Probabilistic Sensitivity Analysis (PSA)

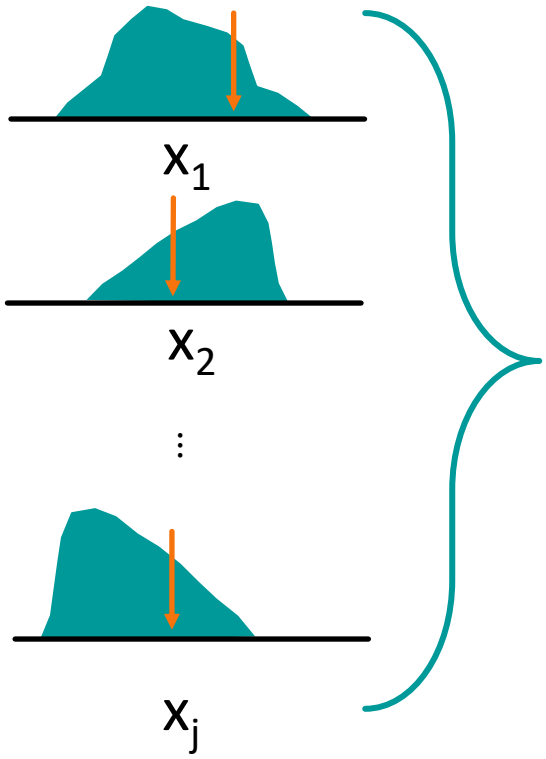
Sensitivity Analysis

- Vary input parameters within plausible ranges
- For which values is each strategy optimal?

- Deterministic sensitivity analysis (DSA)
  - One-way analysis: vary one parameter, hold rest fixed
  - Two-way analysis: vary two parameters, hold rest fixed

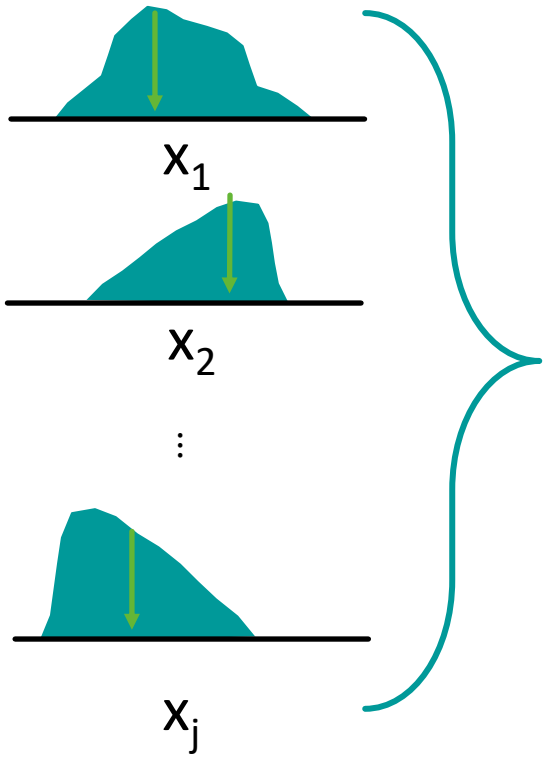
- **Probabilistic sensitivity analysis (PSA)**
  - Simultaneously vary input parameters by randomly sampling from appropriate probability distributions
  - How often is each alternative cost-effective?
  - What strategy has the highest expected net benefit?

