PHARM.D • YEAR 5

Pharmacoepidemiology & Pharmacoeconomics

CHAPTER 3

Applications, Software and Case Studies of Pharmacoeconomics

PPT CHAPTER COVER

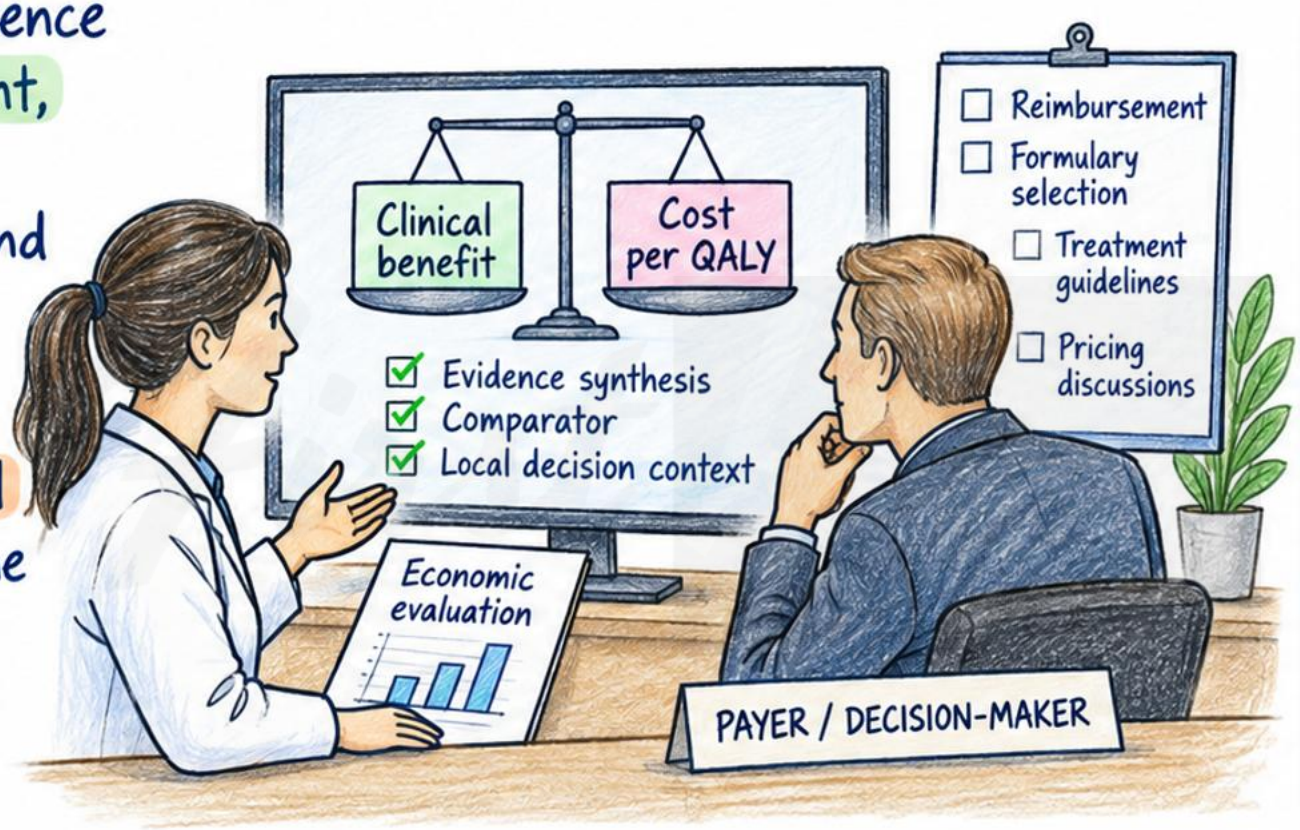


DOCTOR OF PHARMACY

Applications in Coverage and Pricing

Pharmacoeconomic evidence supports reimbursement, formulary selection, treatment guidelines and pricing discussions.

The comparator and local decision context determine whether a treatment offers value.



NICE's current standard technology-appraisal considerations use £25,000–£35,000 per QALY, with context and modifiers.

These are not a universal threshold for every agency or appraisal.

An economic evaluation can support market-access submissions, but does not guarantee approval or coverage.

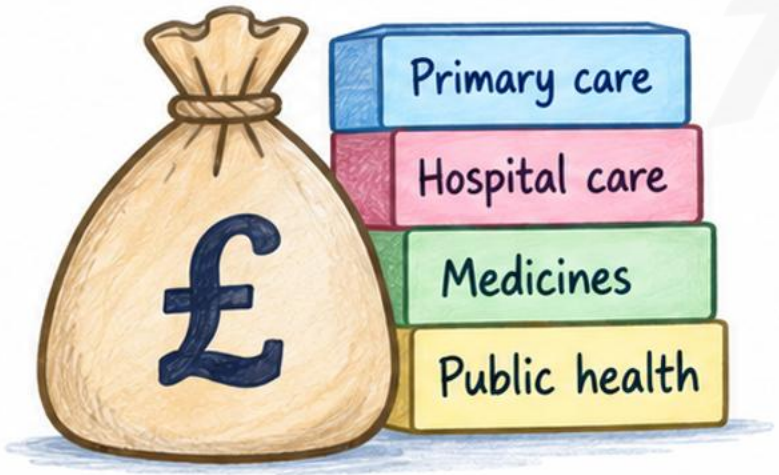
Clinical benefit, uncertainty and equity remain relevant.

