PHARM.D • YEAR 5

Pharmacoepidemiology & Pharmacoeconomics

CHAPTER 2.1

Definition, History and Need for Pharmacoeconomic Evaluations

PPT CHAPTER COVER



DOCTOR OF PHARMACY

What Is Pharmacoeconomics?

Pharmacoeconomics compares the costs and consequences of pharmaceutical products and services.

Its purpose is to inform decisions when healthcare resources are limited.



Costs

Costs include relevant resources used, not only the medicine's purchase price.

Consequences

Consequences include clinical outcomes, quality of life and economic effects.

An economic evaluation identifies, measures and compares alternatives.
Value depends on outcomes gained relative to resources used,
with attention to uncertainty and the decision context.

Value Beyond Acquisition Price





Fewer complications, better functioning





More monitoring costs or poorer outcomes

A medicine with a higher purchase price may prevent costly complications or improve patient functioning.

A cheaper medicine may still create more monitoring costs or poorer outcomes.



Clinical outcomes

describe effectiveness and safety.



Economic outcomes

describe resources and costs.



Humanistic outcomes

include quality of life, satisfaction and functioning.

Comparing these dimensions helps payers, clinicians and patients consider **value** rather than price alone.

Main Evaluation Approaches

Cost-minimization analysis

compares costs when outcomes are demonstrably equivalent.

Compare costs

Equivalent outcomes required



Cost-effectiveness analysis

relates costs to a natural outcome, such as cases prevented or life-years gained.

$$\frac{\text{Cost}}{\text{natural unit}}$$

Cost-utility analysis

commonly relates costs to quality-adjusted life-years (QALYs).

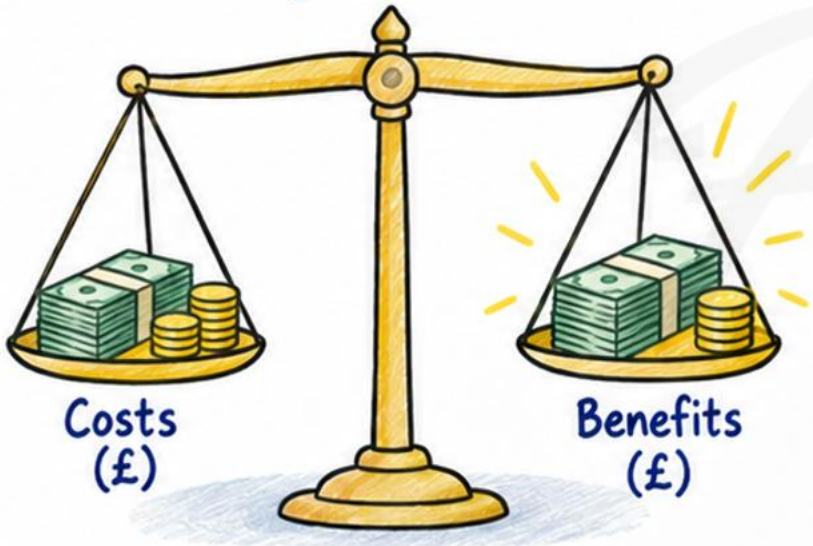
$$\frac{\text{Cost}}{\text{QALY}}$$

Each method answers a different question.
The comparator, relevant cost perspective and outcome measure must be explicit.
Do not select cost-minimization merely because two products share an indication.

Other Economic Decision Tools

Cost-benefit analysis

Cost-benefit analysis values both costs and benefits in monetary terms.



Cost-consequence analysis

Cost-consequence analysis presents costs and several outcomes separately, without a single combined ratio.

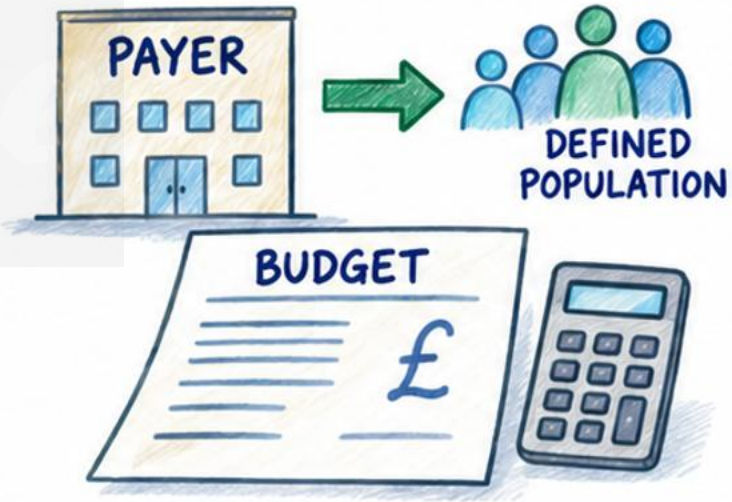


Costs
(£)

- Mortality
- Morbidity
- Quality of life
- Adverse events
- Other outcomes

Budget impact analysis

Budget impact analysis estimates the financial consequences of adopting a treatment for a defined payer and population.



Cost-effectiveness and **affordability** are different questions.

A favorable economic evaluation **does not guarantee** the available budget can fund the intervention or that access will be equitable.

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