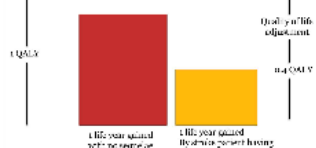


Types of Economic Evaluation Cost Benefit Analysis (CBA)

- Values both costs and benefits in money terms and compares them through criteria:
 - BENEFITS**
 - COST**
- It directly compares the benefits of a chosen option against the costs incurred with the option.
- Ratio shows how many times the cost is earned by its health effect through monetary benefits of a certain option.

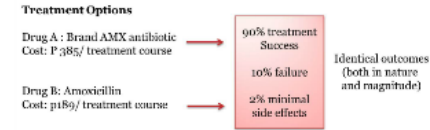
Ex. A stroke patient who has neurologic complications (Not being able to walk by himself) has lower quality of life than the normal patient. Thus adjustment in quality of life is made.



Types of Economic Evaluation Cost Utility Analysis (CUA)

- Another form of CEA but differs slightly because it measures the effects of a project programs in terms of utilities (quality-adjusted health outcome caused or averted).
 - Like CEA it can focus on either minimizing cost or maximizing effect. Costs are expressed in terms of costs per QALY or QALY's per monetary unit.
- How much money do we spend for every unit of health effect we want to get?*

Cost Minimization in antibiotic therapy.



Types of Economic Evaluation Cost Minimization Analysis (CMA)

- Is a derivation of the CEA but focuses on costs of different given alternative programs or intervention options.
- Assumes that regardless of whichever option is taken, the effects or outcomes will be identical.
- With the assumption that outcomes of the interventions are measurably identical, the least option is chosen.

Basic Principles of Economic Evaluation

Decision Making – Economic Evaluation are techniques done to evaluate options which all promise to produce "better health".

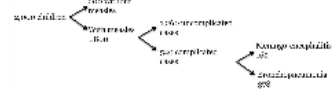
Which of the alternatives will provide the most health effect for every peso spent for the improvement of health?

Assume that we are evaluating a project proposing to vaccinate 2,000 children for measles in a certain distant province. Assume also that the cost per child immunized is P300.00. We know that if we do not immunize these children for measles, there is a good chance that they will contract it. Is it cost-beneficial for us to immunized all of them?

- ASSUMPTIONS AND OTHER PARAMETERS ARE GIVEN:**
- 90% of immunized children will contract measles.
 - Of those who will contract it, 90% will have complications.
 - Of those who develop complications, 90% will have meningitis encephalitis, and 20% will have neurologic sequelae.
 - Costs are as follows:
 - 1 unimmunized child = P 300,000 cost
 - Meningitis sequelae = P 20,000 cost
 - Neurologic sequelae = P 5,000 cost

Analysis:
Cost of immunizing 2,000 children at P300.00 each = P 600,000

Cost of not immunizing children:



Costs:

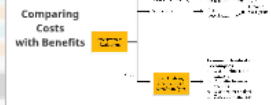
- 1 child unimmunized case = P 300,000
- 1620 Measles sequelae = P 20,000
- 324 neurologic sequelae = P 5,000
- TOTAL COST of non immunization = P 3,000,000**

Cost Benefit Ratio = $\frac{P 600,000}{P 3,000,000} = 0.2$
Therefore the project is highly beneficial

Economic Evaluation techniques are valuable tools in assessing the economic feasibility and efficiency of health interventions. They can be used in assessing such in health programs, medical therapeutic and diagnostic interventions, pharmacologic therapeutics.

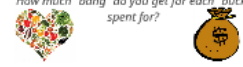


Basic Principles of Economic Evaluation



Basic Principles of Economic Evaluation

"Bang" and "Buck"
Bang – Outcomes/benefits/effects
Buck – Costs
How much "bang" do you get for each "buck" spent for?



Types of Economic Evaluation Cost Effective Analysis (CEA)

- Most frequently used technique.
- Investigates the best way of achieving a single objective by comparing effects and costs.
- Evaluates either (1) which possible intervention will best achieve a given objective at the least cost; (2) when given a fixed budget, which intervention maximizes the effectiveness of the expenditure.
- Total Cost / Total Health Effect
- It is a ratio that compares costs per health effect.

