take difficult choices in the face of uncertainty.
• 4. Good decision requires comparing benefits and risks (cost)
Why it is important for the medical students or medical practitioner to have knowledge about Health economics?

II. Differences between physicians and economists:

1. Physicians are usually concerned about individual patients.

2. Economists are usually concerned with large aggregations:
   - Organizations and institutions
   - Industries
   - Governments
   - Society as a whole
Why it is important for the medical students or medical practitioner to have knowledge about Health economics ?????

III. Advances in knowledge

Comes in many forms, in different types of researches:

1. new diagnostic procedures MRI and CT scan
2. New therapeutic procedures
3. New drugs
4. New uses for old drugs: Aspirin to prevent acute myocardial infarction
5. New understanding of diseases: Smoking causes lung cancer, Fatty diet related to hypertension
Why it is important for the medical students or medical practitioner to have knowledge about Health economics?

IV. Against a background of :-

• Health economics is exerting an influence on decision making at all levels of health care.

• **Health economics seeks to facilitate decision making** by offering an explicit decision making framework based on the principle of efficiency.

• It is an important one and practitioners **will need to have an understanding of its basic principles and how it can impact on clinical decision making.**
Why it is important for the medical students or medical practitioner to have knowledge about Health economics ????

V. Contribution of economics in health care services:

1. **Quantifying** over time the resources used in health care services delivery.

2. **Asses efficiency** with which resources are allocated and used for health care purposes.

3. **Determination of the consequences of particular choices in terms of preventive, curative and rehabilitative health care services on individuals and society.**

4. Assist the **choice of future development.**
Why it is important for the medical students or medical practitioner to have knowledge about Health economics?

- Health care can form a significant part of a country's economy.
- In 2008, the health care industry consumed an average of 9.0% of the gross domestic product (GDP) across the most developed countries.
- GDP: The monetary (economic) value of all the finished goods and services produced within a country's borders in a specific time period, is usually calculated on an annual basis (in a given year).
- GDP is commonly used as an indicator of the economic health of a country, as well 9/18a/2s01 6indicator of counAstsirstyant' sPr osfestsaor nEmdana Alr- Kdam iol f living.
Why it is important for the medical students or medical practitioner to have knowledge about Health economics

- Within the MENA region (Middle East and North Africa), Jordan is second to Lebanon in the total expenditure on health;
- As Gross Domestic Product with 9 percent of its GDP going for health.
- In 2005 the real health spending, adjusted for health care inflation, increased by 30 percent, from 449 million JD in 1998 to 671 million JD in 2003.
Health economics?

• Health economics is a branch of economics concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and health care.

• In broad terms, health economists study the functioning of the health care systems as well as health-affecting behaviors such as smoking.
DEFINITIONS OF HEALTH ECONOMICS

- Health economics is the **study of distribution of health care**. It is a branch of economics concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and health care.

It is the **allocation of resources within the health system** in the economy, as well as functioning of health care market.
DEFINITIONS OF HEALTH ECONOMICS

Health economics is concerned with the **formal analysis of costs, benefits, management, and consequences of health and health care.** It is the branch of economics concerned with the application of economic theory to phenomena and problems associated with health and health care.
• Health economics is an application of economic theory, models, and empirical techniques to the analysis of decision making by individuals, healthcare providers, and governments with respect to health and health care.

• It is a branch of economic science—but it is not merely the application of standard economic theory to health and health care as an interesting topic.
CONCEPTS IN HEALTH ECONOMICS

- Resources
- Scarcity: opportunity of cost efficiency, production of health
- Health care market
Goods.

These are the outputs (such as health care) of a production process that involves the combining of different resources such as labor and equipment. Goods (including services) are valuable in the sense that they provide some utility to individual consumers. They are termed ‘goods’ as they are desirable.
CONCEPTS IN HEALTH ECONOMICS

- Macro-economics
  - Level of national income
  - Economy level of outputs
  - General price level

Macro-economics

69
Microeconomics

- Microeconomics is the study of economic behavior of individual decision making units such as: consumers, resource owners and business firms in a free enterprise economy.

- This can be measured by conducting market surveys, pilot and feasibility studies.
Health Microeconomics

Health microeconomics is concerned with how individuals choose, minimize costs or maximize profit or utilities within a given health care system within a set of rules and prices.
COMPONENTS OF HEALTH ECONOMICS

• Meaning and scope of health economics
• Determinants of health
• Demand for health and health care  Supply of health care
• Health care markets

• The relationship between economic growth and health
• Health sector budgeting and planning

• National health systems

• Equity in health outcomes and in health care
• International health.
ECONOMICS AND POLICY

• **Understanding what economics** can and cannot do is the first and possibly **most important step in using economics as a tool of health policy.**

• Economics can offer a **framework to study the implications of individual decision making** and help define the alternative mechanisms available to improve resource allocation.

