Beyond Clinical Effectiveness - the Role of the NHS Economic Evaluation Database in Providing Best Evidence for Health Care

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A. INTRODUCTION

In a world of unlimited resources medical practice would be based on evidence of effectiveness only. In the real world, decision makers have the difficult task to decide how to allocate scarce health care resources among different uses. Economic analysis aims at identifying and making explicit the criteria used in this process.

Economic evaluations of health care interventions identify, measure, value, and compare the costs and consequences of alternatives under consideration[1].

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

Is there comparison of two or more alternatives?	No		Yes
	Examines only consequences	Examines only costs	Examines both costs and consequences
No	Partial evaluation **1A** Outcome description	**1B** Cost description	Partial evaluation **2** Cost-outcome description
Yes	Partial evaluation **3A** Efficacy or effectiveness evaluation	**3B** Cost analysis	Full economic evaluation **4** Cost-minimization analysis Cost-effectiveness analysis Cost-utility analysis Cost-benefit analysis

Table 1: Distinguishing characteristics of health care evaluations.

The characteristics of full economic evaluations of health care interventions are: comparison of costs and consequences of alternative interventions.

B. THE NATIONAL HEALTH SERVICE ECONOMIC EVALUATION DATABASE (NHS EED)

The NHS Centre for Reviews and Dissemination at the University of York, UK, has been commissioned by the UK Department of Health to develop and maintain a database of structured critical abstracts of full economic evaluations of health care.

The goal of the NHS EED Project is to provide a high quality product which is ensured by:

- identifying as many relevant published papers as resources allow;
- classifying them according to existing inclusion/exclusion criteria;
- writing critical abstracts following a set of predefined guidelines.

1. Identifying relevant papers.

Weekly searches of Current Contents-Clinical Medicine are conducted along with hand searches of a range of journals and grey literature sources. Medline and the Cumulative Index of Nursing and Allied Health Literature (CINAHL) are searched on a monthly basis.

2. Classifying papers.

Using a set of inclusion/exclusion criteria[2] (See table 2) all identified papers are either rejected or pass to a further assessment stage. However, studies are not selected for inclusion on the basis of their quality; the commentary field at the end of each abstract provides narrative information about the quality of the study.

Inclusion Criteria		Exclusion Criteria
1. Abstract - the study is a full economic evaluation.	2. Bibliographic reference - costing papers - review papers - methodology papers	All other papers, e.g.: - letters - notes - policy papers, etc.

Table 2: Criteria for inclusion/exclusion of papers on the NHS EED.

3. Writing critical abstracts.

Papers reporting a full economic evaluation of a health intervention are allocated to health economists commissioned by the project to write critical abstracts. A strict process of quality control ensures that the abstracts are accurate, thorough and understandable.

The NHS Economic Evaluation Database contains structured critical abstracts of full economic evaluations of health interventions, as well as the references of methodology, costing and review papers.

C. CONTENTS OF STRUCTURED ABSTRACTS ON THE NHS EED

Abstracts are written following a set of guidelines, compiled with the assistance of an international panel of experts[2]. The aim is to provide a structured, critical summary of the study in order to facilitate the understanding of the methods used by the authors as well as to assess the quality of the study. The format allows comparison across studies and is designed to provide the target audience (health care professionals, managers, policy makers, researchers and academics) with accessible and comprehensive information (See table 3).

Subject of Study

- health technology, disease, type of intervention, study question.

Key Elements of the Study

- economic study type, study population setting, dates to which data relate, source of effectiveness data, modelling, link between effectiveness and cost data.

Details about Clinical evidence

A. Single study:	B. Review/synthesis of previously published studies.	C. Estimates of effectiveness based on opinion
- study sample - study design - analysis of effectiveness - effectiveness results - clinical conclusions	- outcomes assessed in the review - inclusion criteria - sources searched - criteria to ensure validity of studies - methods to judge relevance etc. - number of primary studies included - method of combination - differences between studies - results of the review	- methods to derive estimates - estimates of effectiveness and key assumptions

Economic Analysis:

- measure of benefits, direct costs, indirect costs, statistical analysis of quantities/costs, seneitivity analysis

Results:

- estimated benefits used in the economic analysis, cost results, synthesis of cost and benefits

Conclusions and Comment:

author's conclusions, CRD commentary

Implications of the Study

Table 3: Contents of structured abstracts.

ABSTRACT

Objective: To provide an outline of the NHS EED as a newly introduced part of the Cochrane Library and its role in providing best evidence about economic evaluations of health care.

Background: The NHS EED Project is commissioned by the UK NHS to identify papers on economic evaluations of health, and to disseminate the principal findings to clinicians, decision makers, and researchers through structured abstracts available on the public database. Furthermore, the abstracts are critical in their nature as they also contain a commentary field where assessment of the quality of the study is provided. It is recognised that health interventions should only be considered for general use when their effectiveness and safety have been demonstrated. However, decision makers are becoming increasingly aware that, because of finite resources, the resource implications of health care interventions also need to be considered. Based on our experience, we suggest an approach in making well-informed decisions about health care by using the Cochrane Library. Cochrane reviewers can search the database to identify such evaluations which may be relevant for their review.

