

Articoli/Articles

**MEDICAL AUDIT IN THE UNITED KINGDOM:
THE PAST, PRESENT, AND FUTURE**

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SUMMARY

In defining medical audit as the term describing in the United Kingdom the quality assurance of medical care, the authors draw out a scheme of its historical development, of its changes in time towards a much more innovative organization of the medical profession, of its present state, its compliance with official policies at local level, and of the identification of eventual future challenges.

DEFINITION

Medical audit is the term commonly used in the United Kingdom to describe the quality assurance of medical care. The generally accepted definition is found in the government's 1989 White Paper on the National Health Service (NHS), *Working for Patients*. This defines it as *the systematic and critical examination of medical activity, including the procedures used for diagnosis and treatment, the use of resources, and the resulting outcome for the patient* (Department of Health, 1989). Each specialist is required to participate. The process is explicitly medically led, based on peer review. This medical leadership

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is exercised locally, through district medical audit advisory committees, and nationally, through the Royal colleges. The principal role of management is to facilitate audit and they have no right to obtain information relating to individual patients and doctors, although they are entitled to receive general results. In almost all cases it is envisaged that medical audit will come about through a process of persuasion although there is also provision for external involvement by Regional Health Authorities and an external body, the Audit Commission, in extreme circumstances.

The view that specialists cannot be totally independent and they should submit the results of their work to their colleagues who have a legitimate right to question it is relatively new. For many years there was considerable resistance to the suggestion that the quality of care should be assessed. This attitude persisted among many doctors until the early 1980s. Thus the development of medical audit can be seen as a major change in the culture of the traditionally conservative medical profession, and one that has taken place with amazing rapidity. This paper examines the context within which this change has taken place, asks about the compliance with official policies at local level, and identifies some of the major challenges for the future.

HISTORICAL DEVELOPMENT OF MEDICAL AUDIT

The leading role of the medical profession in medical audit is a consequence of the way in which professional regulation has developed in the United Kingdom. The Medical Acts of 1858 and 1886 formally established a system of self-government for the profession in contrast to the control exercised by ministries of health in many other European countries. The Royal Colleges are responsible for maintaining professional standards at specialist level and the General Medical Council has responsibility for undergraduate training and general aspects of the behaviour of doctors. However issues of clinical judgement have

traditionally been excluded from consideration by these bodies so, until recently, there was no systematic approach to maintaining the quality of medical care.

There were a few areas in which action was initiated but these were mainly as a result of public concern (McKee et al, 1989). Examples include the Confidential Enquiry into Maternal Deaths, resulting from a report published in 1929 in response to the high level of maternal deaths, and the Hospital Advisory Service, established in 1969 after a series of scandals in long-stay hospitals. There was, however, still considerable resistance to extending the principle of quality assurance to medical practice in other areas. The editor of the *Lancet* spoke for many doctors when, in 1951, he argued against any central guidance about clinical care even if it improved the quality of care as *it may indeed improve the care of certain patients who would otherwise be inadequately treated; but the benefit is quite outbalanced by the harm this does to the care of patients in general, by weakening the sense of personal responsibility that ought to be the basis of service* (Fox, 1951).

How has this change come about so that medical audit is now accepted as a fundamental component of the provision of high quality medical care? The spread of medical audit can be considered to follow the same pattern as that seen with many examples of medical technology (Stocking, 1988). Adoption by innovators spreads initially to early adopters and subsequently to the majority of those involved, with a few laggards remaining until the very end. The first phase of the process of diffusion involves the early innovators convincing their colleagues and important policy bodies, leading to the creation of local product champions. The continued diffusion then depends upon a range of factors, including central support, availability of finance, the need to do something, and the complexity of the action being advocated. This model accounts for many of the features of the introduction of medical audit.

Several innovators had been undertaking medical audit for many years. After initially working with local colleagues to form

small groups, some subsequently had an important influence on their respective Royal Colleges. This can be seen in the way that the methods that they adopted were subsequently endorsed by their respective specialties. They include Heath, a physician in Birmingham, who has reported on a programme involving random case-note review (Heath, 1981). His group has been a major influence on the Royal College of Physicians, probably because one of them, Sir Raymond Hoffenberg, subsequently became president of the college. In contrast, surgeons have tended to develop systems based on the collection of data on micro-computers, following examples in Edinburgh (Gruer et al, 1986) and Brighton (Gumpert & Lyons, 1990).

