The duration of training can be reduced only by restricting inflow, creating unemployment among those recently qualified, or by increasing outflow into career posts. If constant inflow is assumed, reducing the duration of training to an average (as opposed to a maximum) of seven years implies the creation of almost 30% more consultant posts, with a numerically equal loss of training posts, in addition to the underlying 2% annual increase. The increase in some specialties would have to be greater and, according to the Calman report, would have to be achieved within five years.

The government has accepted the Calman report but has declined to provide earmarked funding to implement it. Even with such funding, an increase in the number of consultants of the size envisaged would have been improbable. Without it the exercise is effectively dead and the detailed work being done by the royal colleges to design new training programmes an irrelevance. The Calman initiative would impose a continental regimen of training, designed to produce specialists capable of practising at an intermediate level of responsibility, on to a health care system whose specialists are expected to be capable of independent practice at a consultant level.[4] Implementing Calman without expanding the number of consultants will create severe unemployment among trainees, jeopardise patient care, and lead to mounting pressure for wholesale subconsultant appointments. Its impracticability should now be recognised, before legislation to institute unworkable programmes leads to chaos.

Even so, medical staffing faces major difficulties. *Achieving a Balance* has largely succeeded in regulating the number of career registrars, but trainees still spend too long in the grade because the planned expansion of the consultant grade has not occurred. This has created a serious bottle neck at the transition from senior house officer to registrar, with trainees sometimes waiting for years before being able to make the step up. This problem could only worsen if the Calman report was implemented, with the appearance of queues for entry to training programmes reminiscent of those in continental Europe.

An increase in the number of consultants remains vital to achieve a workable career structure, to keep consultants' workload within reasonable bounds, and to ensure high standards of care. The alternative is fragmented specialist training and increasing use of short term, subconsultant appointments by trusts. Without an effective NHS machinery to bring the increase about it is now up to postgraduate deans, who hold the training budget; the royal colleges; and, not least, consultants in individual hospitals to ensure that the increase not only continues but accelerates.

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Making routine data adequate to support clinical audit

Unambiguous definitions are needed

After pioneering examples, such as the Lothian surgical audit scheme,[1] the benefits of extending audit beyond a single hospital have increasingly been recognised.[2] Few absolute standards exist in clinical care, and, unless clinicians compare their performance with that of a sufficiently large number of others, opportunities for improvement may be missed. Also, increasing specialisation often makes it necessary to look beyond the boundaries of a single hospital to compare results with others.

In theory, large datasets could help in this process by highlighting unsuspected variations in care or by identifying events that should not normally occur.[3] This requires the datasets to be accurate, meaningful, and accessible. Many clinicians have concluded that, despite a massive investment in technology, routinely collected data still fail to meet these criteria and that separate systems are required. Does the evidence support this? Do specially designed information systems yield more accurate data? Even if they do, are they sufficiently accurate to support audit?

Two recent papers from the same team have helped to answer these questions.[4,5] In one the quality of obstetric coding in a specially developed maternity information system was evaluated in three hospitals. In the other, the quality of medical and surgical codes entered into the patient administration systems in two hospitals was assessed. The quality of data was higher in the obstetric system (which was "owned " by the obstetric teams) than in the patient administration systems. The patient administration systems failed to capture any events that could be used to indicate lapses in quality, such as transfusion reactions and decubitus ulcers, although some were identified from case notes. These results will not surprise people who have attempted to use routinely collected data at a clinical level.

The studies also identified several important issues facing those wishing to use such data in audit. Agreed and unambiguous definitions of commonly used terms are needed, covering both administrative and clinical data. Currently an "Alice in Wonderland" situation exists whereby words can mean anything one chooses. In the obstetric data major differences in what was understood by a first assessment were identified. The highest level of disagreement arose from different views about when an intervention was an induction or an augmentation of labour. With the medical and surgical data, when coders and abstracters disagreed about diagnoses two clinicians who reviewed the case notes were often unable to resolve the disagreement. The limitations of the almost meaningless concept of a finished consultant episode[6] were illustrated by the finding that a trained abstractor recoding case notes could increase recorded activity by 22%—clearly a good investment for those wishing to improve their efficiency index.[7]

Although much of the ambiguity surrounding administrative variables should be easily resolvable this is not true for clinical data. In a few cases the presence or absence of a disease or disorder may be unambiguous, as with many

fractures and cancers. For other diseases few agreed case definitions exist[8] and when they exist they are rarely used. Tackling this comprehensively would be a massive task and, given the rate with which knowledge is advancing, one that would be doomed to permanent obsolescence.

