

Economic Evaluation

When applied to public health programs, economic evaluation is concerned with the:

- Amount of resources used by a program or intervention, and
- Corresponding level of health-related outcomes.

Economic evaluation is therefore an effort to:

- Analyze inputs (resources) and outputs (changes in health outcomes) simultaneously, and
- Help decision makers assess whether a certain level of output is worth the amount of resources expended to produce it (given that resources are scarce and can be used for alternative purposes).

Costs are the values of all the resources (e.g., labor, buildings, equipment, and supplies), tangible or intangible, used to produce a good or a service.

Benefits are the monetary values of desirable consequences of economic policies and decisions. Together with **costs** they reflect the changes in individual and social welfare that result from implementing alternative programs.

Cost-effectiveness analysis (CEA) is used to identify the most cost-effective strategies from a set of options that have similar results, or to assess the consequences of expanding an existing program.

For example, the federal government might have to allocate scarce resources to:

1. provide a new facility to assist in the development and procurement of vaccines, or
2. enhance the current public health vaccine delivery.

These options have a common health outcome: the number of cases of a disease prevented by the vaccine. **CEA** can be used to identify the option that prevents the most cases at the least cost.

Cost-benefit analysis (CBA) identifies who (an individual or a group) gains and/or bears the costs of the project.

CBA is a particularly helpful tool for the following purposes:

- Deciding whether to implement a specific program.
- Choosing among competing options.
- Choosing and setting priorities from a group of potential programs.

CEA differs from cost benefit analysis and cost utility analysis in that:



- **CEA** expresses outcomes in natural units (e.g., "cases prevented" or "number of lives saved"), whereas
- **CUA** is a specialized form of **CEA** that includes a quality-of-life component associated with morbidity using common health indices such as Quality-Adjusted Life Years (QALYs) and Disability-Adjusted Life Years (DALYs), and
- **CBA** assigns dollar values to the outcomes attributable to the program.