Resource Allocation and Patient Decisions

Health budget

Budget impact estimates the financial consequences of adoption for a defined population and payer.

Resource-allocation decisions consider competing health priorities.





Individual patient consultation

Individual treatment decisions also incorporate clinical needs, preferences, safety and affordability.



Health technology assessment

Health technology assessment integrates economic findings with other evidence.

Decision-support systems may present relevant information but cannot replace judgment.

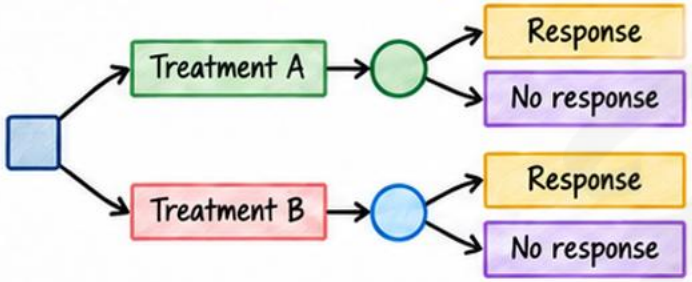
Cost-effective does not necessarily mean **affordable**, and the lowest purchase price does not necessarily provide the best overall value.

Choosing Economic Modeling Software

Choose software according to the model structure, required analyses, available expertise and need for transparent validation.

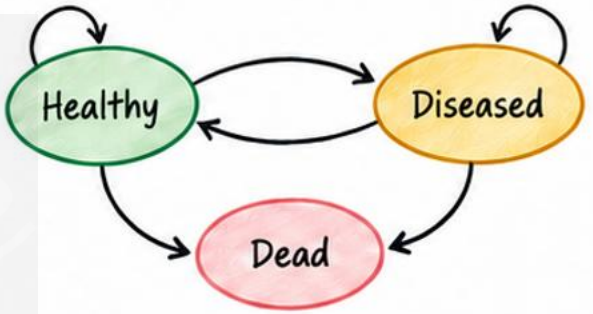
Decision trees

represent branching short-term pathways.



Markov models

represent movement among health states over time.





Patient-level simulation

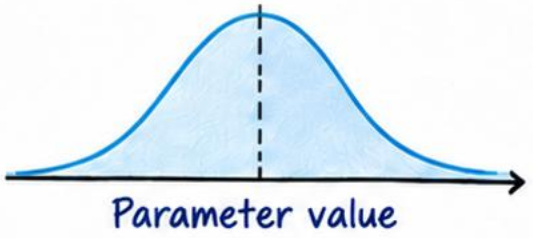
can represent individual variation and histories.



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Probabilistic sensitivity analysis

propagates parameter uncertainty.

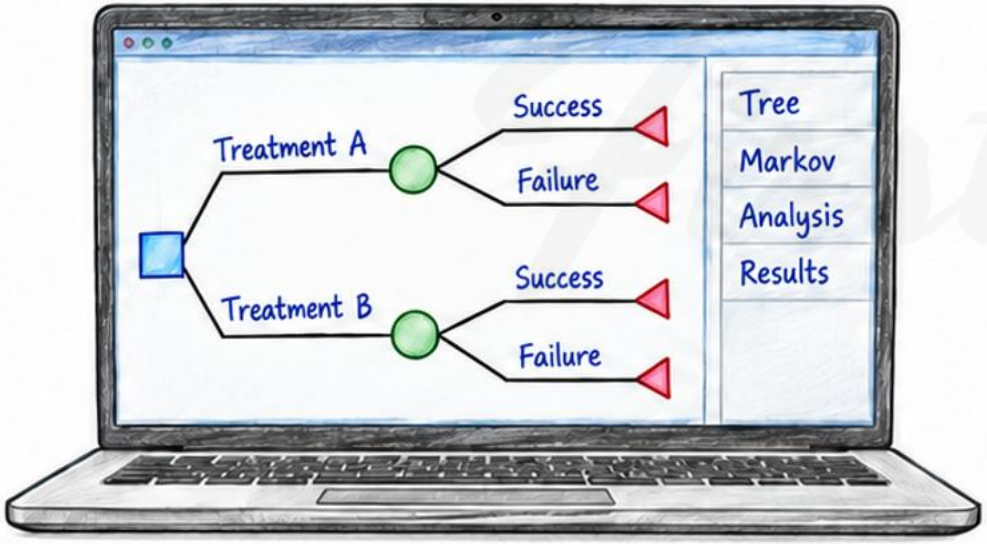


No software brand guarantees valid assumptions or reproducible results.
Record inputs, code or formulas, version and validation checks.

TreeAge and Spreadsheet Models

TreeAge

TreeAge Pro Healthcare supports decision trees, state-transition models and sensitivity analysis in a visual modeling environment.



Excel

Excel can implement cost calculations, decision models and budget analyses with transparent formulas.

VBA can automate tasks; add-ins such as @RISK support simulation workflows.



Important considerations

Visual software still needs model validation.
Spreadsheet models need checks for hard-coded values, broken references and inconsistent formulas.

Tool selection

Licensing, features and reproducibility should be considered when selecting a tool.

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