

# The audit cycle: a guide to success

**A**udit is an ongoing process that few achieve properly. Audit should be a catalyst for improvement in practice. This article will explain how to ensure a successful audit that may be accepted for presentation or for publication.

## Audit is not the same as research

In the last 15 years the ear, nose and throat (ENT) Comparative Audit Group at the Royal College of Surgeons of England have learnt a lot from trainees who submit audit papers. Many audits have failed to make the grade, not necessarily because the auditors do not have appropriate data, but because they are badly presented.

The commonest error causing the rejection of a paper is the trainee not understanding the difference between research and audit.

The essence is following the audit process and picking an appropriate topic of current practice to examine. Does the work come up to expected standards of care, is the process of managing patients working as it should, are all concerned being as effective and as efficient as possible? All medical libraries will have a copy of the helpful booklet *Principles for Best Practice in Clinical Audit* (National Institute for Health and Clinical Excellence (NICE), 2002), which is also available on the internet.

## The audit process: more a spiral than a cycle

The key is in understanding the process. This can take many forms, but all will follow the principle of first identifying a standard for whatever is being audited. The actual practice is then measured (evaluation) and the two are compared. Unless local practice has been updated recently it would be unusual, but not impossible, to do better than the standard. The next stage is to identify what changes need to be made to meet the standard and then to make them.

Too often change is not made, or even proper recommendations. This completes one cycle, but does not in itself make good audit unless the practice is again audited after the change in practice, and compared with the standard to ensure improvement

has been made. The need for further changes may then be identified, and practice evaluated once again. With time, conditions, treatments and standards change so the process should be an ongoing one leading to an upward spiral of clinical improvement (Vasanthakumar and Brown, 1992) (Figure 1).

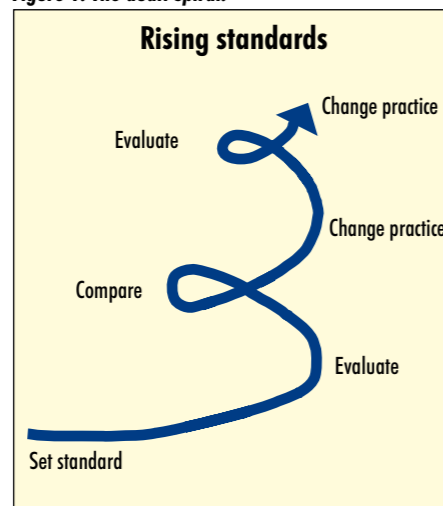
## How to find a topic

The trainee should examine his/her daily work. What is done routinely where a change in practice might make a big difference – these are often high volume or high cost practices, or they may be high-risk to patients or staff. Perhaps a previous patient satisfaction audit had shown dissatisfaction in aspects of the department's practice – e.g. poor communication about the diagnosis (maybe no patient information leaflets or over-booked clinics, with insufficient consultation time), or too long a wait for test results.

There might be an organizational weakness that could be highlighted to provide evidence for change, outcomes of treatment may not compare well with national standards, or the department's drug budget could be overspent and an audit might identify why, and determine if all prescribing habits were in line with national guidelines and whether changes in practice or budget were required to meet the standards.

So topics will fall roughly into the following broad groups:

Figure 1. The audit spiral.



## Processes by which patients are treated

Are there any unnecessary stages that could be omitted? Are time targets being achieved (e.g. 2-week cancer wait)? Are standards of note keeping or their availability for clinics being met? A two cycle audit of operating list efficiency in one hospital department improved list utilization from 70% to 85% (Hopkins et al, 2001).

## Outcome of treatment

Are national standards for outcome of treatment of X or Y being met? Are patients satisfied? A national audit of sinonasal surgery showed that patients with preoperative symptom scores of less than 20 were unlikely to benefit from surgery (ENT Comparative Audit Group and RCS Clinical Effectiveness Unit, 2000).

## Organizational

Is the service being organized in the most appropriate way? National audits indicate that management of stroke patients is better in specialized stroke units (Irwin et al, 2005).

