EDITORIAL

MEDICAL AUDIT

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In 1990, the British Medical Journal began a series of papers on medical audit. British doctors have no choice in the matter. They have to become auditors by 1991. The National Health Service Bill has prescribed so. The royal colleges and faculties require evidence of audit before they accredit posts for specialist training. And hospital managers see audit as the key to achieving high quality service at the lowest possible cost[1]. In Singapore, this decade seems to be appropriate for Singapore doctors to start on this same activity - medical audit.

What is medical audit? It could be defined as the systematic review of daily work, records and assessments of the accuracy of diagnoses and outcomes of treatment. Successful audit leads to improved quality of care. Problems must be acknowledged and the audit process should be designed to achieve change - change for the better. The Royal College of Physicians and the Royal College of Surgeons have both highlighted the educational aspects of medical audit, stating that "education is the most useful product of audit"[2] and "audit is an important educational process for both seniors and juniors"[3]. It entails measurement of performance and so must be a key part of continuing professional education. For too long I have heard it said that our continuing medical education (CME) is imparting mainly theoretical knowledge. How can we ensure that attendance at CME is translated into improved clinical practice? How does theory impact on practice? The answer may be in the implementation of successful medical audit. The theme of the report of the Alment Committee[4] was "it is a necessary part of a doctor's professional responsibility to assess his work regularly in association with his colleagues".

How to audit? Simply put, there are four steps which complete the audit cycle. The four step essentials are, set standards, observe practice, compare with standards, and implement change. Medical audit works at two levels. Firstly, individual self assessment and professional development and secondly, performance review by the clinical team leading to enhancement of the quality of activity of that team[5]. Critical review of current practice encourages learning about new techniques and treatments and when to use them. It also leads to reinforcement of agreed procedures, thus making teaching junior doctors more explicit and practice based. Operational structures may need enhancement to make them efficient. Audit will allow proper judgement or priorities for use of resources.

Audit is educational. Its educational strengths are four fold[5]. The first is small group work which is effective in modifying attitudes and management of clinical conditions. The second is a critical review of current practice, which encourages learning about new techniques and treatments and when to use them. The third is that review of current practice can lead to reinforcement of agreed procedures. The last is that observation of practice may indicate gaps in knowledge and skills for which appropriate educational programmes may be developed. In adult education, for success, learning tasks should be used that build on previous learning, that provide feedback on the skills development and time for reflection by learners on their approaches, and that provide a choice of approaches for acquiring new skills and knowledge. Two important aspects of this process are one, the reflective aspects of professional knowledge and action which are necessary in turning experience into learning and the other, the emphasis on the ability to transfer knowledge to fresh circumstances. The end result should be to stimulate ideas for research and to enhance, not restrict, novel thinking or practice.

What is audit not? Audit data are not intended to prove a hypothesis unlike research data. Scientific rigour is needed to convince the participants of changes needed. Audit is not a project! It has no end. The same audit may be repeated to check that improvement is maintained. Audit data should then be continuously available as part of the process of care. Audit is not assessment that measures ability rather than performance. Ability and performance tend to be confused because potential is commonly assessed by looking at what has been done. Audit is essentially looking backwards. The past cannot be changed. Data gathered for audit are transient and the details are of no value once conclusions have been extracted[6].

The British Medical Journal has since January 1990 run a section on "Audit in Practice" demonstrating how medical audit has been performed. Within this section is a subsection, "Audit in Person". Some interesting articles are worth reading. The evaluation of contributions of a general practitioner hospital to health care has been analysed twice - once in 1971[7] and again in 1986-1987[8]. These may have relevance for the community hospitals of Singapore. An example of a high technology lucrative procedure was audited in a district hospital which provided general practitioners with free or open access to upper gastrointestinal endoscopic services[9]. An important finding of the study was that in patients aged over 40 years, there was more efficient use of endoscopy services by general practitioners than their hospital colleagues. This may perhaps reflect the general practitioners skill in recognising normality, in contrast to hospital doctors, whose training is mainly directed towards detecting abnormality[10]. In Singapore, fee-for-procedure based payment may result in overinvestigation where the justification for the procedure seems to be the exclusion of abnormality. Is a 40% rate of negative gastroscopy too high?[11]. This is not to undervalue a normal gastroscopy result. Such examinations remove serious upper gastrointestinal disease from clinicians' differential diagnosis and also provide strong reassurance for doctors and patients.