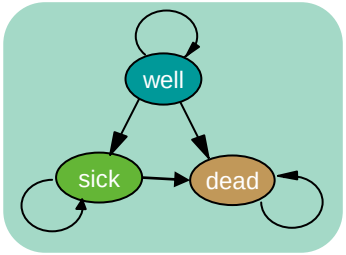
Input



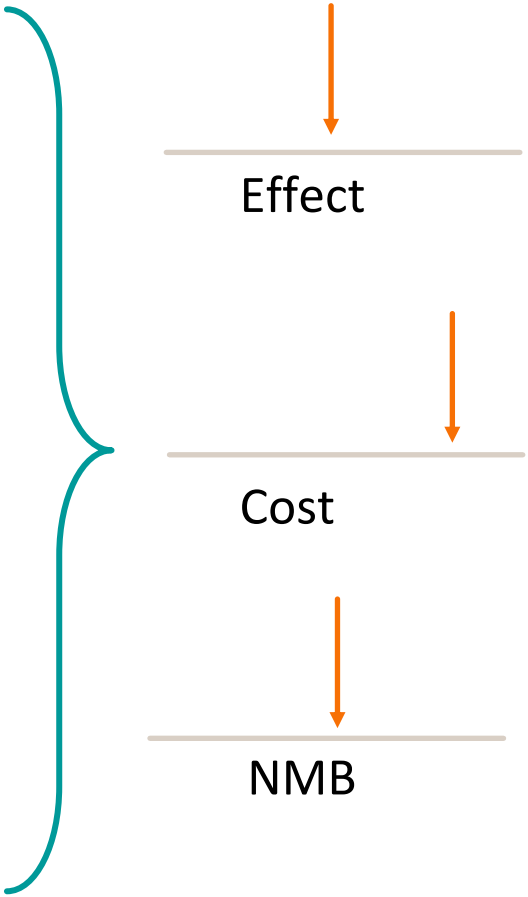
Input

Outputs

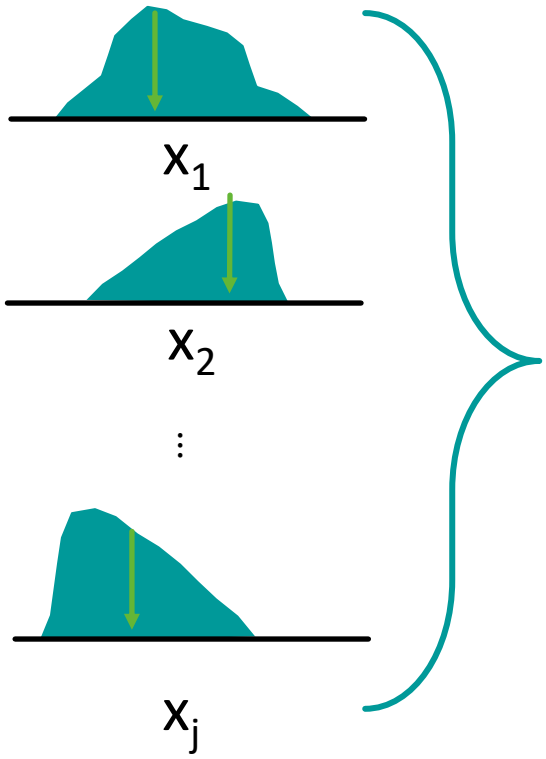


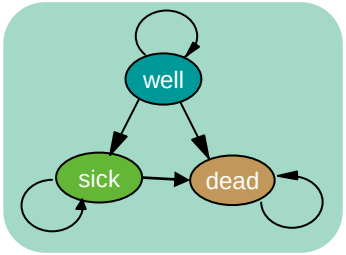


Model



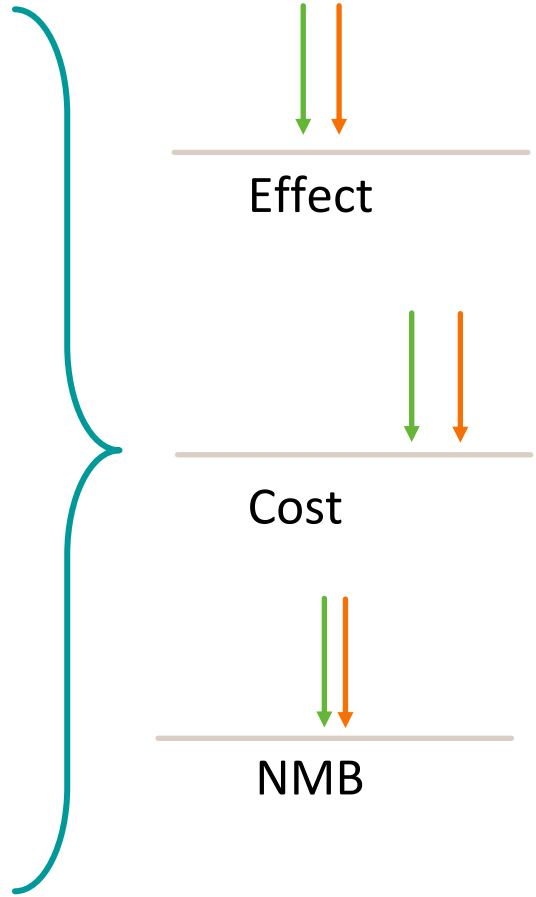
Input





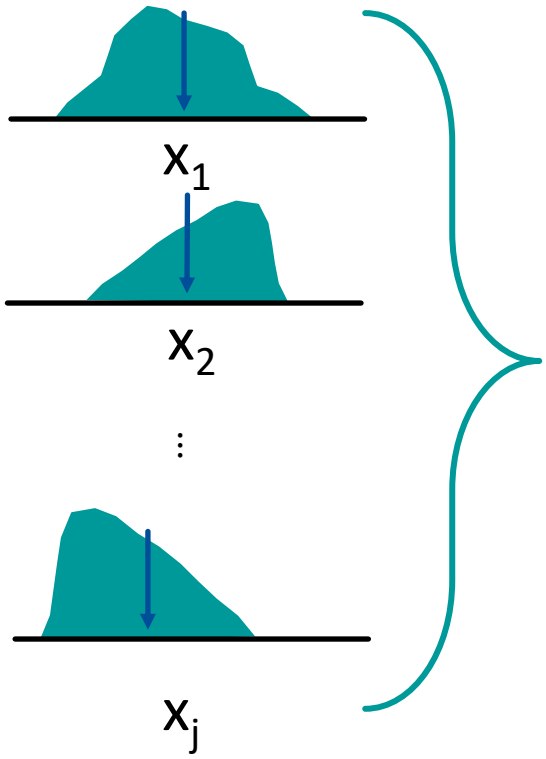