## Medical/surgical practice

Are medications being used as advised by national bodies and protocols for treatment being followed, or is the most appropriate treatment being used. Nine neonatal units in Northern Ireland improved their standards of care by sharing audit data (Jenkins et al, 2005), meeting all the criteria of high cost, high-risk and high government priority. The ENT Comparative Audit Group discovered, through a national prospective tonsillectomy audit, that risks of bleeding were greater with some techniques than others (ENT Comparative Audit Group and RCS Clinical Effectiveness Unit, 2000), and this, together with other findings, has been adopted by NICE in their advice to ENT surgeons.

## How to find a standard

Having chosen a topic, the trainee should get it agreed by the group participating in the audit. The bigger the better – involve another hospital, or even better, all the departments in the region. The next

thing is to find a recognized standard against which to measure the group's performance. Web sites for NICE, Scottish Intercollegiate Guidelines Network, Cochrane Library, health evidence bulletins, national service frameworks or medical royal colleges, among others, are bound to offer information regarding standards or guidelines relating to the audit in question.

## How to ensure a successful audit Make sure the 'audit culture' is present

Trying to do an audit without an infrastructure of support is impossible. It is imperative that the senior people in the department are supportive and create the right culture for the audit to take place.

It is also important that the trainee wins over any people he/she will be relying on to collect data. Too often audits fail because data collection ends up hopelessly incomplete.

## Complete the cycle (at least once)

Too many 'audits' just record what is happening at the present time. No attempt is made to move to the next stage of the process or even complete one audit cycle. One of the problems is that a trainee may start the process, present the results locally, and then move on. Proper audit does take time, and often the only way to complete a cycle is to have a succession of trainees take the process forward stage by stage and then jointly present when at least one cycle is complete, preferably more. This requires a local audit coordinator who is a permanent member of staff such as consultant, associate specialist or staff grade. Rotations within a region make it easier to keep in touch with progress, and indeed provide an opportunity for regional audit with the same people involved wherever they are in the rotation.

## Collect prospective data contemporaneously

A prospective audit is better than a retrospective one for obvious reasons. Any retrospective data will be incomplete and inevitably will not contain just what the trainee wants. It is best to work out exactly what question(s) the trainee wants to answer, and design a questionnaire that suits this purpose.

Time should be spent showing the questions to people who have nothing to do with the audit to see if they are unambiguous. Accuracy and completeness of clinical data collection is greater if this is done at the time of the patient contact.

## Pilot the questionnaire

Too often inadequate preparation is taken before launching the audit and deficits in the data collection form (paper or electronic) are not realized until too late. A short pilot should sort these problems out.

## Keep it simple and short

The objective of the questionnaire should be kept simple and focussed. Any data collection requiring the goodwill and cooperation of several people needs to be short, particularly, if data is being collected contemporaneously.

## Data collection

This may be on paper or electronic, such as on a personal digital assistant (PDA). The advantage of a PDA is that it is easily accessible to the trainee and data can be filled in as the work is done, and download to the database at the end of the day. The less time it takes to get the data collected the more likely are those involved to complete the process. Preferably no data entry per 'patient contact' should take longer than 30 seconds.

## The future

The future will almost certainly include specialties identifying 'indicative procedures or treatments' on which to base outcome. This will include nationally and internationally validated disability/symptom scores which will give a better indication of the wide range of outcome which crude measurements such as death rates,

re-admission rates or return to theatre rates do not. Audit works best if it is not only carried out systematically, but is also ongoing from year to year.

Within a specialty, agreed national basic data sets will enable clinicians to compare their own and their department's performance from year to year. It would also allow, through a central server under the control of the relevant college, anonymized comparative data to be available to each contributing department to see how they rank with others. Such a database already exists for otology (<http://www.ear-audit.net>) and is soon to be available for rhinology. *BJHM*

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## KEY POINTS

- Understand the audit process and follow it.
- Choose your topic from routine work and identify a standard.
- Ensure everyone is 'on board'.
- Pilot your questionnaire.
- Collect data prospectively, preferably electronically.
- Plan so that if you rotate your successors will continue and you will still be involved – don't start what you cannot finish.
- Keep it simple.