

to run successfully, looking after most of the patients on long-term anticoagulant therapy on our list. The patients are delighted with its accessibility and availability and the speed of our response to 'bad' results.

Our next task is to computerize the results, which will enable us to audit them more closely and improve our retrieval of information for the patient.

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Sir,

Recent work has shown that anticoagulation control can be significantly improved using computer assisted management.^{1,2}

This has, however, only been tested in hospital. I am hoping to launch a pilot study to assess the feasibility of using computer assisted management of anticoagulation in general practice. Should this system prove effective, the days of the hospital anticoagulation clinic will be numbered.

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Sir,

The paper by Pell and colleagues (April *Journal*, p.152) raises serious questions about the quality of oral anticoagulant control generally.

I carried out a similar study, between July and September 1992, of the test results for all patients attending anticoagulant clinics at Poole Hospital and for all patients whose general practitioner had sent a test to the hospital's haematology department (the hospital covers the surrounding area of Dorset with a radius of about 20 miles). The results were not quite so alarming but give no cause for complacency (Table 1). The hospital anticoagulant clinics achieved better results than the general practices, although one practice (A) achieved better results than the others.

Table 1. Results of survey of anticoagulant therapy.

	Hospital anticoagulant clinic	All general practices	Practice A
Total no. of patient tests	1710	460	95
% of tests indicating undertreatment ^a	15.4	34.6	22.1
% of tests indicating overtreatment ^b	5.8	4.3	5.3
Mean INR	2.9	2.4	2.7

INR = international normalized ratio. ^aINR <2.0. ^bINR >4.5.

The two studies are not strictly comparable because I was not able to break down the numbers by diagnosis and thus to determine performance within the British Society for Haematology guidelines for different indications; my study was retrospective and diagnoses were only available for the hospital outpatients. All non-hospitalized patients receiving anticoagulant therapy and tested over a three-month period were included. The international normalized ratios for all patients receiving anticoagulant therapy are held on computer in my department and are specifically coded. In addition, the request cards from general practice are retained for one month and the record cards for hospital anticoagulant clinics are held permanently. The hospital clinic is held three times per week and is carried out by a consultant haematologist and two experienced general practitioner clinical assistants; every patient is seen with their prothrombin time, international normalized ratio results and hospital notes. No patients are seen by junior medical staff. Few of the general practitioners working in the practices surveyed had much experience of warfarin dosage at the time of the study.

In the practice which achieved the best results, the patients are normally seen by one partner for their anticoagulation therapy and this practice sees more patients receiving this therapy than the others. The international normalized ratios are faxed to this practice immediately after testing in the laboratory. The results for the other practices are telephoned in mid-afternoon, usually to a receptionist or secretary. Faxing the results reduces the potential for transcription errors from telephoning.

Considering only patients in the recommended range of 3.0 - 4.5 in Pell and colleagues' study it is interesting that the percentage of patients with ratios above 4.5 are the same in the two studies for the hospital patients (5.8%). In Pell and colleagues' study, however, 10.9% of patients in general practice were overtreated compared with my finding of 4.3%. Numbers are small but it may be that in my study general practitioners tended to err on the cautious side when prescribing a dosage.

A major cause of poor anticoagulant control is poor patient compliance but this is always extremely difficult to quantify. Compliance is likely to be better when patients see the same doctor regularly, and the reasons for their anticoagulation are fully explained to them. It is also important that the doctor prescribing the therapy has a full knowledge of the patient, including their current drug therapy. In all of these respects the general practice setting is ideal for good anticoagulant control.

Prescribing the correct dosage of warfarin is not difficult, but experience helps. Now that more and more patients are, rightly, receiving anticoagulant therapy it is a useful skill for general practitioners to acquire, as many patients prefer to go to their practice than to a hospital clinic. In my area, over 20% of all non-hospitalized patients receiving warfarin now have their therapy controlled by their general practitioner. It is hoped to carry out another survey soon to examine whether control in either or both settings has improved.

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Flourishing or floundering in the 1990s

Sir,

Like Andrew Brown (letters, April *Journal*, p.176), I deplore the philosophy that has led to a two-tier system in the National Health Service. I would, however, disagree that it is only as members of society that we as doctors should debate the issues of rationing.

