

Improving outcomes through access to critiqued economic evaluations: The NHS Economic Evaluation Database within the HTA review process

John Nixon¹, Steven Duffy¹, Nigel Armstrong¹, Dawn Craig¹, Julie Glanville¹, James Christie¹, Michael Drummond² and Jos Kleijnen¹.
¹ Centre for Reviews and Dissemination, University of York. ² Centre for Health Economics, THE UNIVERSITY of York

Background

Technology Assessment Reviews (TARs) in health care now increasingly include cost outcomes as well as clinical effects. This means that healthcare decision-makers and researchers are required to access and use economic and clinical evidence for interventions that are being considered by healthcare providers (Bentkover, 2002, NICE 2001, Commonwealth of Australia, 1995, CCOHTA, 1997).

In this regard, recent research with UK Health Authorities has shown that local decision-makers value sources such as the NHS Economic Evaluation Database (NHS EED) (<http://nhscrd.york.ac.uk>) that independently collect, summarise and critique evidence from economic evaluations (Hoffman et al, 2002; Nixon et al, 2003). Other useful sources of evidence include the Cochrane Database of Systematic Reviews (CDSR) (<http://www.update-software.com/clubng/clublogon.htm>), the Database of Reviews of Effects (DARE), and the Health Technology Assessment (HTA) database (both available at <http://nhscrd.york.ac.uk>).

The technology assessment process for economic evaluations includes the following steps:

- Search for studies in databases, journals, and through hand searches
- Extract and record data from studies that meet the specified inclusion criteria
- Assess the quality of included studies
- Summarise the findings of all included studies
- Determine the need for new modeling studies that synthesise the effectiveness and economic evidence derived from the review.

The aim of this study was to determine the usefulness of NHS EED in contributing to the TAR process as commissioned by the National Institute for Clinical Excellence (NICE). The findings should be useful in refining and developing NHS EED to be a more useful tool within the TAR process.

Methods

TARs were identified from the NICE website (<http://www.nice.org.uk>) which lists completed technology appraisals where guidance has been issued. A postal survey of lead authors of TARs commissioned by NICE was conducted. The questionnaire investigated the usefulness of NHS EED by means of both quantitative and qualitative data analysis approaches.

The survey questionnaire consisted of 6 questions (in the form of statements) answerable using a scale from 1 (least useful) to 5 (most useful). An alternative option of 'N/A' was used to indicate NHS EED was not relevant. The specific statements used in the questionnaire were as follows:

- 1. Search strategy:** NHS EED was useful in locating or identifying economic studies that were included in the review.
- 2. Data extraction:** NHS EED abstracts were useful in extracting and summarising data from the published economic studies.
- 3. Quality assessment:** NHS EED was useful in completing quality assessments (for example the Drummond 10-point or 35-point checklist (Drummond et al, 1997) for economic studies included in the review.
- 4. Requirement for new modelling:** NHS EED abstracts were useful in informing the decision to commission/not to commission a new modelling study.
- 5. Other comments** – participants were asked to comment on future improvements to NHS EED in terms of future NICE TARs.

To classify the quantitative results according to their perceived usefulness, we adopted the method of proportionality by grouping scores of 3 or above (most useful), 2 or below (least useful), and N/A. The qualitative data were analysed to identify both positive and negative statements related to each question, with the results being presented in tabular form for clarity.

Results

A total of 46 reviews commissioned by NICE were identified. From these, NHS EED was used in 37 cases (80%).

The questionnaire response rate was 52%. The quantitative results are shown in Figure 1. They show that the most useful role played by NHS EED was in terms of search strategy and identifying studies (score 3 or above = 60%). The next most useful role was that of quality assessment (score 3 or above = 30%), although a high proportion (48%) found NHS EED to be not applicable in this element of reviews. Only 26% of respondents found NHS EED to be useful in data extraction, with 48% finding NHS EED to be not applicable. In terms of determining the requirements for new modelling studies, only 22% scored 3 or above while the N/A score was again high at 52%.

Although the quantitative results, with the exception of search strategy, suggest NHS EED was not highly useful in the HTA review process, the qualitative comments (Table 1) provide reasons that explain and expand upon the quantitative findings.

Discussion

The results of this survey have demonstrated the relative usefulness of NHS EED within the TAR process.

NHS EED offered advantages over a simple MEDLINE search in identifying studies and was especially useful for non-economists. Whilst NHS EED was helpful in reviewing the published literature, those producing TARs also need to consult the confidential company submissions, which are forwarded to them from NICE. In this regard the results of such studies will only be available on NHS EED once they become available in the public domain.

Whilst we understand that the protocol requires the TAR team utilise the source papers, having an already prepared NHS EED abstract is of assistance to someone reading the paper.

