

Cost-utility analysis (CUA)

CEA is particularly useful when we need to choose among alternative forms of care for the same problem. CEA is, however, less useful when the consequences of different interventions are different, and especially when such interventions are different, and especially when such interventions cause differences simultaneously in the quality of life and the quantity of survival. This type of consequence is not rare in health interventions. To overcome this complex problem, the last two decades have seen an increase in interest the development of utility-based measures of consequence. CA is a specialised variant of CAE.

"Utility" is a term used by economists to signify what a person expects to gain from the consumption of a good or service. This Concept is applied in health to mean the individual's state of well-being deriving from the use of health care interventions.

The most commonly used measures are therefore estimated by weighting the changes in different mutually exclusive health states by their relative utilities, as judged in surveys of representative groups of people. The best known measure of utility is the QALY - pronounced "qualy", which is based on a quantity of life scale adjusted for its quality.

Consequences are often calculated by assessing health levels and applying utility values derived from preferences of population samples, as in Rosser and Watts matrix. There are alternatives to this type of calculation which construct utilities in a direct manner, by eliciting patients' preferences face to face. There are three widely used approaches.

1. The *rating scale measurement* where a subject is asked to place his/her current health status on a line that goes from 0 (death) to 1 (perfect health).
2. The *time trade-off measurement* in which the subjects, on the basis of their current health status, have to decide how many years of his remaining life expectancy they would like to change for complete health. This is traditionally thought to be simple administer.
3. The *standard gamble measurement*, based on utility theory, in which individuals have to choose between living the rest of life in their current state or a gamble (for instance a surgical procedure) which, if won, will mean perfect health and, if lost, will signify death.

Because a cost-utility evaluation can compare the consequences of care programmes for different illnesses and conditions it can help to inform allocative decisions within health care.