I find that patients increasingly realize that what is happening to them personally is not the consequence of their own doctor's actions. They also seek guidance as to how to make an effective protest, not just a way of ensuring that their treatment is expedited. This can mean the doctor acting as the patient's advocate in a political as well as the more usual medical sense.

There should be no ethical dilemma or any conflict of roles in our ostensibly democratic society. Teaching patients is a fundamental task in general practice, and recent history is too full of situations where not to protest is taken as tacit approval.

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Advance directives

Sir,
The discussion paper 'Advance directives: partnership and practicalities' (April *Journal*, p.169) was helpful in drawing attention to some of the serious practical limitations and dangers of the increasingly popular practice of encouraging patients to make advance directives or living wills. These would indicate that should the patient 'become so mentally or physically ill that there is no prospect of recovery, any procedures designed to prolong life should be withheld.'¹ It is noteworthy that the paper commences with a favourable reference to an earlier paper arguing that doctors may be morally justified in assisting death.² David Short has observed that the strong support given to the advanced directive by the Voluntary Euthanasia Society shows clearly that it is designed to lead to the legalization of euthanasia.³

Among the objections to the advance directive hinted at in the paper is that the individual who draws up the advance directive has no basis for making an informed decision since the precise situation which he/she will face cannot be foreseen. This is why a considerable proportion of patients do not necessarily want their advance directives followed strictly.⁴ Also, an individual cannot foresee the changes taking place in his/her attitude over the years. There are many examples of people who have changed their minds when illness has struck. The healthy do not choose in the same way as the sick.⁵

Perhaps the most serious objection to the advance directive, which escapes mention in the paper, is that it puts the onus on the public to demand medical care, including compassionate and intelligent treatment, of a quality a doctor would wish to receive, which they are entitled to expect as a right. David Short suggests that it is doctors rather than patients who should sign a declaration — a declaration that they will never knowingly administer futile treatment or prolong suffering without real hope of recovery.³

A determination by doctors to pursue the highest standards of care, following

the Royal College of General Practitioners' motto *Cum scientia caritas* and adhering to the declaration of Geneva and the international code of medical ethics,⁶ should make advance directives unnecessary.

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Accidents among children

Sir,
Carter and Jones' study of childhood accidental injury (April *Journal*, p.159) failed to demonstrate statistically significant differences in risk factors for accidental injury and in the possession of safety equipment between cases and controls as a result of their choice of outcome. Stewart-Brown and colleagues demonstrated the importance of definition of accidents in studies of risk factors.¹ In their analysis of the data from the third British national cohort study, they found that using admissions to hospital as the outcome resulted in more risk factors being associated with the outcome, than if a single medically attended accidental injury or repeated medically attended accident injuries were chosen as outcome measures.¹ The small numbers involved in Carter and Jones' study may also have resulted in insufficient power to demonstrate a significant difference in the frequency of risk factors between cases and controls even if such differences did exist. Stewart-Brown and colleagues failed to demonstrate association for some risk factors using a data set of more than 12 000 children.

Carter and Jones' conclusion that their study casts doubt on the value of safety equipment and knowledge in preventing childhood accidents cannot be substantiated from their results for the reason outlined above. Furthermore, they have not made it clear whether the equipment was possessed prior to the accident or not; it is possible that the accidental injury acted as a trigger to the family to obtain safety equipment.

Evidence from the published literature shows that environmental change is the most effective method of preventing childhood accidents.² Evidence exists that safety equipment such as smoke detectors,³ window guards,⁴ cycle helmets⁵ and infant and child car seats⁶⁻⁸ do reduce mortality and morbidity from accidents in childhood. The primary health care team should make efforts to educate parents about environmental changes and facilitate them to make such changes, as well as lobbying on a local and national level for a safer environment.

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Personal medical attendant reports

Sir,
William Hamilton's interesting letter on personal medical attendant reports (April *Journal*, p.172) concluded that 'Completing insurance forms appears to be more a problem of data retrieval than an ethical problem.' This view is short-sighted. The existence of these reports means that some patients avoid consulting their general practitioner for particularly sensitive problems, such as concern about human immunodeficiency virus (HIV) status. There are also many reports of insurance agents advising patients not to ask to see the doctor's report as this may delay the acceptance of the proposal.

Hamilton also quoted a study that showed that 57% of patients would have