Practical session (1) Measuring & Estimating costs



Types of pharmacoeconomic analysis



Cost-Minimization Analysis (CMA)





Cost-Benefit Analysis (CBA)



Cost-Effectiveness Analysis (CEA)



Cost-Utility Analysis (CUA)

Importance of cost evaluation:

• To estimate the resources that are used in giving a product or service as an outcome.



• The real cost of resources is its **opportunity cost** not necessarily its money value.

Opportunity Cost – Explanation with example

It may be defined as the cost of availing an opportunity in terms of loss of another opportunity.

Producer having land as resource























So, what are the types of Healthcare Costs?

Cost Categories

Modern

Categorization

Healthcare sector costs

Costs to other sectors

Patient & Family costs

Productivity costs

Classical Categorization

Direct medical costs

Direct non-medical costs

Indirect costs

Intangible costs

Classical Categorization



Direct medical costs (medically-related).

Ex: physician visits, medications, radiology, Lab.



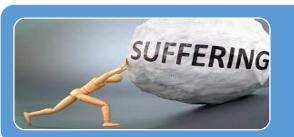
Direct non-medical costs (non-medically related)

Ex: traveling to hospital, child care services.



Indirect costs

Ex: loss of productivity due to illness.



Intangible costs

Ex: pain, fatigue, insomnia.

Modern Categorization



Health care sector costs

Ex: resources used to provide medical service



Costs to other sectors

Ex: housing, public assistance, education.



Patient and family costs

Ex: any costs incurred by family (medical or not).



Productivity costs

Ex: lost productivity (similar to indirect costs).



Healthcare facility



Patient



Society

Perspective Comprehensiveness



Case scenario (1):

Mr. O is a 58 year-old man who does not have insurance and has not seen a physician in 10 years. He works as a landscaper. He presented to the ED with chest pain and weakness and was found to have both an NSTEMI and an acute MCA infarct in the setting of uncontrolled diabetes and hyperlipidemia.

>What do you think regarding the incurred service costs and its categories?

Case scenario (2):

- A 55 year-old man presented to his PCP with knee pain after twisting his knee during a skiing accident. He attempted rest, ice, and NSAIDs at home for 5 days without improvement.
- Knee exam findings revealed joint instability, effusion, and tenderness.
- The GP ordered an MRI and referred the patient to orthopedics.
- >What do you think regarding the incurred service costs and its categories?

Timing Adjustments for Costs

- Bringing past costs to present: (Standardization)
- By multiplying number of units by current cost:

➤1 Radiology visit * Current cost

➤ 2 Boxes of medication * Current cost of one box.

 Bringing future costs (Benefit) to present:

(Discounting)

 By reduction of future costs by a certain %:

 \triangleright Current cost = future cost – (3% * future cost).

QUESTIONS/EXERCISES

- 1. For each situation, what type of cost is being measured?
 - a. A patient must pay for a taxi ride to the clinic.
 - b. A patient receives an influenza vaccination at the pharmacy.
 - c. A patient is fatigued because of chemotherapy treatments.
 - d. An adult daughter misses work to take care of her mother who recently had hip replacement surgery.

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- a. Direct medical costs.
- b. Direct non-medical costs.
- c. Indirect costs.
- d. Intangible costs.

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Any economic evaluation where costs and benefits occur over a number of years should consider

a. Discounting.

b. Hypothesizing.

c. Alternatives.

d. Surgery.