Another series of interesting articles given the fact Medisave can be used in Singapore for inpatient but generally not outpatient services, are those on admission and readmission rates[12-14]. The

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readmission rate was suggested "as an index of the quality of medical care" and as "one of the few potential measures available from routine statistics for assessing outcome". Health service indicators relate more to process than to outcome, that is, they tell us little about what is achieved for patients and their health. Outcome indicators on the other hand show how far a service has achieved its objectives[15]. Outcome indicators are needed by purchasers if they are to choose between hospitals on the basis of quality as well as cost, and providers want similar information to know about effectiveness and efficiency of their services. In this light many readmissions may represent a failure of the best care. Are they avoidable? General medical and geriatric readmissions and surgical readmissions at 0-6 days after discharge were more likely to be assessed as avoidable than those at 21 to 27 days. Also general surgical readmissions were more frequently assessed as avoidable than general medical and geriatric readmissions[14]. Despite these findings the authors felt that use of readmissions rates as an outcome indication of hospital inpatient care should be avoided.

Does audit in practice actually achieve anything worthwhile? A study from Central Middlesex Hospital evaluated one year of audit of care of medical inpatients[16]. The conclusion was that medical audit resulted in appreciable improvements in the aspects of care such as clerking and record keeping. The authors overestimated the likely resistance to audit and felt that the continued support for the audits probably reflected the major attitude shift now occurring in Britain. The same I predict would happen in Singapore this decade.

Turning now from Audit in Practice to Audit in Person, a few articles are highlighted. The first is criteria based audit[17]. The author is the Director of the Medical Audit Programme at King's Fund Centre. He highlights five differences between audit and traditional review and gives the five practical steps to criterion based audit - viz. choose a topic, choose criteria for screening records, analyse sample records, discussion of results and repeat audit. Criterion based audit is applicable to almost any clinical circumstance and can include practical issues of communications among doctors, clinical organisation, clinical decision making, efficiency of care, and the satisfaction of patients with their management and the information available to them. The cost – an audit assistant working 150-200 hours per year. This cost of recruiting and training audit analysts will be less than the cost in opportunity of diverting clinicians from clinical practice.

In another paper, the author emphasizes two salient points after a random review of hospital patient records[18]. The first is that "medical practice was often based on habit rather than medical fact" and the second is that "most weeks at least one important problem that warrants attention is unearthed." Yet another paper[19] makes another two salient points which are that "the scientific basis of the practice of medicine is inadequate" and that "research on outcomes will continue to be the central necessary ingredient in the effort to improve clinical practice." Doctors do not seem to use the existing scientific knowledge to full advantage. Because medical decisions to treat similar conditions may vary so widely among doctors, the author felt that medical practice is inadequately based on scientific basis and so the outcomes of treatment as a consequence are uncertain and therefore as a further result, doctors disagree among themselves in choosing treatment. In this light, in 1989, the United States Congress created a new agency for health care policy and research (budget US$100m for fiscal year 1990). The agency is charged with the responsibility "to enhance the quality, appropriateness, and effectiveness of health care services through the establishment of a broad base of scientific research and through the promotion of improvements in clinical practice and in the organisation, financing and delivery of health care services." What a task!

To conclude, the goal in medical audit is improvement in the care of patients within existing economic constraints. Quality assurance programmes, medical audit and assessment of the appropriateness to eliminate poor quality care. Just by eliminating poor quality care does not ensure that the remainder is good quality care. It is an enormous undertaking to measure the positive impact of medical care, taking cognisance of how much good medicine does overall and how much good it does procedure by procedure and condition by condition. But the wheels of machinery to work this out have begun moving.

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