departments to consider how to improve the disciplinary procedures for senior hospital doctors (21 March, p 787).

One idea for improving accountability is that consultants, as well as junior staff (and general managers), could be employed only on short term contracts. This may be attractive to administrators, but it does not answer the problem of how the consultant's performance is to be assessed. In today's competitive labour market such a system would be open to abuse by health authorities, who for political and economic reasons might feel tempted to replace vocal and articulate senior consultants with less expensive young ones. Nevertheless, if proposals like this are to be resisted we need a better system than the various complaints procedures we have at the present.

A more sensitive system of accountability would mean reviewing consultants' work regularly rather than waiting for complaints. As Kennedy has persuasively argued, such a system could identify problems early and allow action to be taken if someone is failing to cope.[2] Whether consultants would welcome regular appraisal is uncertain, but it might be acceptable if it led to overburdened ones being given extra help or remuneration—for example, by being linked with the "distinction awards" system. Consultants found to be shirking NHS duties could be warned—first privately and then if necessary publicly—before facing the ultimate sanction of suspension from duty. The composition of the reviewing panel is a delicate matter, but no more so than the composition of the committees that already distribute distinction awards or of tribunals that investigate a consultant's fitness to practise. The panel would have to include respected doctors if it were to appraise consultants' clinical performance as well as their devotion to duty, and its task would be made easier if consultants also participated voluntarily in assessment systems such as the one being developed by the Royal College of Obstetricians and Gynaecologists.

The principle of clinical freedom is important, and excessive management or political interference in clinical practice is dangerous.[19] Closer control of consultants could stifle individuality and thereby prevent progress. Nevertheless, it is unrealistic to expect the public to pay a consultant's salary for almost 30 years without checking on whether or not he is giving value for money. Provided the risks are recognised and safeguards adopted, I believe that consultants should cooperate in developing a more sensitive system of accountability than the one we have at present.

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Abdominal aortic aneurysms

Hospital admissions and necropsy studies show that the number of cases of atherosclerotic abdominal aortic aneurysms is increasing. In England an abdominal aneurysm is found in 3% of those over 50 and causes death in 1·5% of cases.[1] The annual incidence of ruptured aneurysm has increased to 17 for every 100 000 people[2]; for men aged 60-64 in England and Wales it is 22 for every 100 000, and it is 177 for every 100 000 of those aged 80-84.[3] A parallel rise has been seen in Sweden,[4] and in the United States the diagnosis of aneurysms increased from 12·2 to 36·2 per 100 000 person years between 1950 and 1980 (using modern scanning techniques increased the diagnosis of small aneurysms tenfold[5]). In Australia the incidence rose by more than half between 1971 and 1981.[6] In patients with other manifestations of arteriosclerosis 9·5% have an abdominal aneurysm.[7] These increases are explained partly by the aging population and partly by increased detection rates, but they are not the full explanation.

Clinical examination detects large aneurysms but may miss a third.[8] Other diagnostic techniques include conventional radiology, arteriography, digital subtraction angiography, ultrasonography, computed tomography, and nuclear magnetic resonance. Ultrasonography and computed tomography provide accurate diagnosis[9] but are less effective in defining the proximal extent of the aneurysm and showing whether the renal artery is affected.[10] Scanning techniques provide information about the thickness of the vessel wall and whether there is intraluminal thrombus, whereas arteriography and digital subtraction angiography are better for assessing the condition of renal and visceral arteries. Nuclear magnetic resonance will probably be very valuable, combining these advantages while remaining non-invasive.[11-13]

Attempts to stop aneurysms rupturing were confined to inducing thrombosis before Dubost in 1951 performed the first resection using aortic homograft.[14] Dacron became commercially available in 1957 and still provides excellent patency with few long term complications.[15] Early analysis of patients with untreated aneurysms showed that half were dead within two years and that 60-80% of those with symptoms lived only one year.[16] An operation seemed to improve this poor outlook,[17] and mortality from non-emergency operations ranges from 2 to 10%.[2 18-31] Results are worse for urgent operations even when the aneurysm has not ruptured,[23 27-32] and when it has the results are poor—hospital mortality ranges from 21 to 70%.[2 14 21-24 26-38] Patients who have a ruptured aneurysm yet arrive at hospital have already, however, shown a capacity for survival. Only 38-64% reach hospital at all.[1 2 6 39-41]

Patient selection in these series is often weighted in favour of those who have elective resections, but the benefit of an operation is still evident.[42] Old age adversely affects results[23] but should not be a contraindication to surgery.[32 43 44] The size of an aneurysm influences the probability of rupture, but aneurysms grow about 4-5 mm a year[20 44 45] and small aneurysms do rupture.[28 46] The balance between risk and benefit is delicate in those for whom an operation will carry a high risk and who have a small asymptomatic aneurysm—further surveillance with serial imaging may be a better option. Elective surgery with careful preoperative evaluation is, however, safe, and the prognosis for patients leaving hospital compares well with that of matched populations after both elective and emergency surgery,[29 47-49] although

these figures are favourably influenced by the deaths of high risk patients.

If a patient ruptures his aneurysm and reaches hospital alive early diagnosis and an immediate operation are vital. With a non-operative mortality of 100% there is little need for debate or delay. The patient should be anaesthetised on the operating table after all preparations for the operation are complete. The relaxation of the abdominal muscles may result in the rupture extending and dramatic hypotension. Early proximal control of the aneurysm is important, and catheters have been used before the patient is anaesthetised.[50] Interventional radiology may have an increasingly important place if it does not delay the operation.

Many deaths occur in patients who are moribund when they present, and medical ingenuity cannot help. The opportunity for improving results must lie in diagnosis before rupture, and in an ideal world a screening programme could be employed using ultrasonography or, better still, nuclear magnetic resonance. Necropsy studies suggest that three elective resections would be needed to avert one rupture.[1 46] Such a programme would need 12 000 operations in England and Wales[51] and cost £9000 for each life saved.[52] In the United States the cost might be $10 billion.[22] More realistically, doctors must become more aware of abdominal aneurysms and palpate the abdomen of men over 50, just as they would take their blood pressure. Ultrasonography should then be used in doubtful cases and those with other cardiovascular symptoms.

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Nursing manpower

Is there a crisis in nursing manpower? The National Health Service's chief executive, Len Peach, has warned of future difficulties in recruitment, and many local voices are complaining of shortages. Old troubles with the quality of training and the excessive work contribution of student nurses have regained prominence through the Project 2000 report.[1] But after four years in which the same number of nurses has faced up to a 13% rise in workload the atmosphere remains surprisingly calm.[2]

Management action is now an alternative to complaint. Techniques of measuring the need for nurses are now available: the monitor project at Newcastle Polytechnic and work in Brighton and north Lincolnshire have developed the earlier work at Aberdeen.[3] Many districts may complain of shortages, but only those that can prove their shortages with the new measures will command respect. The Department of Health and Social Security's work on the lack of fit between nursing resources and needs has also had an impact on opinion, most recently through the report on the mix of nursing skills.[4]

The nursing force is now much better educated and flexibly trained than it was. The development of postbasic training has been a success, and, although wastage among student nurses throughout their course and through exam failure is at least 30%,[1] the turnover among trained staff is probably lower than in the 1960s: more people are working as