

Educational aspects of medical audit

G F Batstone

*Medical Audit: Working Paper 6*¹ does not couch medical audit activities in an educational environment. The Royal College of Physicians and Royal College of Surgeons, however, have highlighted the educational aspects of medical audit, stating that "education is the most useful product of audit"² and that audit "is an important educational process for both seniors and juniors."³ Kenneth Clarke in a speech on 10 July stated that in his view, "Medical audit is about quality assurance in clinical work. As it entails a measurement of performance it must be a key part of continuing professional education." This echoes the theme of the report of the Alment Committee: "In our view it is a necessary part of a doctor's professional responsibility to assess his work regularly in association with his colleagues,"⁴ although in medical audit such reviews are considered educational. The approach of peer review of practice creates a "sympathetic environment" for medical audit.

This paper aims at highlighting the educational aspects of audit and the framework required to exploit them and at considering the nature of education and of audit.

Educational aspects

Medical audit works at two levels: firstly, through individual self assessment and professional development, and, secondly, through review of performance by the clinical team, leading to enhancement of the quality of activity of that team. Thus audit may be regarded as a process leading to improved clinical care by mechanisms which may be educational or operational, or both. The educational strengths of audit are:

- Small group work, which is effective in modifying attitudes and management of clinical conditions
- Critical review of current practice, which encourages learning about new techniques and treatments and when to use them
- Review of current practice, leading to reinforcement of agreed procedures and thus making teaching junior doctors more explicit and practice based
- Observation of practice, which may indicate gaps in knowledge and skills for which appropriate educational programmes may be developed.

Audit also discloses operational features that require modification to enhance quality of patient care, which may include problems associated with communication, motivation, explicitness of procedures, weakness of structure or organisation of clinical work, or inappropriate use of resources. To overcome these problems doctors require skills for counselling those who seem poorly motivated; for use of briefing systems to ensure that members of the clinical team are aware of developments; for reviews of procedures to ensure that these are up to date and well understood; for enhancement of structures to make them efficient; and for making judgments on priorities for use of resources. These skills are largely parallel to management approaches such as "action centred leadership"⁵ and are very different from many "management courses" to which senior registrars and consultants are subjected.

Here, therefore, is another educational and training area that requires attention if audit is to be successful in effecting changes that improve patient care.

Organisational aspects

The white paper indicates the need for a clearly defined organisational framework for audit, led by a senior clinician, who will require appropriate training. As each district hospital and family practitioner committee sets up audit advisory committees it will be essential for them to recognise the need to link with educational organisations at district level. Some districts have recognised this requirement by using the district medical education committee⁶ as their audit advisory committee. Most districts have a district medical education committee (according to a postal survey by the National Association of Clinical Tutors with a 40% response rate, 82% of postgraduate centres had working committees with a further 10% planned), and these comprise clinical tutors and college tutors with the director of public health and additional general practice representatives. Such a body can plan educational programmes for individual doctors or clinical teams to overcome deficiencies in knowledge and skills identified by audit. It is unreasonable to expect any other district body to be able to help in developing reading plans, literature reviews, computer and video packages, specific training courses, and even secondment.

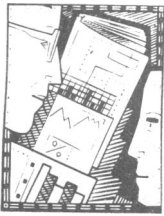
Audit in educational programmes

Most doctors in training or continuing medical education will need help with setting standards, techniques for monitoring performance against these standards, and determining the source of any apparent shortfall in the service studied. Newcomers to audit will require help in selecting appropriate topics with achievable outcomes in order to maintain their enthusiasm. Also, development of training in management techniques to improve the effectiveness and efficiency of clinical teams will be required if audit is to be central to decision making processes.

Audit also has a role in continuing medical education. In medical training Harden recommended the concept of "task based learning" to link clinical experiences of cases with theoretical information to provide a learning environment.⁷ Within continuing medical education audit topics may be used in a programme of journal clubs, case discussions, and lectures by external experts to link current clinical experience, knowledge, and skills with new information to promote learning that changes behaviour. Such a curriculum requires careful planning and much skill to be effective.

