



تنوير

HEALTH ECONOMICS

Title : اخر جزء ب topic 10

Lecture no :

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CEA differs from cost-benefit analysis CBA and cost-utility analysis CUA in that:

لوحه جدا

* الاختلاف حسب الـ Outcomes

• CEA expresses outcomes in natural units (e.g., "cases prevented" or "number of lives saved"), whereas:

• CBA assigns dollar values to the outcomes attributable to the program, and

• CUA includes a quality-of-life component associated with morbidity using common health indices such as quality-adjusted life years (QALYs) and disability-adjusted life years (DALYs).

•The **limitation** of this analysis is that it is **difficult to compare the interventions with differing natural effects**. E.g.: interventions which are focused on looking at **life years saved** cannot be compared with others which are focusing on **improving the physical functioning**.

أمثلة من
Examples of the public health activities that are highly cost-effective:

Immunization : in the first year of life

School-based health services

Family planning and nutrition.

Primary health care is cost effective than building five star hospital.

4 Cost Utility Analysis

- A unique form of economic evaluation that compares costs in monetary units with outcomes in terms of the quantity and quality of life

e.g., in QALYs, DALYs

Cost ^{تكلفة}
Outcome → ^{Daly} Qaly

- Utility represents a person's preference (or utility) for a preferred outcome (or health state).

تحليل تكلفة المنفعة

تعتمد على
point of view for
patient or person

QALY, DALY and Quality of life are subjective

Dr. Omnia Elmahdy

تعتمد بشكل كبير على تفضيل

الشخص

ا ((احساس الداخلي من ناحية

health status))

Quality of life

- VALUING OUTCOMES

1: a year of full health

0: death (extremely bad health)

- Health states that lie somewhere between these two anchor points will have a utility value that lies somewhere between zero and one.

لعمري ستره

Type of evaluation	Costs considered	Health considerations	Strengths	Important issues
Cost-minimization	All present and future health-care costs relevant to the patient and the disease state are compared for each therapeutic strategy	No difference in health status attributable to disease or treatment strategies is assumed	Requires minimal data (on costs only) Enables assessment of the technical efficiency of each strategy	Assumption of identical outcomes of disease and the treatments compared should be robust
Cost-effectiveness	All present and future health-care costs relevant to the patient and the disease state are compared for each therapeutic strategy	Uses commonly evaluated health outcomes, including clinical or surrogate outcomes, such as blood pressure, renal function (eGFR), and serum LDL levels	Relates costs of treatment with therapeutic effectiveness based on health outcomes that are readily available from clinical trials	The 'cost per unit of health' values obtained in cost-effectiveness analyses can be difficult to interpret; comparisons between populations and diseases are not possible
Cost-utility	All present and future health-care costs relevant to the patient and the disease state are compared for each therapeutic strategy	Health status is transformed into a quality-adjusted life-year score anchored between 0 (death) and 1 (perfect health) All aspects of disease and its treatment are captured in one metric	The metric comprehensively measures health, enabling benchmarking and comparisons of outcomes among disparate populations and diseases	Cost-utility analyses require the greatest amount of data of all these types of economic evaluation Assumptions might be required when estimating health-related quality of life

TABLE 2. Main Type of Health Economic Studies

Type of Study	Cost Units	Health Units
Cost-benefit analysis	Monetary	Monetary
Cost-effectiveness analysis	Monetary	Health effects
Cost-utility analysis	Monetary لقدية	Quality-adjusted life-years (or similar)