Cost Minimization Analysis

Chapter 4

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- cost-minimization analysis (CMA) measures and compares input costs, and assumes outcomes to be equivalent
- it is the simplest of the four types of pharmacoeconomics analyses
- compares two or more interventions considered equally effective
- determines which intervention costs less

- Used to compare:
  - brand vs. generic drugs
  - two or more drugs in same therapeutic class with similar side effect profiles
- Results of CMA are expressed as cost/patient treated
- costs include more than drug acquisition cost
- CMA shows only a “cost savings” of one intervention over another

- costs should extend beyond a comparison of drug acquisition costs and include costs of drug preparation (pharmacist and technician time), administration (nursing time), and storage, physician visits, number of hospital days, and pharmacokinetic consultations

- the least expensive agent, considering all these costs, should be preferred

- CMA has been used frequently, and its application could expand given the increasing number of “me too” products and generic competition in the pharmaceutical marketplace

- Example 1: the following is monthly t/t cost for low molecular weight heparin (LMWH) and heparin. They are assumed to be therapeutically equivalent. Which one would you recommend?

	LMWH	**Heparin**
Monthly acquisition drug cost	$72.20	$27.09
Monthly Monitoring cost	$0	Five tests per patient @ $12.4
Total t/t cost	$72.20	$89.09

Example 2: The following is monthly t/t cost of selected oral antidiabetic drugs. They are assumed to be therapeutically equivalent.

a. Which one is recommended?
b. How much is the cost saving of using Diabeta over Glynase?

Drug	**Total monthly cost**
Glyburide (Diabeta)	$22.50
Glyburide (Mirconase)	$29.25
Glyburide (Glynase)	$24.75

Example 3: Administration of prostaglandin E2 gel intracervically to expectant mothers on the day before labor was to be induced.

- Outpatient Group: administer medication → monitor 2 hours → send home overnight → admit next day → induce labor
- Inpatient Group: administer medication → monitor 2 hours → send to maternity unit for the night → induce labor

Type of Cost	Costs for Outpatients (n = 40)	Costs for Inpatients (n = 36)
Labor cost	$575	$902
Delivery cost	$471	$453
Pharmacy cost	$150	$175
Hospital Costs	$3835	$5049

No adverse maternal or neonatal effects with the therapy were encountered in either setting. So the outcomes for each group were considered equivalent. Which program would you recommend? the outpatient or inpatient?

Common Applications

- Common CMA application:
  - Cost comparison of two generic medications rated as equivalent by FDA
  - Cost comparison of same drug therapy in different settings
- Not appropriate for comparing different classes of medications

- Advantage: simplest analysis to conduct

- Disadvantage: cannot be used when outcomes of each intervention are not equivalent
  - this method has limited use because it can only compare alternatives with the same outcomes