Nature of education and audit

Education has been defined variously as: (a) the passing on of a cultural heritage; (b) the initiation into worthwhile fashions of behaviour; and (c) the fostering of an individual's growth, and audit has strong links with the last two statements. For adult education to be successful learning tasks should be used that build on



earlier learning and there should be feedback on development of skills, time for reflection by learners on their approaches, and a choice of approaches for acquiring new skills and knowledge.⁸ The reflective aspects of professional knowledge and action as explored by Schon⁹ is a necessary step in turning experience into learning. Another important aspect of the "elaborated learner" emphasises the ability to transfer knowledge to fresh circumstances. These factors are linked in the learning cycle described by Kolb (fig 1).¹⁰ The cycle begins with observation of and reflection on current practice to ascertain the principles for care, which are then applied in new environments. This cycle is rather different from the audit cycle,² which starts by setting standards and then by observation assesses conformity with them. The critical part is to determine the cause of any deficiency and then to implement changes to rectify the situation (fig 2).

Resolution of the apparent differences between these two cycles has been attempted.¹¹ One difficulty with the audit cycle is the setting of standards, and for many this is best achieved by observing practice and reflecting on its aims. This process is often triggered by an unexpected finding (for example, poor performance indicators or adverse experience or complication of clinical treatment) and is developed because of a desire for change. The aims of the observed practice having been determined, the setting of standards seems much simpler. The pattern described links the audit and learning cycles (fig 3) without appreciably changing either. It might be argued that the learning cycle is much more an individual phenomenon and the operational aspects are related more to the activities of a clinical team. However, this will probably vary

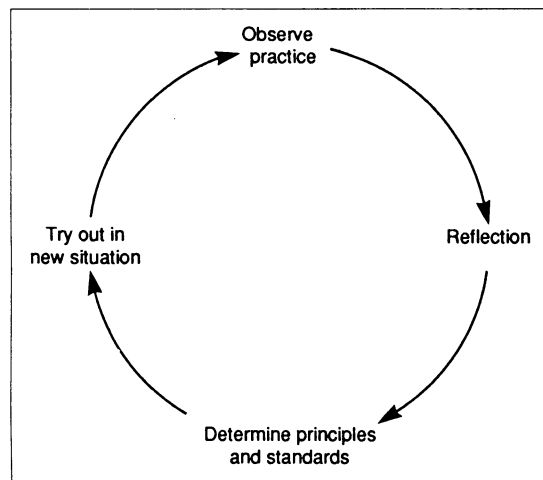


FIG 1—Learning cycle (after Kolb¹⁰)

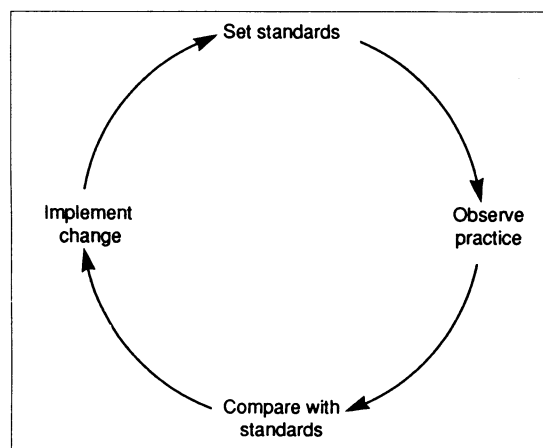


FIG 2—Audit cycle (after Royal College of Physicians)