While these individual efforts were proceeding, there was little general awareness of the concept. During the 1970s it was possible to detect the beginnings of a change in attitude. The literature started to include occasional expressions of interest and examples of local initiatives. The introduction of Professional Standards Review Organisations in the United States in 1974 was reported in the *British Medical Journal* (Sanazaro, 1974) accompanied by a series of articles that were broadly in support of audit, but which emphasised the need for the profession to take the lead. The importance of the latter point was emphasised by Dudley who argued that *If we cannot come up with ways of accounting for the apparent vagaries of our clinical behaviour, we can scarcely blame others for moving into the administrative vacuum* (Dudley, 1974). By the early 1980s a few product champions were emerging. One of these was Shaw, who wrote a series of articles in the *British Medical Journal* (Shaw, 1980). He had previously worked in North America, and was almost certainly influenced by this experience. This period marked the beginning of the transition from the period of innovators to that of the early adopters. This was reflected in increased interest by professional bodies, with guidelines and reports being published by most of the Royal Colleges and professional associations. The ways in which this came about have never satisfactorily been explained, but it is clear that the in-

novators had an important role, either directly, through the Royal Colleges, or indirectly, as in surgery, where the Association of Surgeons took the lead while the Royal College of Surgeons followed (Vickers, 1989).

The momentum continued, with increasing numbers of specialist associations and colleges setting out their ideas until, in 1988 at a seminar held by the Chief Medical Officer, all of the heads of Royal Colleges endorsed the principle of medical audit (Warden, 1988). Subsequently their influence has been crucial, especially where they have indicated that training posts will not be recognised unless audit takes place.

Many of the factors identified as important by Stocking in the continuation of diffusion have been present. The general climate of opinion has been strongly in favour of medical audit. The Griffiths Report introducing general management to the NHS advocated a greater role for consumers (DHSS, 1983). This idea was taken up by the government when they published performance indicators. The increasing volume of litigation, and the public attention and professional concern it has attracted, may also have been a factor. The media have also been increasingly willing to criticise the medical profession.

The climate favouring greater accountability has been reflected in the views of politicians at several levels. In the run-up to the NHS review a number of back-bench MPs were beginning to question the ability of the medical profession to regulate itself. Similar comments were made in commons committees and by members of parliament (Shephard, 1988). The government indicated its willingness to use legislation, if required, in the field of clinical practice by putting a requirement into the Ionising Radiation Regulations for those administering radiological investigations to have agreed guidelines for them (United Kingdom Government, 1988).

Finally, as described earlier, medical audit was a central tenet of the 1989 reform of the NHS. The remaining factors supporting the diffusion of medical audit, such as central support and the provision of financial resources, are related closely to the

implementation of the NHS review of 1989 and will be considered in that context.

REACTION TO THE INCLUSION OF MEDICAL AUDIT IN THE NHS REVIEW

The emphasis on medical audit in the White Paper launching the reforms was generally welcomed by medical organisations. The Conference of Royal Colleges and Faculties, an umbrella body representing the whole profession, went so far as to say *If these two critical improvements [medical audit and resource management] were successfully developed many of the other proposals in the White Paper would, in fact, be unnecessary* (Conference of Colleges, 1989).

Individual clinicians were less positive. A typical view was *whether we like it or not, we are all going to become involved in the systematic audit of our work* (Russell & Helms, 1990). Suspicion that the Government's underlying motive was cost containment rather than quality was common (van't Hoff, 1989, Nixon, 1990).

Reaction to the initial working paper (Department of Health, 1989) led to some changes in the final legislation. The requirement for new committees at Regional level and for public health physicians to represent management was dropped (BMJ News & Information, 1990).

However some clinicians criticised the lack of management involvement, claiming this was needed to make audit effective (Boughton, 1990).

Many commentators emphasised the need for adequate resources to implement audit (Brice 1989, SCOPME 1989, Shaw 1989), and the Government responded to this by providing a specific ring-fenced allocation. Funds were distributed direct to the Royal Colleges as well as to Regions, amounting to £ 2 million (4 billion lire) in 1990/1 (NHS Management Executive,

1991) and £ 4 million (8 billion lire) in 1991/2, to help develop and evaluate audit methods. At the local level, audit funds have represented the only source of new money for many clinicians, leading to *an explosion of interest in medical audit, a phrase barely used in the UK before except by a few hardy pioneers* (Hopkins, 1991).

