of deterioration and a low risk of surgical complications whether she was or was not taking anticoagulant drugs. I would have offered burr hole aspiration of the fluid component of the haematoma, and I feel the authors should not be congratulated for the recovery of their patient. It will always be difficult to balance the risks of surgery for intracranial haematomas, particularly in patients receiving anticoagulation, but I hope that their report will not encourage clinicians routinely to manage such haematomas conservatively.

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1 Anderson TJ, Donaldson IM. Successful treatment of subdural haematoma during anticoagulant treatment. *Br Med J* 1989; **299**:1566. (23-30 December.)
2 Teasdale G, Galbraith S, Jennett B. Operate or observe? ICP and the management of the "silent" traumatic intracranial haematoma. In: Schulman K, ed. *Intracranial pressure IV*. Berlin: Springer-Verlag, 1980:36-8.

Multicentre trials

SIR,—Professor Charles Warlow is to be congratulated for his clear, detailed, and sympathetic advice about organising multicentre trials.[1] I am not sure whether he was writing from a sense of exasperation or with a wry smile when he wrote, "Although currently unfashionable in some quarters, the whole philosophy underlying multicentre trials is that group effort takes precedence over individual effort." Until those quarters change their philosophy the medical journals will remain cluttered with inconclusive, contradictory trials of small size from which it is almost impossible to make generalisations for clinical practice.

Many important clinical questions would be answered quickly and efficiently if the junior doctors currently scrabbling for research publications could be allowed to turn their efforts to multicentre trials. Appointment committees must be shown that it is counterproductive to regard multicentre trials with disdain.

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1 Warlow C. How to organise a multicentre trial. *Br Med J* 1990;**300**:180-3. (20 January.)

Benefits of animal research and the doctor's responsibility

SIR,—There is at present a vigorous and well planned campaign by animal rights activists to persuade the public and the media that animal experiments are both cruel and unnecessary, referred to by Sir Walter Bodmer.[1] New legislation has recently been introduced and there are now stringent controls to prevent unnecessary suffering. The campaign is designed to influence public opinion about the use of animals in medical research in order to produce changes in the application of legislation that will inevitably cripple major areas of fundamental and applied biomedical research. An unpleasant feature of the campaign is that many research workers have been abused and insulted and some have been sent letter bombs.

It is now time for the public to be continually reminded by doctors that the tremendous developments of modern medicine in the past 50 years—antibiotics, corticosteroids, renal and hepatic transplants, cardiac surgery, hip replacement operations, poliomyelitis vaccine, and cytotoxic drugs for cancer therapy—would not be available but for animal experimental work.

In the United States the Nobel laureate, David Hubel, recently stated that he would be well satisfied if during his presidency of the American Society for Neurosciences he accomplished nothing other than to persuade doctors to say to each patient, "Don't forget that without research on animals we wouldn't have been able to treat your disease and such research is being seriously threatened by the animal rights movement."

We agree with Professor Hubel and we believe it is the duty of all doctors, particularly general practitioners, who do most of the prescribing of drugs, to make clear to patients or their parents that the benefits of modern medicine would not be available but for research in which animal experimentation has played a major part. Furthermore, our hopes for further improvement in the prevention and treatment of conditions such as coronary disease, heart failure, strokes, dementia, arthritis, cancer, cot deaths, and AIDS, which cause so much suffering and misery, depend on such work continuing.

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1 Bodmer W. Experiments on animals. *Br Med J* 1990;**299**:1524. (16 December.)

Measuring blood pressure in the elderly

SIR,—I wonder how many readers share my surprise that it should have taken seven authors nearly two pages of text and statistical analyses, three tables, and 11 references to confirm what all of us discovered in our first clinical year: that it is difficult to measure arterial blood pressure accurately with a sphygmomanometer in patients of any age with atrial fibrillation, not just in elderly patients with this condition.

The measurement of arterial blood pressure with a sphygmomanometer is reasonably accurate in patients with sinus rhythm. In patients with atrial fibrillation, however, each cardiac contraction produces a different stroke volume, and a large element of subjective compromise in the recording of blood pressure is thus inevitable. It would therefore be remarkable if interobserver variability were not significantly greater in patients with atrial fibrillation than in those with sinus rhythm. The paper by Dr D Sykes and colleagues not only states the obvious but makes extremely heavy weather of doing so.

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1 Sykes D, Dewar R, Mohanaruban K, *et al*. Measuring blood pressure in the elderly: Does atrial fibrillation increase observer variability? *Br Med J* 1990;**300**:162-3. (20 January.)

AUTHORS' REPLY,—We suggest that Dr Ian W B Grant's comments emphasise exactly the reasons why we felt it necessary to publish our results.

His observation that there is subjective difficulty encountered during the measurement of blood pressure in patients with atrial fibrillation is appreciated by all clinicians—our study was the first attempt to quantify this and we pointed out that the major source of error lay in different physicians' interpretations of Korotkoff sounds, resulting in significant interobserver variability that was large enough to alter the management of patients. Moreover, we suggested guidelines that might help overcome this variability. An unexpected finding was the less pronounced intraobserver variability.

His references to the term accuracy suggest that Dr Grant has confused this with precision. Our study was not an attempt to verify or justify the accuracy of sphygmomanometers but was concerned with quantifying the relative precision of groups of measurements recorded in patients with sinus rhythm and those with atrial fibrillation. Rather than (as he says) suggesting the obvious we recommended a way in which this very difficult and common clinical problem might be assessed and tackled on the basis of a clinical trial instead of anecdotal observation.

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University hospitals and the NHS review

SIR,—Professor Peter Richards's laudable vision of what constitutes good undergraduate medical education[1] will be shared by most medical academics. His demand for direct funding for teaching hospitals from the Department of Health to create this vision would, however, have a disastrously adverse effect. Separating the funding from that for mainstream hospitals and community services would isolate and cushion teaching hospitals from the real world of the internal market, inevitably creating once again a two tier system in which elitist teaching hospitals produce students ill prepared for the world outside their gates. That the medical school curriculums now reflect more closely the pattern of everyday disease in their local populations than they did before 1974 is in part a consequence of the integration of teaching hospitals with the rest of the NHS.

The service increment for teaching (SIFT) is not a separate allocation of resources to support teaching but is merely an explanation of the extra costs of teaching hospitals. We do not know what these extra costs comprise beyond the broad fact of high staffing levels and probably a different case mix. We need to have a clear idea what these extra service costs are and how these arrangements benefit medical teaching. It makes good sense to route SIFT through the channels for commissioning services as a whole—that is, through the region and then onward from there to whichever authority holds the contracts for the majority of services within the teaching hospitals. The analysis of SIFT would inevitably flow out of this arrangement. It would also guarantee that a close working relation would develop between the school and the authority. Some tension between the school's aims and the authority's aims is inevitable, but probably healthy.

I understand all too well why the schools would like to sit comfortably outside the NHS system, but cannot think of anything worse for the education of future NHS doctors.

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1 Richards P. University hospitals and the NHS review. *Br Med J* 1990;**300**:138-9. (20 January.)

Construction of clinical scoring systems

SIR,—Dr D G Seymour and colleagues[1] describe a scoring system that seems very appropriate for use by doctors, with our incomplete, cross correlated data and need to participate in decision taking.[2] This is not, however, necessarily a much simpler approach than those based on artificial intelligence