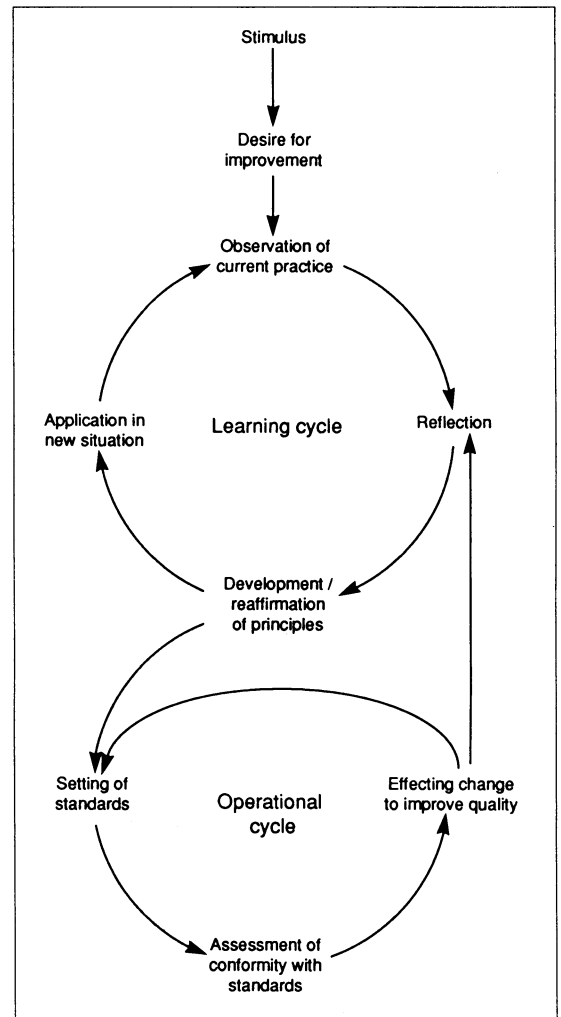


FIG 3—Integration of learning and audit cycles

according to the clinical problem under review. Either cycle may stimulate ideas for research and should enhance, not restrict, novel thinking or practice.

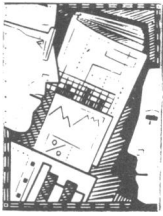
Doctor-patient relationships

Audit should not deal solely with outcome measures or use of resources but also with the access to and process of clinical care, which greatly concern the doctor-patient relationship and communication skills. These topics have been given more attention in the recent past by general practitioners and by the practice of reviewing video recordings of a doctor's approach to a patient and his or her presenting history. The nature of such interviews has been shown to alter objective measurements of the quality of care of chronic disease. In diabetic patients when outpatient visits were characterised by meaningful questioning and interruption by the patient the glycated haemoglobin concentration and blood pressure were noted to be lower.¹² Such results may lead to consideration of the doctor-patient relationship as a topic for audit and not merely concerned with consumer satisfaction. The techniques entailed, however, are those of the social scientist, and not many doctors are happy with the approaches of critical incident technique, Delphi techniques, and ethnography; audit may broaden our knowledge of social sciences.

Conclusions

Within the complex relations of medical audit with education some key points emerge:

- Audit is essentially an educational rather than a



managerial tool but requires an impetus for learning, a desire for improvement, or quest for excellence

- Learning based on experience and reflection on experience is more effective than study of theory
- Doctors will need to use team leadership skills to create those improvements in quality care that are indicated by audit findings
- District medical education committees will need to learn to exploit the learning opportunities arising from audit
- Audit will require the use of social science skills as well as those currently used.

Finally, medical audit alone poses an exciting challenge for education and will lead to improvements in the quality of clinical care.

- 1 Secretaries of State for Health, Wales, Northern Ireland, and Scotland. *Medical audit. Working paper 6*. London: HMSO, 1989.
- 2 Royal College of Physicians. *Medical audit—a first report: what, why and how?* London: RCP, 1989.
- 3 Royal College of Surgeons. *Guidelines to clinical audit in surgical practice*. London: RCS, 1989.
- 4 Alment EAJ. *Competence to practise: a report of a committee of inquiry for the medical profession in the United Kingdom*. London: Committee of Inquiry into Competence to Practise, 1976.
- 5 Adair J. *Action centred leadership*. Aldershot: Gower, 1979.
- 6 Council for Postgraduate Medical Education in England and Wales. A proposal for a district medical education structure. London: CPME, 1987.
- 7 Harden R. The curriculum for the year 2000. *Medical Education* 1989;23:301-4.
- 8 Brown G, Atkins M. *Effective teaching in health education*. London: Methuen, 1989.
- 9 Schon DA. *The reflective practitioner: how professionals think in action*. New York: Basic Books, 1983.
- 10 Kolb DA. *Experiential learning: experiences as a source of learning and development*. Englewood Cliffs, New Jersey: Prentice-Hall, 1984.
- 11 Coles C. Making audit truly educational. *Postgrad Med J* 1990;66(suppl 3):S32-6.
- 12 Kaplan SH, Greenfield S, Ware JE. Impact of the doctor patient relationship on the outcomes of chronic disease. In: Steward M, Roter D, eds. *Communicating with medical patients*. London: Sage, 1989:228-45.

News and Information

Published in conjunction with King's Fund Centre, 126 Albert Street, London NW1 7NF

Audit in public health—Mersey Regional Health Authority has commissioned the Nuffield Institute for Health Services Studies in Leeds to carry out an audit project to deal with some of the complex issues in public health medicine. Funded by the regional health authority and the Department of Health, the institute aims at producing agreed guidelines on selected tasks to enable each health authority to implement an audit programme and eventually establish a peer review system of audit for public health doctors. The draft guidelines will be developed with working groups comprising primarily public health doctors, which report to a central coordinating research team, and then piloted within the region and assessed. The research team will liaise also with key figures in public health including members of the Faculty of Public Health Medicine, which has recently published an important report on audit in public health. A literature search to elicit examples of good practice throughout the United Kingdom and a series of workshops will complement the study. Eight topics in public health will be covered initially: in the first stage, immunisation and vaccination, cervical screening, perinatal and infant mortality, and annual public health reports and in the second breast screening, control of communicable diseases, service and academic training, and health and housing. Further information from Dr Ann Richardson, project director, 39 Glenmore Road, London NW3 4DA (tel 071 722 7076).