CURRENT AUDIT ACTIVITY

Systematic surveys to gauge the extent and type of medical audit activity within the UK have not been undertaken, although there is a national database of non-medical quality assurance activities (Carr-Hill & Dalley, 1992). The description given here is based on the authors' personal impressions and access to internal NHS documentation.

THE AUDIT INDUSTRY

The Government's requirement for rapid implementation of audit throughout the NHS has created a new bureaucracy. Each Health Authority has to produce an annual report and forward programme for the Department of Health to qualify for ring fenced money (NHS Management Executive, 1991). Although such reports may contain lists of changes in practice associated with audit, (North West Thames Regional Health Authority 1991, Riverside Health 1992) it is rarely clear to what extent these changes might have occurred anyway. Other evidence for the rapid growth of an audit industry is the establishment of an association for audit staff, with 400 out of an estimated 800 potential members (NHS Management Executive, 1992). A

newsletter specifically aimed at this group is published by the King's Fund, a voluntary organisation specialising in health care (King's Fund Centre, 1991). Corresponding developments have occurred in the medical press, with the launch of a specialist journal (Moss, 1992).

STRETCHING THE DEFINITION OF AUDIT

One effect of the provision of specific funds for suitably named projects is that current usage of the term *audit* is relatively loose. In the British Medical Journal's *Audit in Practice* section during its first year of publication (1990) 14 out of 19 audit reports featured a single round of data collection only with no reference to standard setting or explicit judgement of practice. Reports of specific programmes to implement change are particularly hard to find.

Only one article in this series (Hancock, 1990) has described specific changes, and this concerns the practice of a single consultant only.

Other groups within the health service have claimed rights to share in this growth industry. Nurses and paramedical staff have been awarded ring-fenced money on a similar basis to medical staff, but on a much smaller scale (£ 6.3 million in 92/93, compared to £ 42 million for medical audit) (NHSME, 1992). Good progress towards the development of standards is claimed (Normand, 1991), in contrast to the less precise use of funds by medical staff. Others have made only limited attempts to set up their own parallel systems of audit, but pharmacists (Hawkey et al 1990, Batty & Barber, 1992) and managers (Bowden & Walshe, 1991) have advocated that they should be involved in medical audit itself. Some clinicians have encouraged this (Ellis & Sensky, 1991).

AUDIT AND CONTRACTS

Despite the range of volume of activity audit has not so far been prominent in contracts between purchasers and providers. The National Association of Health Authorities and Trusts have compiled a database of 1500 such documents (Appleby, 1991). Detailed review of a sample of these (NAHAT, 1992) found that requirement to undertake audit was often stated but details of how implementation would be monitored were vague. Only one out of 115 specifically mentioned the involvement of the Director of Public Health in this respect, despite this being a key method to get standards written into contracts (Williamson, 1991).

CASE STUDIES

In the absence of clear descriptions of activity in annual reports or contracts, specific case studies must be used to gauge the range of audit being undertaken. Examples of local approaches to audit have been reported from North Derbyshire (McConnachie 1990, Fielding 1991), Brighton (Gumpert & Lyons, 1990), Hounslow & Spelthorne (Ellis & Sensky, 1991), Bloomsbury (Secker-Walker et al, 1989) and Wessex (Brice, 1989). A wide range of obstacles to the successful implementation of audit have been described, from difficulty persuading colleagues to cooperate (Gumpert & Lyons, 1990) to a lack of information in the case notes (Brice, 1989).

One issue which divides opinion is the appropriate use of information technology. Some clinicians have suggested that entering clinical data onto computers is of limited value (Brice, 1990, Hopkins, 1991). Others have argued that *useful audit as a byproduct of routine data capture is unrealistic* (Nixon, 1990), and that dedicated audit systems are essential. Some Districts have invested in such systems or undertaken pilot projects (Ben-

nett & Walshe, 1990), but this may be at considerable expense. Bromley Health Authority's approach requires 6 full-time nurse screeners to cover a hospital of 500 beds (BMJ News & Information, 1990). There are important questions about the cost-effectiveness of such schemes. A study of the use made of an obstetric system established in 1983 suggested that only the most simple audits could be performed without supplementary data (Yudkin, 1990).

Controversy is likely to continue until methods to measure the effectiveness of audit have been agreed.

Other than the use of computers, use of other adjuncts to audit is uncommon.

