

# Strategies to Incorporate Pharmacoeconomics into Pharmacotherapy

## Chapter 9

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- Various strategies are available to incorporate pharmacoeconomics into pharmacotherapy.
- Popular strategies for applying pharmacoeconomics to assess the value of pharmaceutical products and services include:
  - using the results of published pharmacoeconomic studies
  - building economic models and
  - conducting local pharmacoeconomic research

# Use the Pharmacoeconomic Literature

- Many pharmacoeconomic analyses are published in primary medical and pharmacy literature sources
- To use this literature as an aid in clinical decision making, it must be:
  - critically evaluated for quality and rigor and
  - interpreted correctly
- Therefore, prior to using pharmacoeconomic data to make clinical and policy decisions, decision makers should recognize the potential limitations of those data.

- A primary consideration when evaluating and interpreting a study is the ability to generalize or transfer the results to other healthcare settings and countries
- It can be difficult to generalize and transfer the results of a published study, primarily because of:
  - wide variations in practice patterns
  - patient populations, and
  - costs among healthcare systems and countries
- These and other factors present a challenge for practitioners attempting to extrapolate or relate exact cost savings or cost ratios to their own practice settings

- To enhance the ability to use pharmacoeconomic results published in the literature, consider the following points:
  - What is the technical merit of the study?
  - Are the results applicable to local decision making?
  - Do the results apply generally in different jurisdictions with different perspectives?

- Various guidelines, criteria, reviews, and consensus-based recommendations for evaluating, conducting, and reporting pharmacoeconomic literature have been published
- These guidelines and criteria have been combined and summarized into 11 categories most pertinent to pharmacotherapy (this strategy is discussed in chapter 10)

# Build an Economic Model

- Modeling studies use existing clinical and/or epidemiologic data to project future outcomes
- Use of economic models can provide support for various clinical decisions, especially those which are time-contingent
- Identifying assumptions regarding the treatment alternatives being compared, the patient outcomes under study, and the probability of those outcomes occurring can provide the basis for an economic simulation to assist in the medication decision-making process

- Using an economic model can help the clinician to forecast the impact of medication-use decisions on a patient, institution, or healthcare system. Also, as new drugs are marketed that can displace older agents, an economic model can expedite the reappraisal process for formulary management and drug-use policy decisions
- when building an economic model to assist in clinical decision making, various published studies and a review can be considered.



- Common pharmacoeconomic models include decision analysis, Markov models, multivariate regression analysis, and basic spreadsheet analyses
- Typically, economic modeling in today's practice settings employs clinical decision analysis, which has been defined as an explicit, quantitative, and prescriptive approach to choosing among alternative outcomes (this strategy is discussed in chapter 8)

# Conduct Local Pharmacoeconomic Evaluation

- Clinicians may need to conduct a pharmacoeconomic evaluation if:
  - there is insufficient literature
  - published results cannot be extrapolated to clinical practice or
  - building a model is not appropriate
- Before conducting a pharmacoeconomic evaluation, clinicians should be familiar with the similarities, differences, and appropriate application of pharmacoeconomic methods (discussed in chapters 4 - 7)

- Conducting local pharmacoeconomic evaluations consumes both time and monetary resources
- Therefore, specific pharmacy products and services for pharmacoeconomic evaluation should be targeted
- Thus this strategy should be reserved for pharmacy decisions that may have a significant impact on cost and/or quality of care  
(this strategy is discussed in chapter 9)