

Critical Appraisal of Economic Analysis

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Rec Date: 08 December, 2015; Acc Date: 15 December, 2015; Pub Date: 22 December, 2015

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Introduction

Economic analysis is a systematic and comparative assessment of the costs and consequences of two or more alternative treatments or programs of action for the promotion and health care. The basic

function of an economic analysis is to identify, quantify, assess and compare the costs and consequences of alternatives considered for promotion and health care. The Table 1 shows the checklists needed to make a critical analysis of economic analysis [1-14].

Appraisal questions
Was a well-defined question posed?
Is it clear what the authors were trying to do?
The study addresses an appropriate and clearly focused question
The economic importance of the question is clear
The choice of study design is justified
Was a comprehensive description of the competing alternatives given (i.e., can you tell who did what to whom, where and how often)?
Was there evidence that the programme's effectiveness had been established? Was the study attached to the economic evaluation an RCT?
How valid was the study design used?
What is the perspective?
How many options are compared?
Are both costs and consequences considered?
What is the time horizon?
Was a comprehensive description of the competing alternatives given?
Can you tell who did what, to whom, where and how often?
Does the paper provide evidence that the programme would be effective (i.e., would the programme do more good than harm)? If an RCT or systematic review was used; if not consider how strong the evidence was (Economic evaluations frequently have to integrate different types of knowledge stemming from different study designs).
Were the effects of the intervention identified, measured and valued appropriately? Effects can be measured in natural units (e.g. years of life) or more complex units (e.g. years adjusted for quality of life such as QALYs) or monetary equivalents of the benefit gained (e.g. \$).
Were all important and relevant resources required and health outcome costs for each alternative identified, measured in appropriate units and valued credibly?
Were all the important and relevant outcomes and costs for each alternative identified?
What perspective(s) was/were taken, e.g. health service, patient, society.
Measured accurately in appropriate units prior to evaluation? Appropriate units may be hours of nursing time, Number of physician visits, years-of-life gained etc.
Valued credibly? Are the values realistic? How have they been derived? Have opportunity costs been considered?
Were costs and consequences adjusted for different times at which they occurred (discounting)?
Were the outcomes and costs valued credibly?
Were opportunity costs considered?
What were the results of the evaluation? What is the bottom line? What units were used (e.g. cost/life year gained, Cost/QALY, net benefit)?

Was an incremental analysis of the consequences and cost of alternatives performed?
Was an adequate sensitivity analysis performed? If all the main areas of uncertainty were considered by changing the estimate of the variable and looking at how this would change the result of the economic evaluation.
Were outcomes and costs adjusted for different times at which they occurred (discounting)?
Is the programme likely to be equally effective in your context or setting?
<ul style="list-style-type: none"> • the patients covered by the review could be sufficiently different to your population to cause concern • your local setting is likely to differ much from that of the review
Are the costs translatable to your setting?
All costs that are relevant from the viewpoint of the study are included and are measured and valued appropriately.
The outcome measures used to answer the study question are relevant to that purpose and are measured and valued appropriately.
If discounting of future costs and outcomes is necessary, it been performed correctly
Assumptions are made explicit and a sensitivity analysis performed.
The decision rule is made explicit and comparisons are made on the basis of incremental costs and outcomes.
Was an incremental analysis of the outcomes and costs of alternatives performed?
Was a sensitivity analysis performed?
Were all the main areas of uncertainty considered?
Did the presentation and discussion of the results include all, or enough, of the issues that are of concern to purchasers?
Is it worth doing in your setting?
Were the conclusions of the evaluation justified by the evidence presented?
How well was the study conducted?
Are the results of this study directly applicable to the patient group targeted by this guideline?
The results provide information of relevance to policy makers
Can the results be applied to the local population?
Are the patients similar enough to your population? <ul style="list-style-type: none"> • Is your local setting similar to that in the study?
Conflicts of interest are declared.
Rate the overall methodological quality of the study, using the following as a guide: High quality (++) : Majority of criteria met. Little or no risk of bias. Low quality (-) : Either most criteria not met, or significant flaws relating to key aspects of study design. Reject (0) : Poor quality study with significant flaws. Wrong study type. Not relevant to guideline

Table 1: Critical appraisal of economic analysis.

Use this checklist can improve the evaluation of prognostic studies.

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