Model

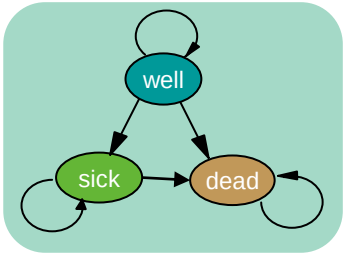
Outputs



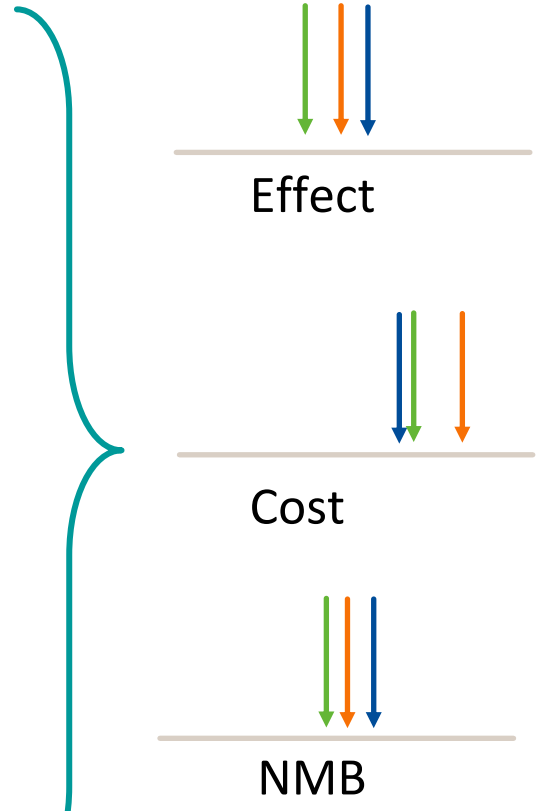
Input

Outputs

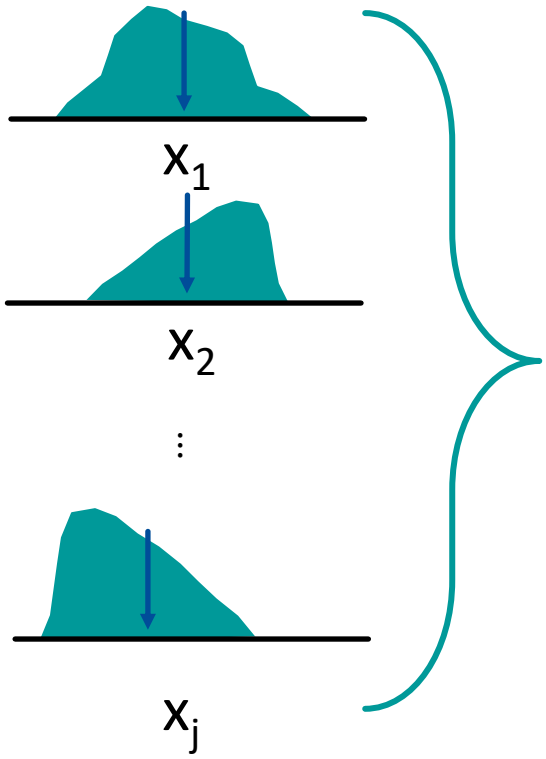


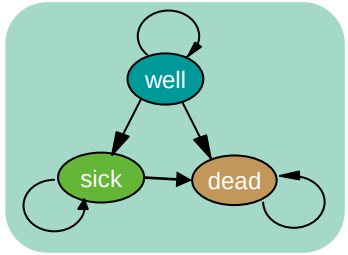


Model



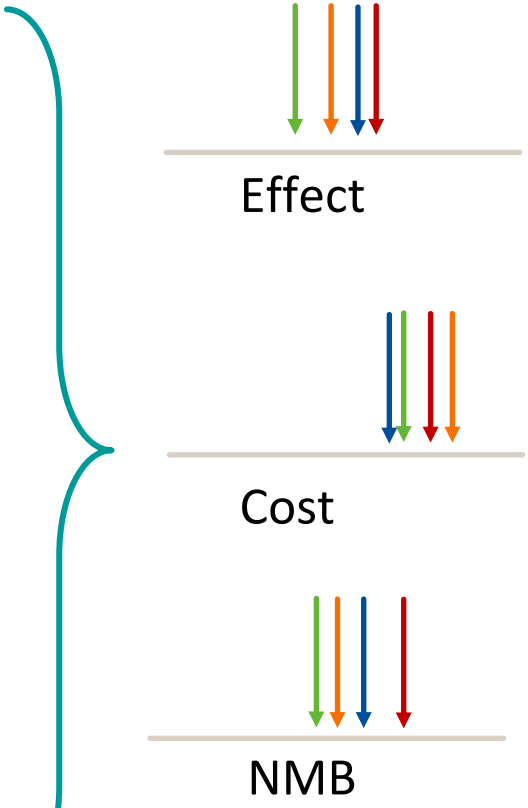
Input





