



Methods of Pharmacoeconomic Evaluation – An Overview

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Pharmacoeconomics is defined as a “branch of health economics which particularly focuses upon the costs and benefits of drug therapy”. Pharmacoeconomic research identifies, measures and compare the costs (resources consumed) and consequences (clinical, economical, humanistic) of pharmaceutical products and services.¹ Before prescribing any new drug therapy, two questions must be answered;

- (i) Whether the new drug is equally or more efficacious in the said disease as compared to the standard treatment.
- (ii) Does the new drug have any economic advantage over the existing drugs?

In a developing country like India 85% of total health expenditure is financed by house-hold out-of-pocket expenditure. Many poor people frequently face a choice between buying medicines or buying food or other necessities due to limited resources and high pricing of drug. Studying Pharmacoeconomics makes it possible to estimate and understand the full impact of new therapy. Numerous drug alternatives and empowered consumers also fuel the need for economic evaluations of pharmaceutical products. Pharmacoeconomics is one of the strongest pillars of health economics to make the allocation decisions with respect to the medicines and there by ensure that society allocates minimal health care resources wisely, fairly, and efficiently. Using Pharmacoeconomic principles, methods and theories into practice, for quantifying the value of pharmacy products and pharmaceutical care services utilized in real world environment is one of the major applications of pharmacoeconomics.²

Various methods of Pharmacoeconomic evaluation are;

- **Cost Minimization Analysis:** It is a method of calculating drug costs to project the least costly drug or therapeutic treatment. It can only be used to compare two products that have been shown to be equivalent in therapeutic effect.
- **Cost Effective Analysis:** It is used when there is a single measurable dimension of effectiveness for both treatments. Eg: Hypertension-blood pressure measurement. Cost effective Analysis is used when it is necessary to measure both cost and clinical outcome of the drugs.
- **Cost-Benefit Analysis:** This method measures the costs of treating an illness, along with monetary equivalents that provide the same outcome, with the ultimate aim of identifying the most economic option.
- **Cost-utility Analysis:** It measures the costs of treating an illness in terms of their social value, expressed in incremental measures or preference equivalents (QOL, QALY) for the treatment's outcomes.