• **It cannot be used to solve all problems of healthcare access and delivery.**
HEALTH POLICY ISSUES

• Health and economic development

• Organization and economic development

RELEVANCY OF ECONOMICS

• To identify and measure health and diseases, basic needs. To identify determinants of growth and economic development, elements of health expenditure by use of macro economics

• To determine the economic characteristics of health care and Health related activities
HEALTH POLICY ISSUES

• Finance aspects of health sector

• Demand analysis

RELEVANCY OF ECONOMICS

• To find out the source of health care financing; social accounting system, self financing insurance etc.

• To analyze the determinants of demand, individual and supplier induced behavior, time, cost, health payment system etc.
HEALTH POLICY ISSUES

- Supply analysis
- Health man power

RELEVANCY OF ECONOMICS

- To determine the physical resources and costs, estimation of short term And long term cost curve
- To determine the labour market and demand for & supply of health workers, remuneration and other determinants of behavior, productivity etc
HEALTH POLICY ISSUES

• Financial management

RELEVANCY OF ECONOMICS

• Budgeting system and accounting, inventory management
Major Tasks of Economics In Health (Care)

- Descriptive Quantification
- Explanatory or Predictive
- Evaluative
FEATURES OF HEALTH ECONOMICS

- Health and medical care is considered as economic goods
- Health is a private or a public good
- Measurement of health is also considered in economics
- Stock of health
- Investment aspects of health
FEATURES OF HEALTH ECONOMICS

- Loss due to ill health.
- Resource costs of different diseases, effects of health and medical care provision.
- Planning of health and medical care.
- Choice of technology in health care system, etc.
- Provision of equity in health outcomes and health care.
FACTORS INFLUENCING HEALTH ECONOMICS

- Extensive government intervention
- Intractable *uncertainty* in several dimensions
- Information asymmetric
- Barriers to entry
- Externalities *and the presence of a third-party agent*
Roots of health economics

Emerged as a sub discipline of economics in the 1960s with the publication of two important paper:


• Concerned with the health market not with health or health status.
Health Economics,
Why is it important?

1. The size of the health economy is large and growing
2. Role of government in the health care markets
3. Health care market is difference from other markets
4. Externalities
Why is it important?

Health economy is large and growing

Figure 1-1
US Health Expenditures Shares, 1960-2003

Expenditures as a % of GDP

Year

Personal Expenditures

• Medical care is the largest category.
  – Most of this is for hospitals/nursing homes
  – Need to think how policy affects this category
    • Uninsured go to emergency rooms

• In 1960 food was 25%, housing 15%, and medical care 5%.

• There has been a big shift in spending patterns. May represent a richer society.
Medical care prices (CPI), 1960-2004
## Personal Consumption, 2001

<table>
<thead>
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<td>Food and Tobacco</td>
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<tr>
<td>Housing</td>
<td>14.3</td>
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<tr>
<td>Medical Care</td>
<td>18.2</td>
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<tr>
<td>Hospital and nursing</td>
<td>7.3</td>
</tr>
<tr>
<td>Transportation</td>
<td>11.4</td>
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<tr>
<td>Household Operation</td>
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<tr>
<td>Recreation</td>
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<tr>
<td>Clothing</td>
<td>5.9</td>
</tr>
<tr>
<td>Other</td>
<td>15.6</td>
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Source: FSG Table 1.2
Role of Government

Participate because of market failures

• Demand side
  – Provision of insurance
  – Effort to affect health behavior

• Supply side
  – Price controls
  – Restriction of entry/exit
  – Subsidize research
  – Tax policy

and much more ...
US health care spending, 2003
Government is 45 % of total health spending

Types of economic problems in the health sector

• At what level should hospital fees be set?
• Are taxes on cigarettes a useful way of promoting health through reducing the prevalence of smoking?
• Which is the more effective method of increasing the take-up of health services: price controls or subsidies?
• How should doctors be paid?
• Which treatments are the most cost-effective for people with HIV?
Types of economic problems in the health sector

There are four specific questions that are the primary concern of economics:

- **What goods are being produced and in what quantities?** (For example: what types of malaria prevention measures are being implemented and how much of each type?)
- **How are these goods produced?** (What resources are required to produce these malaria prevention measures?)
- **How is society’s output of goods divided among its members?** (Who has access to these measures?)
- **How efficient is society’s production and distribution?** (Can we get the same amount of protection from malaria using fewer resources? Would an AIDS awareness campaign be a more effective use of resources than malaria prevention?)
Health economics ‘map’

- H. Micro-Economic Appraisal
- E. Market Analysis
  - A. What is Health? What is its value?
  - B. What influences Health? (other than health care)
  - C. Demand for Health Care
  - D. Supply of Health Care
- F. Macro-Economic Appraisal
- G. Planning, budgeting, regulation mechanisms
A: Value of health

THE WIZARD OF ID

THE BAD NEWS IS, YOU'RE GOING TO BE IN PAIN

WHAT'S THE GOOD NEWS?

...FOR A LONG TIME
B: Demand for health (Grossman)

Investing in health

**Inputs**
- Health Care
- Diet
- Exercise
- Environment
- Income
- Time

**Production Process**
- Health Stock

**Output**
- Healthy Days
C/D/E: Supplier-induced demand

![Graph showing supplier-induced demand]
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Thank You