

# **Economic Evaluation: Introduction**

**Online Workshop On Health Economics**

**September 14th, 2021**

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# Background

- Resource scarcity
- Opportunity Cost
- Illustration:
  - Routine health system: Resource envelope under NHM
  - Hospital budgets: resource based rather than need based
  - Planning process?
    - Precedence
    - Situational analysis: epidemiological burden and effectiveness of intervention
    - Health Technology Assessment

# Lecture overview

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- Efficiency concept
- Health Care Evaluations & Efficiency
- Definition of economic evaluation
- Types of economic evaluation

# Efficiency

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Investing resources to get best value for money

# Types of Efficiency

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- Technical Efficiency
- Productive Efficiency
- Allocative Efficiency

# How to Assess Efficiency?

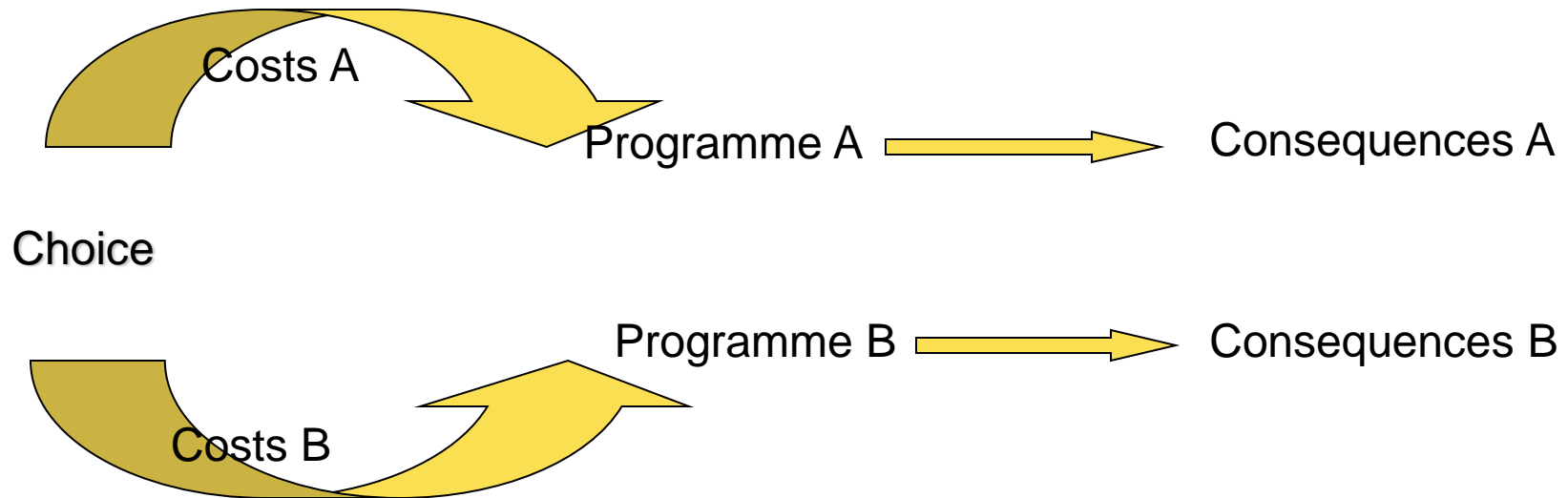
## *Economic Evaluation*

*The comparative analysis of alternative courses of action  
in terms of both their costs and consequences*

Source: Methods for the economic evaluation of health care programmes Michael F. Drummond,  
2<sup>nd</sup> edition, 1997

# What is economic evaluation?

Does a medical intervention (drug, device, program, surgery) when used to prevent or treat a condition or improve health outcomes in patients, justify the additional dollars spent compared to the existing medical strategy?



# Health Care Evaluation

Are both the costs (inputs) and consequences (outputs) of the alternatives examined?

Is there a comparison of two or more alternatives

	No		Yes
	Examines only consequences	Examines only costs	
No	Partial Evaluation <i>Outcome Description</i>	Partial Evaluation <i>Cost Description</i>	Partial Evaluation <i>Cost Outcome description</i>
Yes	Partial Evaluation <i>Efficacy or Effectiveness Evaluation</i>	Partial Evaluation <i>Cost Analysis</i>	<b>Full Economic Evaluation</b> <b>Cost Minimization Analysis</b> <b>Cost Effectiveness Analysis</b> <b>Cost Utility Analysis</b> <b>Cost Benefit Analysis</b>



