Review criteria for clinical audit

A study of the methods used to select review criteria for clinical audit

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Executive summary

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Executive summary

Background

Substantial variation is reported in the quality, appropriateness and cost-effectiveness of healthcare services. To reduce such variation, quality improvement initiatives have been actively promoted by many healthcare providers and policy-makers. One potentially powerful method of quality improvement involves establishing the extent to which clinical practice complies with identified criteria.

A possible reason for the incomplete success of activities such as clinical audit stems from the review criteria used. Review criteria have been defined as 'systematically developed statements that can be used to assess the appropriateness of specific healthcare decisions, services and outcomes'. If desirable performance measures are set according to appropriate criteria, the attainment of these targets should result in improved care. In contrast, if quality of care is assessed against inappropriate criteria, attainment of targets may not effect any improvement in care and resources may be wasted in ineffective quality improvement activities

This report describes a programme of research to study the methods used to select the review criteria for clinical audit used in quality improvement activities in the NHS in England and Wales.

Objectives

- To develop a clear definition of the desirable characteristics of review criteria and their selection.
- To create and use a valid questionnaire to identify the degree to which review criteria that have those characteristics are selected or developed.
- To identify obstacles to the selection or development of review criteria and recommend methods of overcoming such obstacles.
- To advance our understanding of how review criteria for clinical audit are selected.

Methods

A definition of the important and feasible characteristics of review criteria was created. The definition was developed through an iterative questionnaire process to generate consensus among an international panel of experts in the field of quality improvement in healthcare. Their consensus on the desirable characteristics of review criteria was used to develop a questionnaire to assess how well review criteria were selected or developed. This was then used to measure how well review criteria have been selected or developed for use in clinical audits in the NHS in England and Wales.

After piloting and revisions, the questionnaire was distributed to leads of clinical audits in NHS trusts and general practices. Following the questionnaire study, a sample of respondents was selected for interview. Interviews explored obstacles to using systematic methods to select criteria and methods that had been used to overcome these obstacles successfully.

Results

The audit criteria questionnaire (ACQ) was created to assess the extent to which systematic methods are used to select review criteria and assess the quality of the review criteria actually used in clinical audit in the UK. The ACQ score was based on the list of desirable characteristics of review criteria derived from expert consensus.

Reported methods of selecting review criteria for clinical audit were often less systematic than is desirable. The mean ACQ score was 0.52 (range 0 to 0.98, $n = 476$) from a possible range of 0 to 1.00.

Seventy-one per cent ($n = 337$) of respondents based their review criteria on the research literature. Of these, 78% used a literature review that was less than 3 years old. Only 27% recorded whether the validity of the research was appraised and 25% recorded the methods used to appraise it. Thus, over 70% of the cases that used evidence as the base for review criteria did not check the validity of the evidence. Furthermore, 29% of respondents had not reported using the research literature to select their review criteria. Only 1% ($n = 3$) of all literature searching respondents used systematic reviews. Of the 305 respondents who used both literature and expert opinion, 33% ($n = 102$) reported that the method used to

combine evidence and expert opinion was not made explicit. Consultation with colleagues was the most commonly used basis for review criterion selection, as an alternative or supplement to evidence from the literature. However, patients or carers were rarely consulted.

Assessing the validity of review criteria is impeded by the lack of information on how review criteria were developed, even in published audit protocols. The mean score of 0.52 for published review criteria implies that half the desirable characteristics of review criteria are absent. The items were all deemed feasible by expert consensus, and so a perfect score of 1.0 should be possible. Published protocols could improve their development methods, transparency and information on usability.

About half of respondents used audit review criteria that had been piloted. Audits using unpiloted review criteria risk wasting time and resources in discovering that the criteria are unfeasible, contradictory or ambiguous after collecting large amounts of data. Of the respondents, 81% had prioritised their review criteria. Most had used more than one method of prioritisation. Prioritisation according to importance to patients was most often used. Prioritisation according to the quality of the evidence was the choice of the experts, but was used by less than half of respondents.

Creating practical, easy to apply review criteria is more achievable than developing review criteria in a systematic, evidence-based manner.

