Healthcare Market

Dr Leandro Pecchia – 30/1/2018

Lecture goal

- *Introduce the concept of Market*
- *Health as duty or right?*
- *Discuss why healthcare is not an ideal market*
- *Asymmetric knowledge in health*
- *(…why we need HTA?)*

BME&MP and HTA

- *BMEs are increasingly involved in HTA*, collaborating with economists, medical doctors, nurses, pharmacologists, patients, healthcare managers.
- BMEs contribution to HTA is peculiar because *BMEs are involved also in the design* of health technologies and particularly medical devices
- The *European Economic and Social Affairs Committee's* (EESC) of the *European Commission* stated recently that:
    - *"Biomedical Engineering is not simply a subset of modern medicine. Modern medicine predominantly secures important advances through the use of the products of biomedical engineering"**

* EESC, *Promoting the European single market combining biomedical engineering with the medical and care services industry*, 23rd April 2015, http://www.eesc.europa.eu/?i=portal.en.ccmi-opinions.32831

Definition of health technology

- **Health Technology,** according to WHO definition, refers to any application of organized knowledge and skills in the form of medicines, medical devices, vaccines, procedures and systems developed to solve a health problem and improve quality of life.

- **Health technology assessment (HTA)** refers to the systematic evaluation of properties, effects, and/or impacts of health technology. It is a multidisciplinary process to evaluate the social, economic, organizational and ethical issues of a health intervention or health technology. The main purpose of conducting an assessment is to inform a policy decision making.

- *“the "problem" of the assessments is considered only when the technology is close to its placing on the market and not during R&D process”* (WHO*)

*WHO web site (last access 15.09.2012): http://www.who.int/medical_devices/assessment/en/

Healthcare is not and ideal market

What is it a market?

"human beings have unlimited wants/needs but limited resources with which to meet those wants/needs. Given the limited resources, human beings constantly make decisions that require trade-off."

Is this relevant for health?

"NHA has limited budget, sometime scarce. The budget is planned in advance, and the health needs for that period of time, need to be satisfied with the given budget"

- **Market:** any situation where buyers (consumers) and sellers (producers) interact (directly or through intermediaries), trading goods & services.
- **Supply** is the total amount of a product (good or service) that producers (sellers) are willing and able to produce/sell at a specified price.
- **Demand** is the total amount of a good or service that consumers are willing and able to purchase at a given price.
- **Market forces** of supply and demand represent the aggregate influence of self-interested buyers and sellers on prices and quantities of goods and services offered in a market: demand and supply interact to determine prices of goods and services being exchanged.

Ideal market equilibrium

What is it an ideal market?

A market is ideal under several conditions (perfect competition):

- Perfect market information
- No participant with market power can set prices
- Non intervention by governments
- No barriers to entry or exit
- Equal access to factors of production
- Profit maximization
- No externalities (other benefits/costs for non choosing a product/service)

General equilibrium theory: on the assumption of Perfect Competition, and some technical assumptions about the shapes of supply and demand curves, *it is possible to prove that a market will reach an equilibrium* (Pareto optimum), in which sellers and consumers are at the best possible level of utility.

Healthcare is not and ideal market

- **Market structure:**
  - number and size of provides is not sufficient
  - Access to market for provided is limited and ruled by MoH
  - Product differentiation: some hospital are more prestigious than other
- **Demand derivation**
  - Health market is not ruled by “consumer satisfaction” but “health preservation”
  - The final achievement (health) is not marketable (cannot be passed to other)
  - Low market force (demand does not affect the prices or quantity)