# Outcome Assessment in Economic Evaluations

Type of economic evaluation	Outcome can be measured by
Cost effectiveness analysis	<ul style="list-style-type: none"><li>•Clinical end points</li><li>•Mortality</li><li>•Years of life</li><li>•Condition specific outcome measures</li></ul>
Cost utility analysis	<ul style="list-style-type: none"><li>•Utility based quality of life scales</li></ul>
Cost benefit analysis	<ul style="list-style-type: none"><li>•Willingness to pay</li></ul>

Cost Minimization analysis: Least cost with same effects

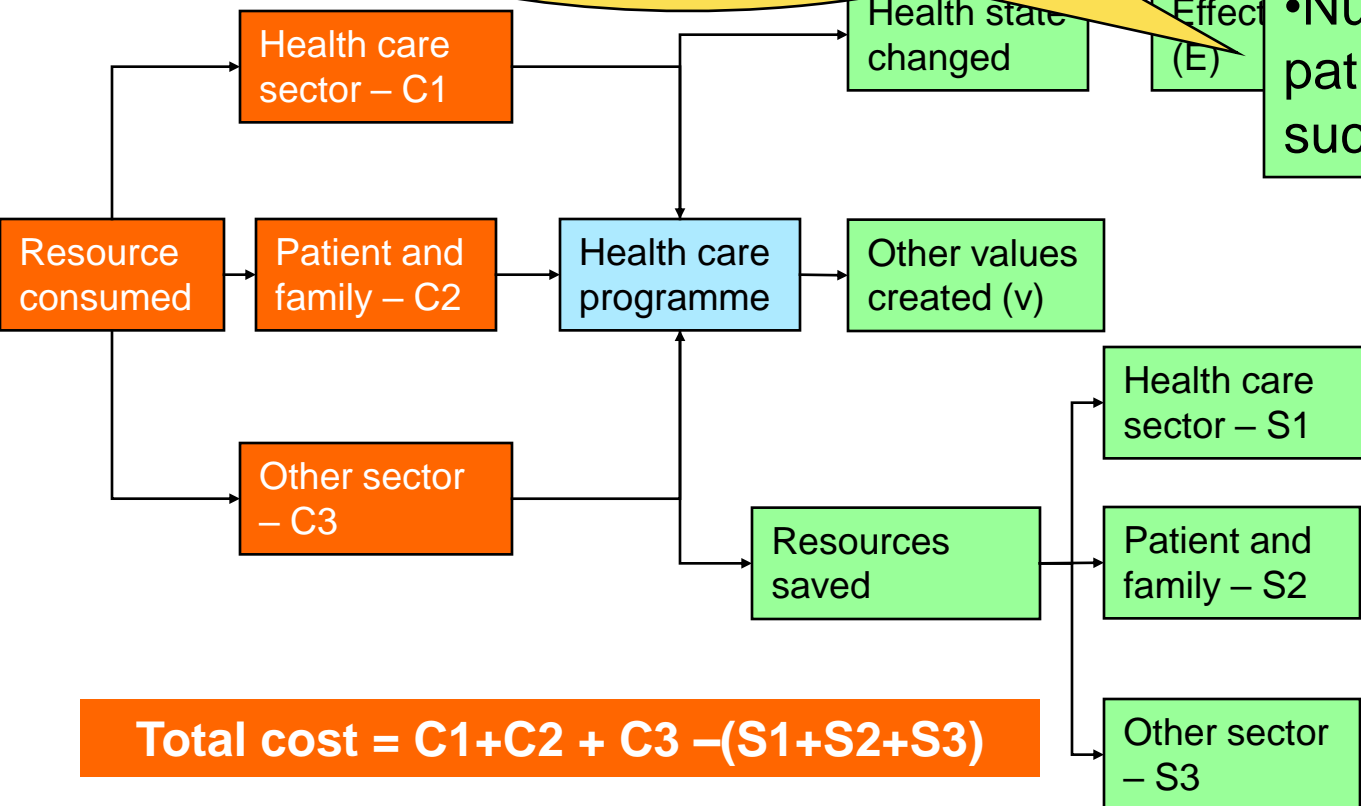
## COSTS

## CONSEQUENCES

### Cost-effectiveness analysis

$$C1 + C2 + C3 - (S1 + S2 + S3) / E$$

- Life years saved
- Mm Hg BP reduced
- Number of patients treated successfully



## COSTS

## CONSEQUENCES

### Cost-utility analysis

$$\frac{C1+C2 + C3 - (S1+S2+S3)}{U}$$

•Quality adjusted life years (QALYs)