Reports

The Australian Council on Healthcare Standards has published a booklet describing the activities planned for the first two years of its care evaluation programme. In collaboration with the major clinical colleges the programme aims at achieving more objective measurements of management and outcome of patient care. After testing in hospitals the accepted indicators will eventually be included in the council's hospital accreditation programme. Initially each specialty will concentrate on selected clinical areas such as (a) high volume procedures in which the rate of negative or normal histological findings may be determined; (b) controversial interventions, for example, rate of caesarean section; and (c) identifiable complications of procedure such as wound infections. The first seminar to introduce the programme, held in May in Melbourne, led to agreement for trials of hospitalwide clinical indicators in trauma, rate of pulmonary embolism, readmission to hospital, unplanned return to operating theatre, nosocomial infections, medication errors, and hospital throughput and output. The low budget of the programme (\$A220 000 in the first year) will encourage anyone pursuing a similar course elsewhere. *Development and Introduction of Clinical Indicators of Care*, available from Australian Council on Healthcare Standards Care Evaluation Programme, 7th Floor, 154 Gipps Street, East Melbourne, Victoria,

3002, Australia (tel (03) 417 5488; fax (03) 416 0094), price \$A20, including postage.

Barnsley Family Practitioner Committee has just released the final report of its pilot project monitoring prescribing in which prescribing analysis and cost data (PACT) from the Prescription Pricing Authority was used to examine general practitioner prescribing in detail. The participation and co-operation of general practitioners was emphasised throughout. The project showed that prescribing volume did not correlate with local factors such as socioeconomic indicators but did correlate with the attitudes and habits of the general practitioners. The report describes progress towards developing a system to help general practitioners and family practitioner committees to monitor prescribing and calls for various educational facilities to help general practitioners with prescribing and for appointment of an independent facilitator. *Prescribing Pilot Project: Final Report* from Guy Rotherham, Barnsley Family Practitioner Committee, 118 Gawber Road, Barnsley S75 2PS (tel 0226 733221), price £15.

Items for possible inclusion in the news and information section to the information officer, *Medical Audit Programme*, King's Fund Centre, 126 Albert Street, London NW1 7NF (tel 071 267 6111; fax 071 267 6108).

DIARY

12 September
Cirencester: Royal Agricultural College. "Audit in general practice. How to do it—a practical study day." Contact: Dr A J Chapman, 41B High Street, Tewkesbury GL20 5BB (tel 0684 292813).

THE MEMOIR CLUB

The story is told, I am not sure if it is apocryphal or not, that a senior member of the council of the Royal College of Surgeons who was examining in the fellowship one year mingled with the "walking wounded" outpatients who were kindly allowing themselves to be used as examination material. The examiner in question had a slight limp; this indeed was part of his personality, just as Churchill's cigar or Chamberlain's monocle were. This examiner, when about to enter the examination hall, was approached by one of the candidates who said to him, "I see you are going to the examination, and I do see you have a limp. Is it your foot, knee, or ankle?"

The examiner in a quiet voice replied, "It is an old TB knee and I have had it since I was a child."

The candidate was well satisfied and passed him a 10 shilling note. Twenty minutes later the candidate was somewhat discomfited when taken

to a table for his viva to find the unknown man was his examiner. The examiner recognised him, gave him a viva on TB knee, told him that he had done very well indeed and, in fact, handed him his 10 shilling note back. At Sir Harry Platt's 100th birthday dinner I meant to ask him if this was true, but there was no time for such trivialities—there were 350 in all at the dinner and after Harry had shaken hands with 175 men and had been kissed by 175 ladies there was little time left for me to put my important question to him.

From *Blood, Sweat, and Cheers* by Ian Fraser. Published under the BMJ's Memoir Club imprint. ISBN 0 7279 0246 6. Price: Inland £14.95; abroad £17.50; USA \$29.00. BMA members: Inland £13.95; abroad £16.50; USA \$27.00.