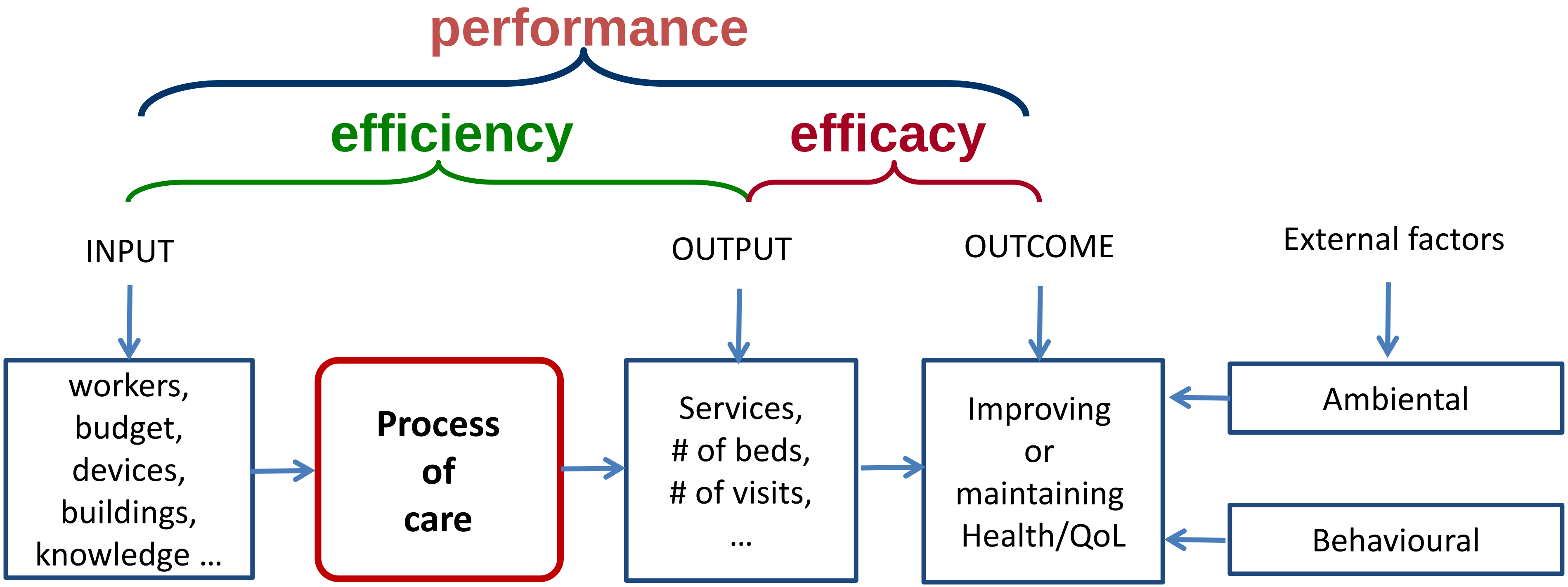
Healthcare is not and ideal market

- **Information asymmetry:**
  - *Medical Doctors:*
    - Have a deep knowledge of the medical problem, but not of all the patients and not of all the technologies
    - Cannot be 100% sure of results
    - Are the suppliers, but they also act on behalf of the patient…

      … demand and supply are jointly determined
  - *The patients*
    - they lack necessary information about their illness
    - they lack necessary information about the effective healthcare technologies
    - Not completely free of choosing
    - Are not consistent, non stationary, not fully transitive (A>B, B>C, A?C)
    - Final users of the healthcare technology, but not those that directly pay for it
  - *Suppliers*
    - Not all are profit-oriented (e.g. hospitals)

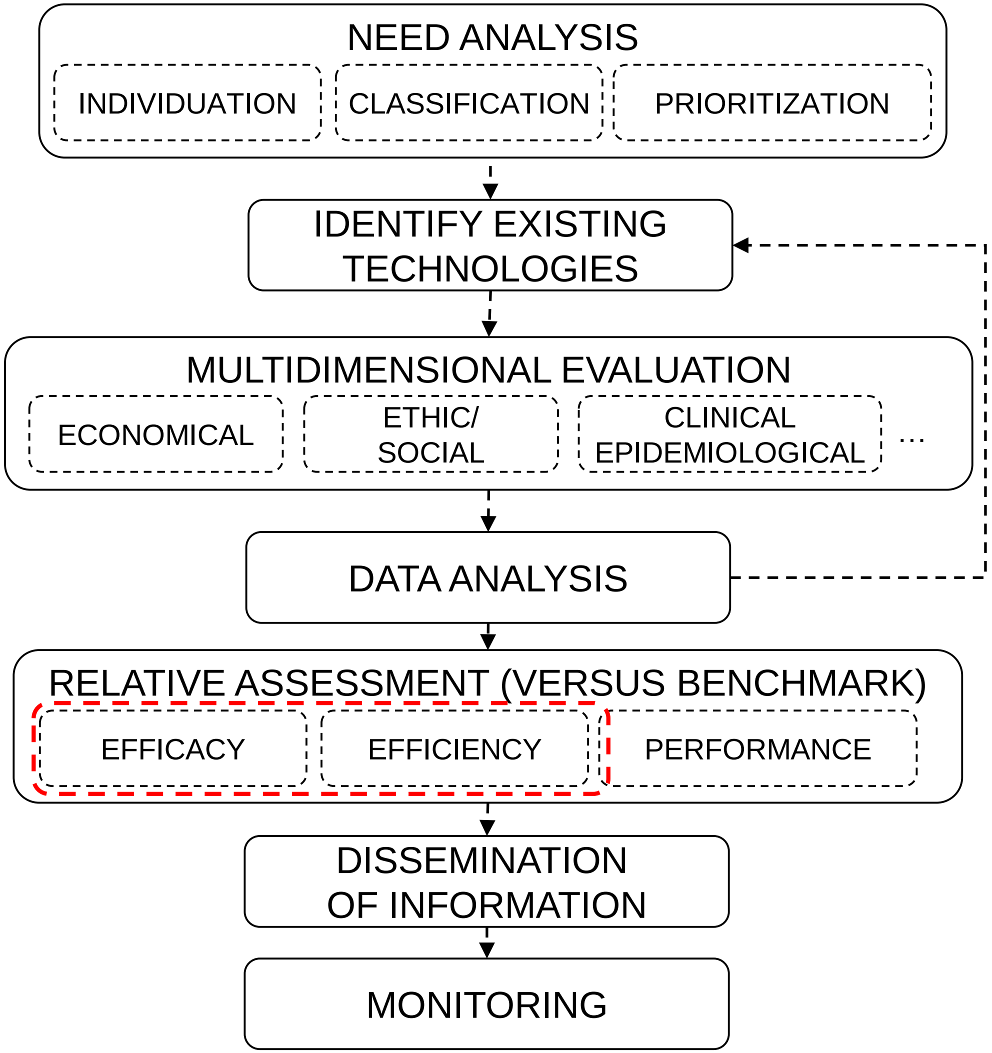
HTA

Performance, efficiency, efficacy



$$Efficiency = \frac{output}{input} \quad Efficacy = \frac{outcome}{output} \quad Performance = \frac{outcome}{input}$$

HTA standard methods



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