Effects (E)

Health state changed

Health care sector – C1

Resource consumed

Patient and family – C2

Health care programme

Other values created (V)

Other sector – C3

Health care sector – S1

Resources saved

Patient and family – S2

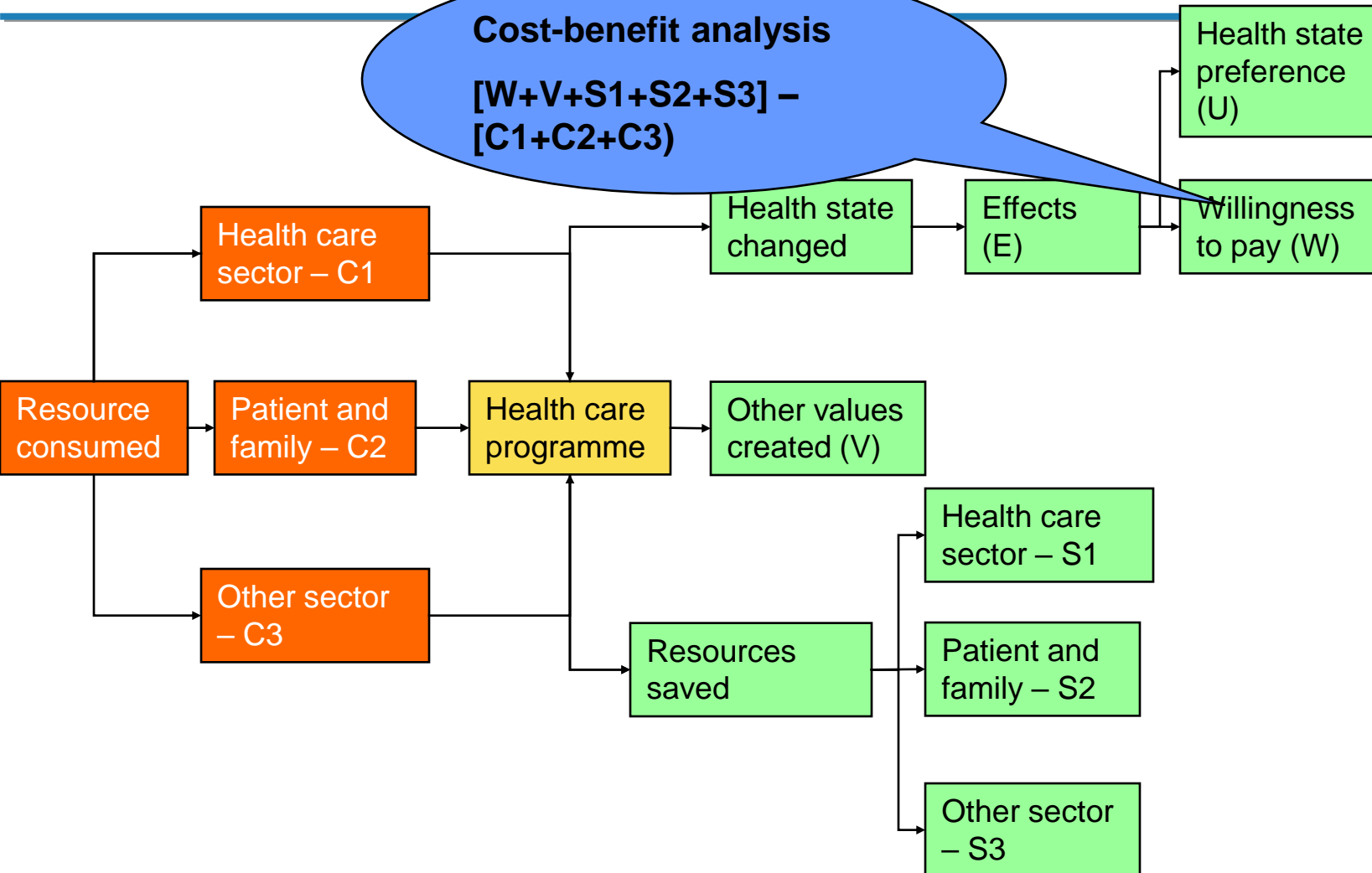
Other sector – S3

## COSTS

## CONSEQUENCES

### Cost-benefit analysis

$$[W+V+S1+S2+S3] - [C1+C2+C3]$$



# Choosing a Particular Design

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- Policy question to be answered
- Type of efficiency to be evaluated
- Feasibility: Resources to undertake the study

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# Thanks!!!

# Thanks!!!

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