Routine measurement of patient outcome for both acute and chronic conditions has shown to be feasible at Freeman Hospital in Newcastle (Bardsley & Coles, 1992) but has not led to any major changes in practice so far. Guidelines for good practice in many specific situations have been issued, for example for asthma (British Thoracic Society, 1990), but a national survey in April 1991 showed that less than 50% of hospitals had any in use (Richardson, 1991).

HAS THE INTRODUCTION OF AUDIT BEEN SUCCESSFUL?

Despite the warm welcome given by the medical profession and the explosion of activity, the success of this part of the NHS reforms is questionable. Two specific issues are important. First, are all doctors involved? Those who have the most potential to learn from audit may feel the most threatened and so avoid active participation. Second, how effective is audit as a means to change clinical practice? Techniques for uncovering poor quality of care are well developed, but the effectiveness of approaches to changing behaviour is much less certain (Wysenwianski, 1988).

DO ALL DOCTORS TAKE PART?

A reliable answer this question is difficult to obtain. Official statements are unlikely to admit that a key Government objective has not been achieved, so indirect evidence must be sought. In the United States and Canada, regulation to involve doctors in quality assurance is long standing. However, surveys have shown considerable variations in the degree of participation by rank and file physicians (Casanova 1990, Barrable 1992). The situation in the UK is unlikely to be better, especially when the reforms are relatively new.

Even if all doctors do attend audit meetings, some may escape active involvement. UK arrangements for training and accreditation of specialists mean that junior doctors undertake most inpatient and out of hours care (McKee & Black 1991, Buck et al 1987). These aspects of medical practice are relatively easy to audit, whilst out-patient care and patient counselling, the bulk of work undertaken in the career grades, are less well defined and so less often audited.

Whilst the work of junior doctors is often the focus of audit, their short term contracts cause difficulties in *completing the audit cycle* before moving to a new posting (Black & Thompson, 1992). The impact of audit across different grades and specialties of doctor seems rather uneven.

ARE EFFECTIVE METHODS USED?

The range of effective methods for audit has been reviewed elsewhere (Eisenberg, 1986; Lomas & Haynes, 1988). Although explicit criteria for audit are generally regarded as essential for effective audit (Lembcke, 1967), the commonest method so far used in the UK is implicit review of case notes.

Although this approach has been criticised in the US for being too subjective (Lembcke 1967, Sanazarro 1974), it has been

widely adopted in the UK as the easiest way to conform with the Government's demands. No randomised trials have been conducted to assess its effectiveness, but before-and-after studies have been undertaken by early pioneers (Heath, 1981) and more recently at Central Middlesex Hospital (Gabbay et al, 1990; Gabbay & Layton, 1992; Bell et al, 1991). These studies have shown that the quality of note taking has improved, mostly in the first year of its introduction. Despite better recording, no improvement in the process or outcome of care could be demonstrated for the one particular condition, asthma, studied before and after the introduction of audit (Bell et al, 1991). Earlier studies, which used a Consultant who did not take part in the audit as a control, showed a similar improvement in note taking but no change in the number of investigations (Heath, 1981). The limited effect of this type of activity may be related to the fact it is perceived as repetitive and boring (Heath, 1990; Gabbay & Layton, 1992). A focus on the completion of records may even lower the quality of care actually delivered, by diverting time and energy from direct patient care (Wiener & Kayer-Jones, 1989; Grumet, 1989).

THE FUTURE OF AUDIT

From the clinicians' point of view, audit appears to have a bright future. Initial concerns within the profession that audit could be used as a new method of management control have been dispelled. Clear professional control over content and methods has become established.

From other perspectives, medical audit has been less satisfactory. When doctors are left in control of quality assurance, scientific and technical aspects of care tend to be emphasized at the expense wider considerations such as equity and efficiency (Black, 1990). Health economists have questioned whether medical audit will lead to a definition of *best medical practice* which includes all relevant costs and benefits to society (Mooney,

1992). An audit of the medical audit programme itself has been suggested (Maynard, 1991).

Whilst ring-fenced money continues to be provided by the Government, there is the opportunity for audit programmes to demonstrate their effectiveness. When purchasers have to support audit out of their general allocation, perhaps from 1 April 1994 onwards, other approaches to the manipulation of clinical practice may become more attractive. For example, purchasers may consider imposing standards developed elsewhere or using financial incentives to bring about change.

In summary, the future of some method of quality assurance is assured, but whether this is medical audit, as currently understood, or some other approach is uncertain. Further research is needed to allow a rational judgement of which method is best.

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