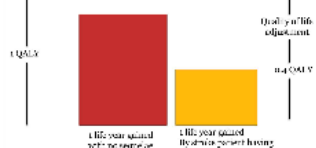
Evaluating options in undertaking an immunization drive.

OPTIONS	# of IMMUNIZED CHILDREN	TOTAL COST OF THE PROJECT	COST-EFFECTIVENESS RATIO
Use Strategic Health Centre	20,000	P 2,000,000	P 100,000/child immunized
Use Mobile Clinics	40,000	P 2,000,000	P 50,000/child immunized
Use All-Box-Street	80,000	P 2,000,000	P 25,000/child immunized

Types of Economic Evaluation Cost Benefit Analysis (CBA)

- Values both costs and benefits in money terms and compares them through criteria: **BENEFITS COST**
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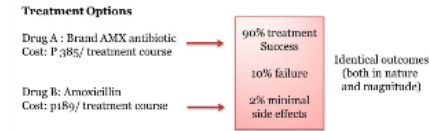
Ex. A stroke patient who has neurologic complications (Not being able to walk by himself) has lower quality of life than the normal patient. Thus adjustment in quality of life is made.



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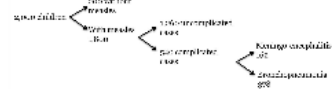
Which of the alternatives will provide the most health effect for every peso spent for the improvement of health?

Assume that we are evaluating a project proposing to vaccinate 2,000 children for measles in a certain distant province. Assume also that the cost per child immunized is P300.00. We know that if we do not immunize these children for measles, there is a good chance that they will contract it. Is it cost-beneficial for us to immunized all of them?

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 - Of those who develop complications, 90% will have meningitis encephalitis, and 20% will have neurologic sequelae.
 - Costs are as follows:
 - 1 unimmunized child = P 600,000 cost
 - 1 immunized child = P 300,000 cost
 - 1 meningitis case = P 20,000 cost
 - 1 neurologic sequelae = P 5,000 cost

Analysis:
Cost of immunizing 2,000 children at P300.00 each = P 600,000

Cost of not immunizing children:



Costs:
 1 unimmunized child = P 600,000
 1800 unimmunized children = P 1,080,000
 1620 children with complications = P 16,200,000
 1458 children with meningitis/encephalitis = P 29,160,000
 292 children with neurologic sequelae = P 1,460,000
TOTAL COST of not immunization = P 47,840,000

Cost Benefit Ratio = $\frac{P 600,000}{P 47,840,000} = 0.0125$
 Therefore the project is highly beneficial



Economic Evaluation techniques are valuable tools in assessing the economic feasibility and efficiency of health interventions. They can be used in assessing such in health programs, medical therapeutic and diagnostic interventions, pharmacologic therapeutics.

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Evaluating options in undertaking an immunization drive.

OPTIONS	# of IMMUNIZED CHILDREN	TOTAL COST OF THE PROJECT	COST-EFFECTIVENESS RATIO
Use Strategic Health Centre	2000	P 600,000	P 300,000/child immunized
Use Mobile Clinics	4000	P 1,200,000	P 300,000/child immunized
Use All-Box Sites	8000	P 2,400,000	P 300,000/child immunized