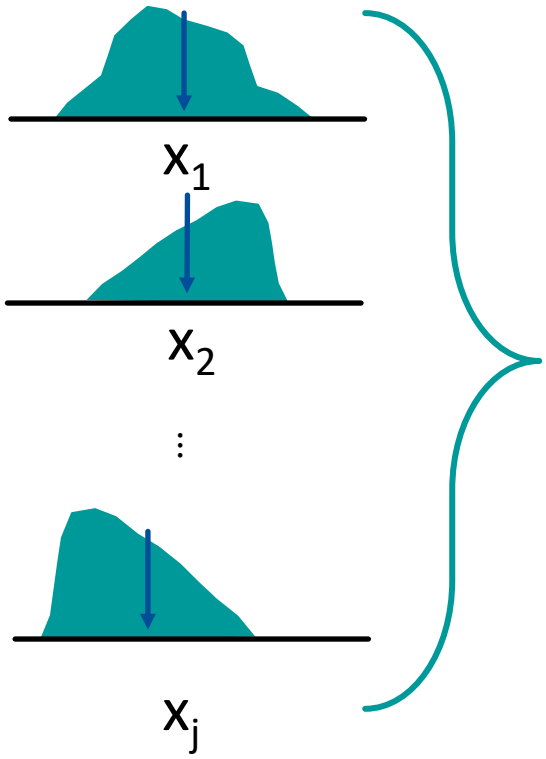
Model

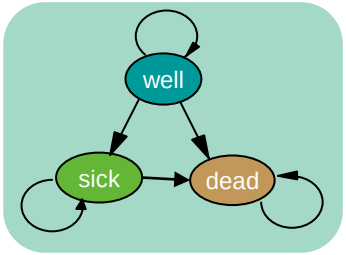
Outputs



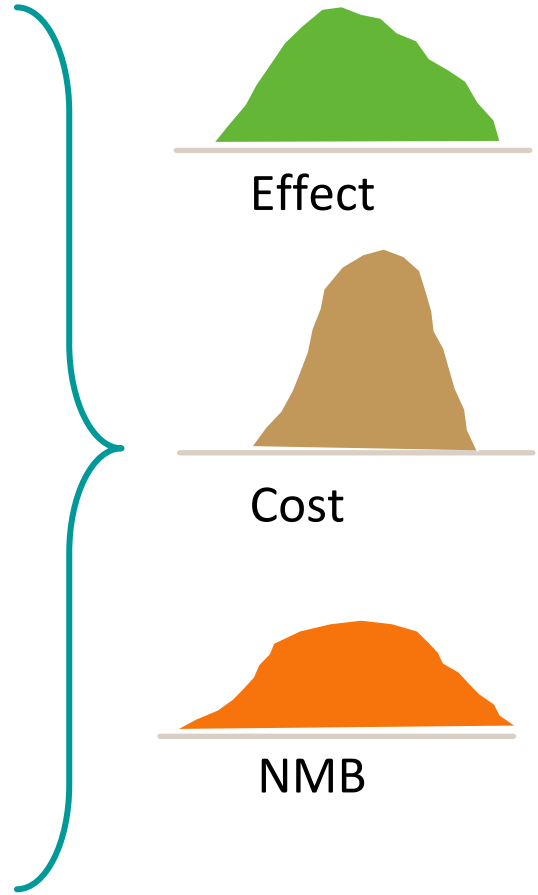
Input

Outputs



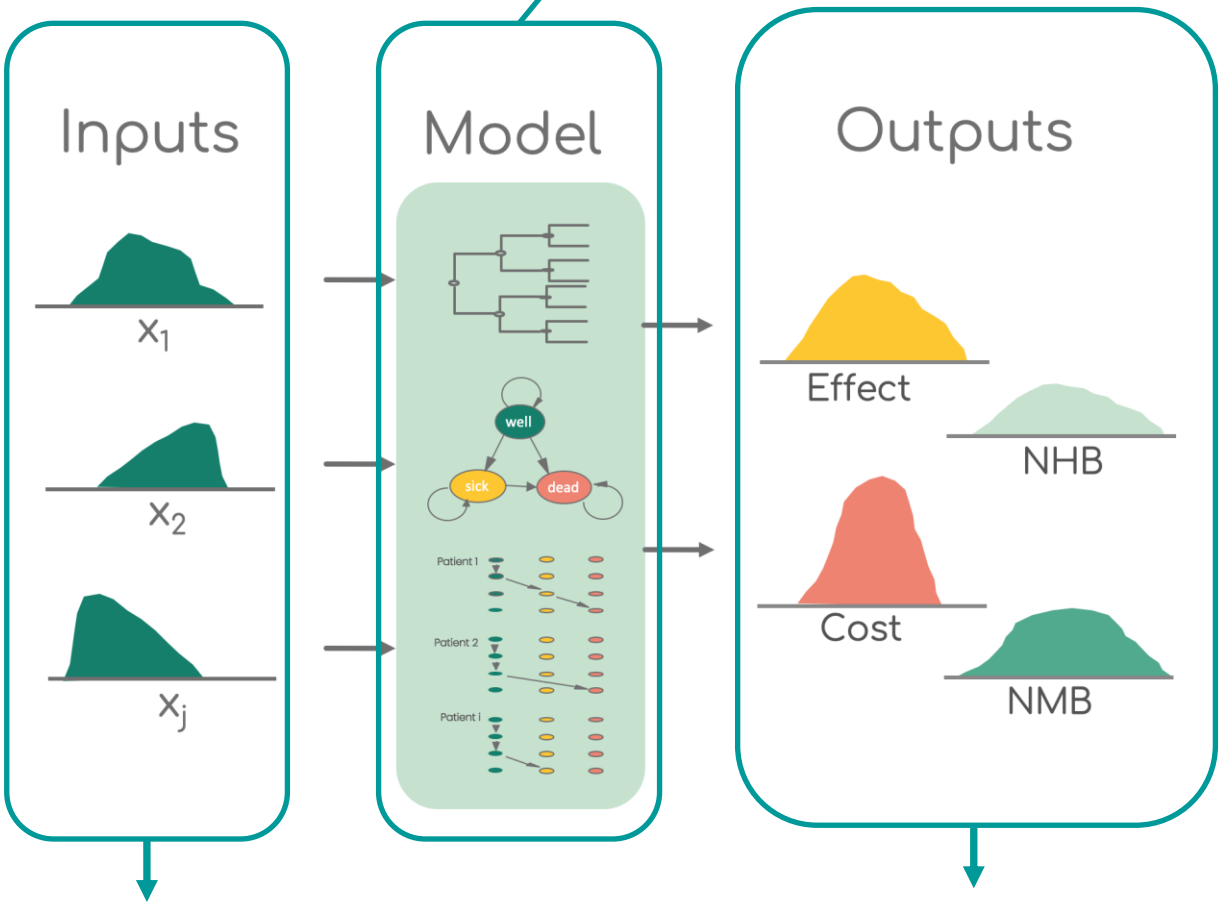


Model



PSA & R

Function which runs the model using the parameter values from the list



List or data set with parameter values for each iteration

Data frame with model outcome estimates for each iteration

http://darthworkgroup.com/

https://github.com/organizations/DARTH-git

https://www.linkedin.com/groups/8635339

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