

Editorial

Criteria-based clinical audit

Clinical audit has a history stretching back to the work of Florence Nightingale (1800) and Ernest Codman (early 1900s). Both Nightingale and Codman monitored mortality and morbidity rates in their respective institutions. Nightingale used an epidemiological method of review, monitoring rates of nosocomial infections in relation to standards of hygiene. Codman introduced the idea of systematic record review as a way of identifying errors⁽¹⁻³⁾. The word 'audit' means to: 'evaluate (esp. by formal systematic review) aprocess, quantity or quality...to evaluate the effectiveness of the management, working practices, and procedures of a company or other professional body... the practice of carrying out such investigations at regular intervals or as part of a continuous process'⁽⁴⁾.

In health care setting usually auditing refers to 'clinical audit' which has a specific objective of improvement in quality of patient care through systematic review. Thus clinical auditing can be defined as "a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. Aspects of the structure, processes, and outcomes of care are selected and systematically evaluated against explicit criteria. Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in healthcare delivery." (NICE, 2002)⁽⁵⁾.

The main types of clinical audit are;

1. Critical incident / adverse event clinical audit where focus is on auditing outcome: (eg. Maternal mortality reviews or enquiries).
2. Review of randomly selected records.
3. Criterion-based clinical audit (CBCA).

CBCA is defined as 'a systematic critical analysis of the quality of care provided to patients at a health facility, with the primary aim of improving clinical practice. It involves comparing care received against explicit standards and aggregating the data

across patients to derive proportions of cases managed optimally⁽⁵⁾. Although CBCA tends to be used to investigate the structure and process of care, it can also be used to look at health outcomes.

The characteristic of CBCA is that it involves comparing care received against agreed criteria of optimal management. These criteria comprise measurable activities that are appropriate for the setting in which they are used (Shaw, 1992)⁽⁶⁾. The procedure involves the extraction of data from the medical records of relevant patients, aggregating the data, and then determining what proportion of patients received care according to the criteria. Hence, CBCA can only be carried out where patient records containing information regarding care received by the patient should be available and retrievable for the audit. One of the distinctive features of CBCA is that it involves the process of not only assessing whether the standard/ agreed level of the care is being met or not but also defining explicit agreed protocol in order to improve the patient care. The effectiveness of this form of audit is thus assessed in terms of changes in the proportion of cases where management met the criteria for optimal management. CBCA has a dual function to play in quality assurance. CBCA promotes an opportunity to learn from others practice.

Five practical steps are followed for conducting CBCA (as illustrated in the Figure).



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Step 1: Select a subject/topic for audit (Identifying problem or issue)

The topic for audit is selected on following basis

1. It should be of general interest or significant as an issue of contention or local interest.
2. Issue with serious quality problem, high risk group /with the highest case-fatality.
3. Complications identified should be clearly defined and preventable.
4. It should be based on available evidence. Amenable to change also should be considered.

Step 2: Selecting criteria: (Set criteria/ standard)

The purpose of this stage is to identify key elements in the management which should be apparent to non-medical analyst. A structured questionnaire containing simple questions answerable in yes or no pattern should be formulated. It should be discussed in the audit group/ committee. Questionnaire should be pretested and should include 'allowable exceptions' and target level of compliance. It should be accompanied by glossary for clarification of certain points.

The criteria defined should be:

1. Measurable and standards (level of performance or care to be achieved) against which to assess the process and or outcome of care.
2. Drawn from existing guidelines and or systematic reviews.
3. Based on the research evidence.
4. Explicit and it should be subjected to external peer review.

As the audit progresses, defining explicit agreed protocol to replace individual or implicit approaches may become easier. Hence end result of the audit will be reconciliation of the existing protocol.

Step 3: Data collection / Observe practice and Data analysis

This phase involves following activities:

1. Identifying the cases which fall into selected category from registers
2. Retrieval of records
3. Abstracting the data: based on previously agreed criteria and completing the pretested, structured questionnaire.

4. Analysis of the data: The analysis involves calculating percentage of the cases that met the defined criteria of best practice. The analysis of the data can be carried out by non-medical person with the help of computers (if the sample size is large). It should be presented as an overall summary table, the aggregate result of the all records included in the audit, without any identification of individual patients.

Step 4: discussion of the results to compare performance with criteria and standards.

At this point, one can reconsider the validity of the criteria chosen and also the significance of compliance. At this stage, a questionnaire survey of staff practice and collecting feedback from staff may help to enable any deficiencies in care that can be attributed to either due to lack of application of the knowledge or lack of knowledge.

Step 5. Implementing the change

Audit group can identify the areas for improvement. The action plan should be drafted by the audit team and senior clinicians, and presented for discussion by all relevant staff. The discussion should attempt to address the specific reasons why care was deficient.

The improvement in the management should be planned practical, affordable and sustainable means for working towards the targets the staff have set themselves. They might include writing clinical guidelines, conducting staff training sessions, improving record storage, or ensuring implementation of guidelines, for example through daily ward rounds or weekly review meetings. The audit cycle is repeated and monitoring and reviewing the agreed protocol in order to evaluate whether the objective of original audit is achieved. It is also important to maintain and reinforce the change.

Advantages of CBCA

1. The CBCA provides systematic approach of evaluation of current practice and setting a target with involvement of local staff for improvement in the health care.
2. Since CBCA provides direct feedback to the staff about the practices and their impact on outcome, it helps the health care providers to identify realistic means for improvement in the health care.
3. It is an excellent educational tool and can be applied to almost all clinical issues.
4. The use of explicit criteria enables non-medical personnel to carry out data analysis, thus

minimizing the use of healthcare personnel and their valuable time.

Disadvantages of CBCA:

1. CBCA is cumbersome in the initial stage. It can deal with only health care facilities and cannot deal the community issues.
2. For senior clinicians it is difficult to follow the concept of evidence based practice and for them their personal experience is the basis for the clinical practice.
3. It is time consuming and requires audit assistant working full time.

In conclusion, CBCA provides objective assessment of the quality of the care and the whole exercise is repeatable. It assesses the resemblance of current practice to the recommended guidelines. The gap between the criteria and the assessed performance provides guidance for priority improvement strategies ⁽⁵⁾.

References

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