Clinical and non-clinical audits did not differ significantly on ACQ scores.

The reporting of national or regional audits was extremely rare in the current study. Scores suggested that single organisation audits, the vast majority of audits, were associated with lower ACQ scores than national or regional ones.

The ACQ scores for unpublished review criteria were even lower than for published ones, and 41% of respondents reported using unpublished ones. Thus the review criteria used in many audits do not meet the desirable characteristics of review criteria.

Reports on the process of selection of review criteria should include information on the methods by which they are selected from the literature, consultation with patients and staff, and reference to criteria from previous audits. However, these items are often absent.

There was no difference in the scores for review criteria between audits from general practice and from NHS trusts.

The most commonly noted problems associated with review criteria development focused on organising the audit and gathering literature upon which to base criteria. Some respondents reported that in their particular clinical discipline there was little or no research evidence to guide their practice. Several respondents had difficulty gaining access to the literature through libraries or specialist journals. Some respondents had trouble in narrowing down large review criteria sets to produce a manageable audit protocol.

Although the sample in this study was probably biased, the bias would be towards better ACQ scores. Thus the conclusion that ACQ scores need to be improved is reinforced.

The interview study identified many barriers to using effective, systematic methods of developing review criteria, but was also able to identify ways in which these may be overcome. Levels of skill in literature searching and critical appraisal are important for ensuring that relevant evidence is considered. The organisation has an important role to play in ensuring that adequate training is provided and taken up and that library facilities are of a high standard and individuals are assisted by electronic or staff services in searching for relevant evidence.

To ensure that review criteria are valid, it is essential to have details of the evidence they are based on, the quality of the evidence, the reasons behind any prioritisation and so on. It is important that published audit protocols include a detailed and transparent account of how the review criteria were selected.

Conclusions

This study has shown that review criteria selections often omit many of the desirable characteristics of review criteria. A significant proportion of review criteria were not based on research evidence. Even where review criteria development did involve reference to research literature, only a limited number of respondents had attempted to assess the quality of the literature, in terms of either its recency or its validity. The higher scores on usability show that creating practical, easy to apply review criteria is more achievable than developing review criteria in a systematic

evidence-based manner. Nevertheless, piloting or providing information on consultation with staff or patients involved were often omitted.

The most commonly noted problems associated with review criteria development focused on organising the audit and gathering literature upon which to base criteria. Audit leads interviewed in this study identified ways in which these barriers may be overcome. Training to enhance levels of skill in literature searching and critical appraisal are important. Furthermore, it is important that all published audit protocols include a detailed and transparent account of how the review criteria were selected, in order that informed choices can be made.

Implications for further research

There is potential for improving the selection of clinical audit criteria, which will directly and immediately increase the effectiveness of clinical audits.

Recent, high-quality evidence is rarely used to select review criteria. The skills in using the literature to create review criteria are lacking and are difficult to acquire. A national resource of review criteria for clinical audit, which has all the desirable characteristics of review criteria, would overcome some of those difficulties. The criteria would be based on informed assessment of the literature, and kept up to date, with full provenance reported. They would also be based on consultation with patients and experts, both on the importance of criteria and the demands made by collecting the relevant data.

A simple tool with which review criteria could be assessed for quality could be used by those starting an audit, in order to make an informed selection from published criteria. Another use would be for those developing their own criteria, to assess the quality of the criteria they have created.

Recommendations for further research

- Trials of interventions designed to improve the selection of review criteria for clinical audit. The questionnaire (ACQ) developed in this study could be used as an outcome measure for such trials. One such intervention could be the creation of a library of review criteria that have all the desirable characteristics.
- The development and validation of a simple tool by which review criteria can be assessed. This should be based on the expert consensus view of the desirable characteristics of review criteria.
- Testing the relative effects on the quality of patient care of national or regional audits compared with local audits.
- Case studies of organisations, where the selection of review criteria is given appropriate importance and resources, would identify the organisational policies that enable and maintain this.

Publication

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Although the National Coordinating Centre for Health Technology Assessment (NCCHTA) commissions research on behalf of the Methodology Programme, it is the Methodology Group that now considers and advises the Methodology Programme Director on the best research projects to pursue.

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