There is, however, a strong case for clinicians to come together, locally or nationally, to develop and disseminate agreed definitions of the most important diagnoses, procedures, and complications so that, when information is produced, everyone speaks the same language. This requires more than the substitution of one set of words, such as those associated with Read codes, for existing classifications. It will sometimes require research to develop validated tools that can be used to determine whether a patient has a particular disorder and, equally importantly, how much of it he or she has.

These studies, and others, also support the view that ownership of data contributes to accuracy.[9] Yet this may not mean that information systems based on separate specialties are always a good thing. In too many hospitals they do not interface with the routine data system and therefore can duplicate work. Also, systematic training for specialty based coders should be available, as it is for routine clinical coders. At present some hospitals manage to obtain much better results than others. It is unclear why, and this merits further study.

Clearly, many routine administrative data are still inadequate to support audit, not to mention contracting. Some purchasers are beginning to impose financial penalties for inadequate data, although this may encourage providers to focus on completeness rather than accuracy.[10] Increased use of clinical data in contracting may improve some aspects of accuracy, although experience from the United States indicates the potential pitfalls.[11]

If comparative audit, based on either routine or ad hoc collection of data, is to succeed, it will require support. The royal colleges and professional associations have done much, but, with the fragmentation of the NHS resulting from increasing competition between providers and the demise of regions, it is far from clear how such activities might be supported in the future.

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Medicine's core values

Summit meeting agrees on several, but others need further debate

British doctors failed to notice that the world around them had changed utterly and so were unprepared for the "blitzkrieg from the right" that overwhelmed them at the end of the 1980s. This was the diagnosis from Sir Maurice Shock, former rector of Lincoln College, Oxford, when he opened last week's meeting of doctors' leaders to discuss the core values of medicine. This was the first "summit" meeting of the profession since 1961 and was prompted by falling morale and influence and a request from the chief medical officer for the profession to look beyond present circumstances to consider its future.[1] It occurred the day after the General Medical Council discussed proposals to change its guidance to doctors from a list of what must not be done to a description of what is required of a good doctor (p 1251).

Doctors seemed to imagine, said Sir Maurice, that they were living in Gladstone's world of minimal government, benign self regulation, and a self effacing state. In fact, "instead of the rights of man we have the rights of the consumer, the social contract has given way to the sales contract, and, above all, the electorate has been fed with political promises . . . about rising standards of living and levels of public service." The appearance of the consumer society together with medical advances on an unprecedented scale and "the rise and rise of the geriatrics" has meant that "the doctor is different, the patient is different, and the medicine is different." In short, warned Sir Maurice, "everything is different except the way you organise yourselves."

The clergy may have escaped to what Sir Maurice called "a niche market," but there can be no escape for doctors: "medicine is right at the centre of our affairs." Doctors cannot swim against the tide and must recognise that "this is an age of regulated capitalism in which the consumer is courted and protected, encouraged to be autocratic, and persuaded of his or her power." Doctors must, he advised, form alliances with others, use the media, and deal with politicians at all levels. They must participate in the management of the health service, and he said: "You have also got to put your backs into ensuring that managers—whether doctors or not—are properly trained." Doctors must be willing to "get their hands dirty" with making decisions on allocation of resources, must speak authoritatively and sensibly to the consumer, and must get the message across on the importance of research and development in the quality of medicine. If they organised themselves in these ways, the government, said Sir Maurice, would have to work with doctors because "you can conquer with a blitzkrieg but you cannot occupy."

Sir Maurice, who has had wide experience in political life, advised that "doctors will have to surrender some independence to a new representative body which in its turn has an executive served by a small administration of the highest calibre. The remit of such a body would need to be loosely defined within a federal structure, and it should largely concern itself with matters of high politics and strategy." But he also supported strongly the re-