

# **Cost-Effectiveness Analysis**

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# Escalation in the health care cost:

- Provision of certain services that could be provided through other lower cost facilities.
- Unnecessary and Improper utilization of health services.
- Lack of patient referrals system.
- Inefficient use of technological alternatives.

# Escalation in the health care cost:

- Lack of emphasis on homecare services
- Epidemiological transition.
- Advancement in the technology.
- Increase spending on human resource for health (HRH).
- Emphasis on curative services rather than preventive.

# Decision making process

**When making decisions, there is a need to address some basic questions:**

- Is this a “good” project to pursue?
- Are there other alternatives/projects that would be “better?”
- How do we use our limited resources for the “greatest good?”

# Decision making process (cont.)

- Cost-minimization analysis (CMA)
- Cost-effectiveness analysis (CEA)
- Cost-utility analysis (CUA)
- Cost-benefit analysis (CBA)

# Cost Effectiveness

- Combines the cost of implementing the intervention with the effectiveness of the intervention.
- Data from this type of analysis is generally readily available and more understandable than cost-benefit analyses.
- It is most meaningfully measured in terms of outcome--cost per life saved or cost per case averted.

# Cost Effectiveness

- In CEA, an economist can avoid the 'political pitfalls' associated with making any direct judgment regarding the value of the life that has been saved.
- Costs often easier to estimate than benefits
- Not easy to handle, but usually easier to get accurate information for costs than for benefits

# CEA aims at:

- Providing key policy makers with the most effective health intervention package options.
- Estimating the potential health impacts of the interventions.



## CEA aims (cont.):

- Determining key factors in improving the effectiveness and efficiency of the health system.
- Establishing the technical and institutional capacity to carry out future National Burden of Disease and Cost Effectiveness (NBD-CE).

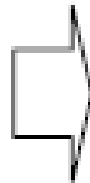
# Measuring Effectiveness – Improvements in Health

- Surrogate measures stated in terms of clinical efficacy  
Blood pressure, cholesterol levels, bone mass density or tumor size
- Intermediate measures stated in terms of clinical effectiveness  
Events, scores on exams
- Final outcomes measure economic effectiveness  
Events avoided, disease-free days, life-years saved, quality-adjusted life years saved

# The General Approach for CEA:

## 1. Define the program

- Develop alternative approaches to the problem
- Define precisely problems to be analyzed (who, what, where, why, when and how)



## 2. Compute net costs

- Compute gross program costs
- Compute monetary savings.
- Discount costs and savings to present value
- Compute net costs (gross costs less savings)



## 3. Compute net health effects (in terms of additional years of healthy life)

Add

- Additional years with full health
- Additional years of disease
- Improvement in health (no extension of life)
- Negative effects (inconveniences and morbidity)
- \* Modify by time preference factors

## 4. Apply decision rules

- Identify case based on net costs and net effects
- Apply rule for appropriate case



## 5. Perform sensitivity analysis

- Vary certain parameters and recomputed costs and health effects.
- Examine effects on decision.



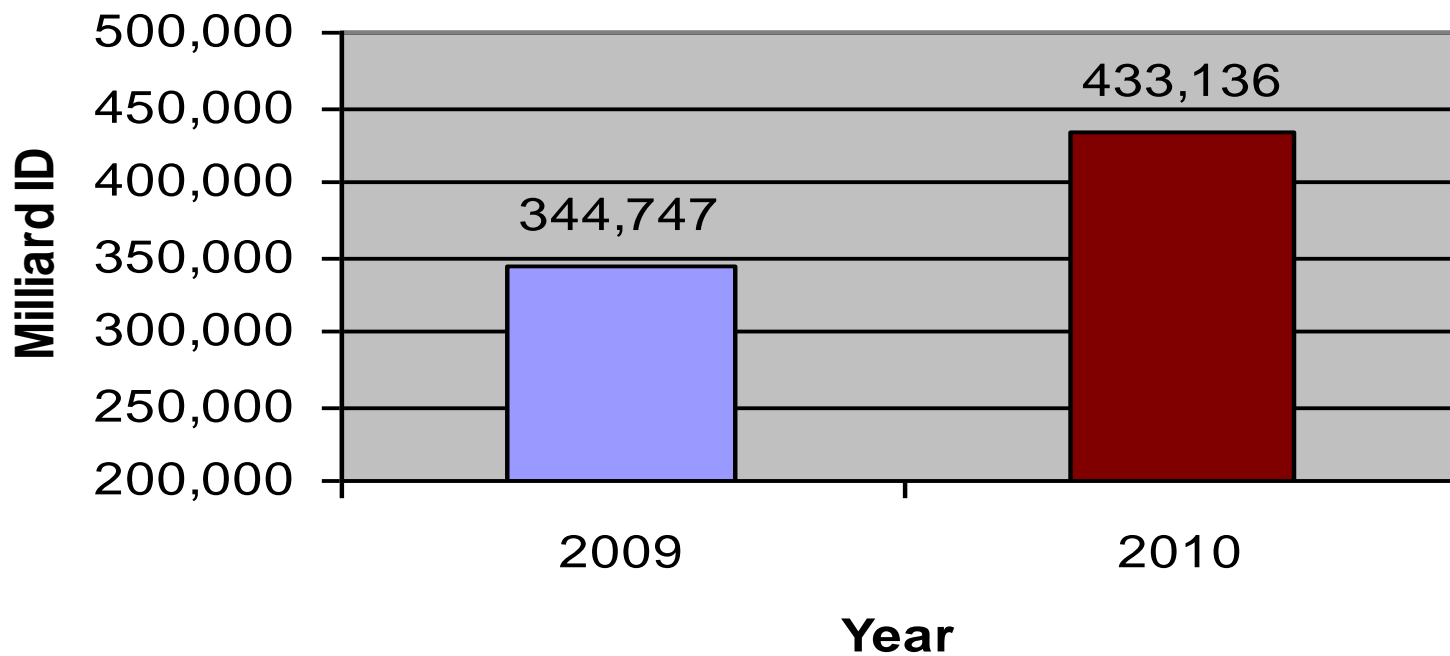
# Limitation of CEA

- In order to compare interventions, all services should have the same measure of effectiveness or outcome.
- Prevention programs are often extremely difficult to associate with a specific number of illnesses averted.

# Limitation of CEA

- CEA is problematic in that it assumes that an intervention has succeeded in preventing or treating an illness for an indefinite period of time.
- CEA does not necessarily reflect the utility of the service from the perspective of the community.

## MOH/KRG Annual Budget



**It worth to mention** that health care spending in Kurdistan increased for the year 2010 by about 25% of that 2009. The budget of 2009 was (344,747,000,000) ID, while in 2010, it was (433,136,000,000) ID.

- Nearly 73% of the budget goes to HRH.
- Immunization Coverage of vaccine-preventable communicable diseases ranged nearly between 65% for TT of pregnant women to 90% BCG.
- Number of surgical operations performed during 2009  
179,349.

Although data are available on the cost of different health care services including physical structures, medical supplies, equipments and HRH, there is no CEA that links the costs with the outcomes.

From a previous data, there is a need for adoption of CEA program for different health services.





**Thank You**