Conclusion: Economic evaluations are a step beyond effectiveness evidence and are conducted in order to provide decision makers with information about the best way to allocate limited resources among alternative uses as they analyse benefits versus costs.

The abstract of an economic evaluation contains a structured summary of the study and a CRD commentary, and is written according to a set of guidelines.

D. WHAT IS CURRENTLY IN THE NHS ECONOMIC EVALUATION DATABASE?

The database (as at 1st October 1999) contains 1372 structured abstracts of economic evaluations published from 1994 onwards (selected studies are available for 1993 - 1990). Revised abstracts from the Register of Cost-Effectiveness Studies, published by the Department of Health, Economics and Operational Research Division in August 1994 are also available on the database (a total of 124). There are 2452 short bibliographic references of cost, review and methodology papers.

The abstracts of economic evaluations cover a variety of areas in health care, the most common being cardiovascular diseases and neoplasms (See also pie chart 1).

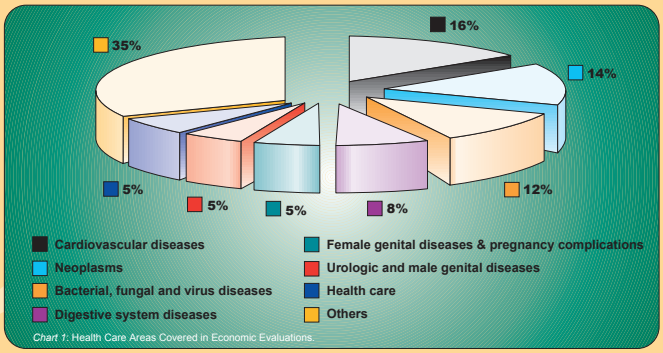

Chart 1: Health Care Areas Covered in Economic Evaluations.

The economic evaluations included as abstracts on the database are typically from the USA or Canada (63.2 %), and the UK (11.2 %); carried out in a secondary care setting (52.6 %) or primary care (22.8 %).

In a recent review of the database it was found that the most preferred type of economic analysis is cost-effectiveness analysis, followed by cost-utility analysis, while cost-benefit studies are very rare (See pie chart 2).

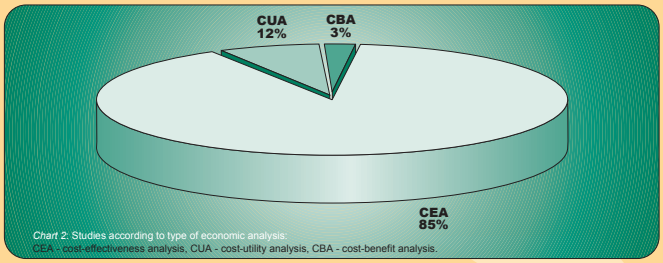

Chart 2: Studies according to type of economic analysis:
CEA - cost-effectiveness analysis, CUA - cost-utility analysis, CBA - cost-benefit analysis.

Explore the NHS Economic Evaluation Database - free Internet access available from this website: http://www.york.ac.uk/inst/crd/info.htm

E. THE NHS EED AND THE COCHRANE LIBRARY

The Cochrane Collaboration aims to help people make well informed decisions about health care by preparing, maintaining and ensuring the accessibility of systematic reviews of the effects of health care interventions[3]. Cochrane reviews and information about the Cochrane Collaboration are published electronically in The Cochrane Library on a regular basis. Several databases are included in The Cochrane Library including the Cochrane Database of Systematic Reviews, the Cochrane Controlled Trials Register, and the Database of Abstracts of Reviews of Effectiveness.

From the beginning of 2000 NHS EED will also be included in the Library, thus enhancing its ability to provide reliable, up-to-date and concise information about the effectiveness and cost-effectiveness of health interventions. The main principles in the running of the database are accessibility, relevance, timeliness, and continuous quality improvements, which are also included in the nine values of the Cochrane Collaboration.[3]

It is our belief too that 'if people are to receive care which is appropriate, then policy makers and decision makers - ranging from ministers of health to individual clinicians and patients - must consider people's needs, the availability of resources, and priorities'.[3]

The NHS Economic Evaluation Database, when included in the Cochrane Library, will help its users access information both on effectiveness and cost-effectiveness of health interventions.

F. CONCLUSION

The database is a powerful tool for decision-making as it provides easily accessible information about the cost-effectiveness of health interventions as well as assessments of the quality of the studies. As a part of the Cochrane Library it will enhance its characteristics as a powerful decision-making tool. The existence of sources such as the Cochrane Library could be the way out of the information labyrinth towards better access to evidence and evidence based health care.

References

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