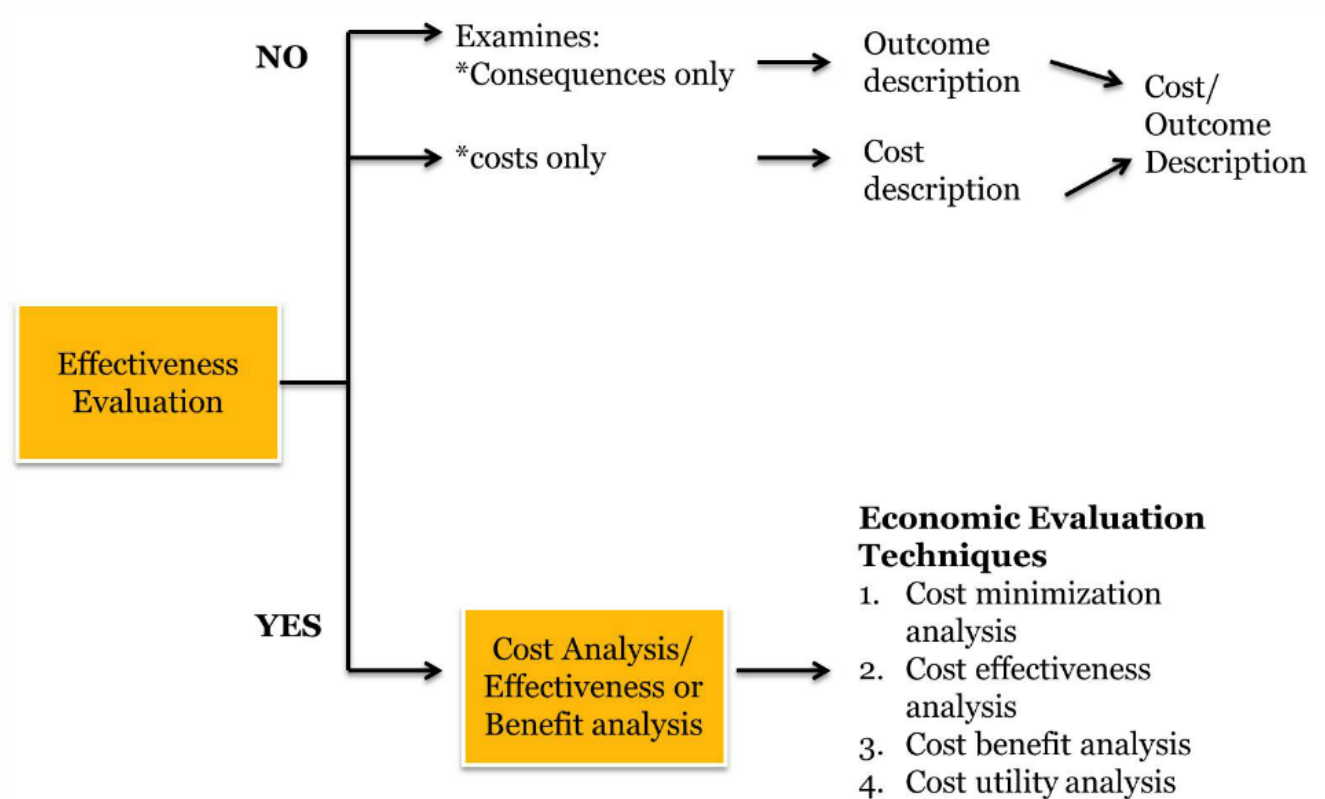
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Basic Principles of Economic Evaluation

Comparing Costs with Benefits



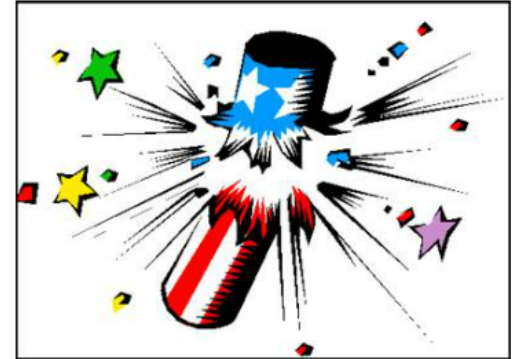
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- Total Cost / Total Health Effect
- It is a ratio that compares costs per health effect.

Evaluating options in undertaking an immunization drive.

OPTIONS	# of IMMUNIZED CHILDREN	TOTAL COST OF THE PROJECT	COST-EFFECTIVENESS RATIO
Use Barangay Health Centers	35,000	P3,500,000	P 98.59/child immunized
Use Mobile Clinics	45,000	P5,750,000	P 127.77/child immunized
Use Jollibee Stores	38,670	P3,750,000	P 96.97/child immunized

Types of Economic Evaluation

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