

Medical Literature: How to Use a Clinical Decision Analysis EBM Working Group

Relevance?

Does it apply to my patients?

Is it common?

Will it change my practice?

Are the results valid?

Were all important strategies and outcomes included?

Was an explicit and sensible process used to assemble the evidence into probabilities?

Were the utilities obtained in an explicit and sensible way from credible sources?

Was the impact of uncertainty in the evidence explored?

What are the results?

Does one strategy yield a clinically important gain for patients? If not is the result a "toss-up"?

How strong is the evidence used in this analysis?

References: JAMA 1995; 273: 1292-1295 & JAMA 1995; 273: 1610-1613

Understanding a Clinical Decision Analysis.

Decision analysis is the application of explicit, quantitative methods to analyze decisions under conditions of uncertainty.

A decision node (square) depicts a decision between two or more strategies.

A decision strategy (line from square) is a sequence of actions that are contingent on each other.

A chance node (circle) depicts possible occurrences along a pathway not controlled by the decision maker.

An outcome node (rectangle or triangle) depicts the final health state resulting from a pathway.

A probability is the likelihood of an event's occurrence, expressed in decimals on a scale from 0 (impossible) to 1.0 (certain).

A utility is a measure of the value of an outcome to the decision maker, expressed on different scales.

The extended utility for each chance node is the sum of the products of each probability times its utility.

A sensitivity analysis is the systematic exploration of the impact of uncertainty in the evidence used.