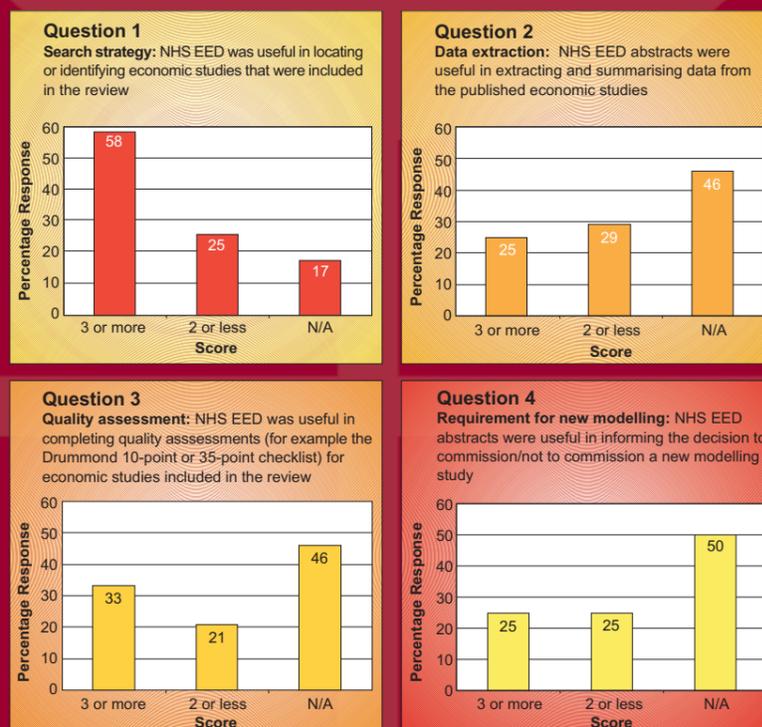
It has been recognised that some economic evaluations were not on NHS EED due to limited reporting of study details by authors but this is explained by the inclusion criteria of NHS EED (Centre for Reviews and Dissemination, 2001). A new category of 'partial economic evaluation' has recently been introduced to address this point (for studies that qualify as full economic evaluations but have limited cost or effectiveness data).

It is also recognised that publication lag accounts for some published studies not being available on NHS EED at the time of the review but steps to reduce this time lag are currently being investigated.

In terms of NHS EED's impact on the TAR process, data extraction and checklist processes could be harmonised and universally applied according to the NHS EED template. Moreover, the emphasis in TARs is towards the creation of original models, and due to limited time to complete each review, we would anticipate that assistance from NHS EED will become more important over time.

The findings of this survey will help to develop and improve NHS EED in its role of providing health outcomes and economic evidence in TARs.

Figure 1: Summary of responses to questions 1 to 4



Positive Comments

- NHS EED information was more useful than that obtained from a Medline search.
- NHS EED abstracts were viewed as a useful reference point.
- A lack of NHS EED abstracts highlighted the need for new modelling studies.
- NHS EED abstracts were useful for non-economists in allowing them to gain knowledge of the methods of economic evaluation.
- NHS EED were helpful in completing quality checklists.

Negative Comments

- 3 reviewers located published economic evaluations not on NHS EED.
- NHS EED abstracts were useful for data abstraction and critical commentaries, but researchers were required in the protocol to use the original study.
- Some studies classified as 'cost' by NHS EED were thought to be cost-consequence analyses and therefore should have been abstracted by NHS EED.
- Quality assessment when required was conducted by means of a checklist, when abstracts were used it was in conjunction with the original study.
- Confidential company submissions are only available within the NICE TAR processes (beyond the remit of NHS EED).

References

Bentkover J D, and Corey R (2002). "Effective utilisation of pharmacoeconomics for decision makers." *Dis Manage Health Outcomes* 10(2): 75-80.
Canadian Co-ordinating Office for Health Technology Assessment (1997). Guidelines for economic evaluation of pharmaceuticals: Canada. Ottawa, CCOHTA.

Commonwealth of Australia (1995). Guidelines for the pharmaceutical industry on preparation of submissions to the pharmaceutical benefits advisory committee: including submissions involving economic analyses. Canberra, Australian government printing office.
Drummond M F, Stoddart GL, O'Brien BJ, Torrance GW (1997). Methods for the Economic Evaluation of Health care programmes. Oxford, Oxford University press.

Hoffman C, Stoykova BA, Nixon J, Drummond MF, Miso K (2002). "Do decision-makers find economic evaluations useful? results of recent focus group research in the UK." *Value in Health* 5(2): 71-78.
Centre for Reviews and Dissemination (2001). Improving access to cost-effectiveness information for health care decision making: the NHS Economic Evaluation Database. York, University of York.

Nixon J, Phipps K, Glanville J, Mugford M, Drummond MF (2002). "Using economic evidence to support decision-making: a case study of assertive community treatment within the UK National Service Framework for Mental Health." *Applied Health Economics and Health Policy*, 1(4): 179-90