within 48 hours, however desirable, would be difficult for most district general hospitals to comply with, even with the best will in the world. Most of these tests are usually done weekly to reduce costs and to fit in with the working of the laboratory. The same applies to results of tests that would be required in a clinic—for example, measurement of glycated haemoglobin and drug concentrations for therapeutic drug monitoring. The soaring costs would not impress our managers, however much it might improve the quality of the service provided.

Finally, it is interesting that Stewart refers to “properly staffed laboratories.” Perhaps the time has come for a national charter for laboratories prepared by professional bodies, which could include guidelines about staffing and budgetary requirements for laboratories serving a given population. This would help to ensure that the provision of pathology services was not totally dictated by market forces, with everything determined by a price label.

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1 Stewart MJ. A patient's charter for laboratories. *BMJ* 1992;304:251. (25 January.)

Audit: the crucial role of medical records

SIR,—M G S Dunnill and S R Gould's retrospective audit of acute gastrointestinal bleeding in a district general hospital highlights one of the main obstructions to audit and attempts to improve outcome—namely, the medical record.¹ Drawing any satisfactory conclusion from medical audit is difficult when 44% (46/104) of the case notes are unavailable. This is not an isolated problem.² Patients' care is also handicapped when notes are unavailable in outpatient departments or on the wards.

Until this problem is resolved we will have to rely on prospective audits with data collection independent of case notes. Good, accessible medical records are the foundation for medical audit, clinical care, coding, resource management, and so on. They are fundamental to the service, and improvements are urgently needed.

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1 Dunnill MGS, Gould SR. Audit of gastrointestinal bleeding in a district general hospital. *BMJ* 1992;304:383-4. (8 February.)
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Audit in general practice

SIR,—In the past few weeks the medical journals and newspapers have exhorted general practitioners to audit 13 aspects of care—namely, the standards of diabetic care, hypertensive care, child health surveillance, and minor surgery; the care of patients who have hypothyroidism, have arthritis, have heart failure, or are receiving diuretics; the prescription of antibiotics and of non-steroidal anti-inflammatory drugs; the waiting time for an appointment and after the appointment time; and consultation techniques.

I have a list of 24 other aspects of medical care that apparently need to be audited by competent, keen general practitioners. For each of these a protocol needs to be established and standards set. The care given has to be measured, a plan for

improvement defined, and the care measured again after a defined time has elapsed. Audit is not a once for all activity. This process has to be repeated in a cyclical manner for each aspect of care audited.

In our practice we have done some audit. We have published our results. The minimum time it has taken us to collect the data has been two weeks, using our ancillary staff to the full.

My list of aspects of care that need to be audited is, I am sure, incomplete, but with the ones given above there are now 37 aspects of care on the list. How do you audit all of them? If you do not audit all of them how do you choose which to audit? I guess that most people audit aspects of care that they are interested in or happy with—not an ideal way to improve your service. If you audit only half of these 37 aspects of care how much extra time do you spend on this process and what do you give up in your normal working day to produce this time? Already I have less time than I would like to visit my terminally ill patients and to counsel patients with alcohol and drug related problems (my interest: perhaps I should audit this?) despite working a 12 hour day.

I submit that the undirected general call to practise audit is illogical and unworkable and leads to disillusionment. I suggest that jointly the General Medical Services Committee and Royal College of General Practitioners should define one aspect of practice each year, define protocols, and encourage doctors all over the United Kingdom to audit this aspect of care against the protocol. Who knows, the care might become better, the improvement might stick, and little by little general practice as a discipline might improve further.

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NHS distribution of funds unfair

SIR,—The idea that NHS resources should be allocated according to health need is generally accepted. The underlying objective of the Resource Allocation Working Party was to seek criteria that were broadly responsive to relative need.¹ *Working for Patients* proposed using a formula based on population weighted for age and morbidity for distributing funds to regions and suggested that district health authorities should be funded on broadly the same basis, taking local factors into account.² West Birmingham Health Authority, however, in a paper presented to its region, has claimed that the national formula gives too much emphasis to the size of districts' elderly populations.³ It argues that deprived districts tend to have fewer elderly people than more affluent districts. Consequently, the current national formula is biased against deprived districts.

To test this hypothesis we examined the relation between mortality (a proxy for deprivation) and the proportion of elderly people in a district population. Our source of data was the Department of Health's common dataset. We calculated the percentage of people aged 65 and over in 190 district health authorities in England, using 1990 mid-year population estimates. All cause, all age standardised mortality ratios, based on deaths for the five years 1986-90, were abstracted for the 190 districts. To investigate the relation between these two variables we calculated the product-moment correlation coefficient; it showed a highly significant inverse relation between the percentage of elderly people and standardised mortality ratio ($R = -0.32$ (confidence interval -0.45 to -0.19), $p < 0.0001$). A simple linear regression analysis (table) yielded the predicted standardised mortality ratios for a given percentage of elderly people. Districts with the highest percentage of elderly people can expect to have the lowest standardised mortality ratios. Because of the known geographical variation in standardised mortality ratio dis-

Predicted standardised mortality ratio for English districts according to percentage population aged over 65, derived from regression analysis

% Aged over 65	Standardised mortality ratio (confidence interval) for English districts (n=190)
12	106 (103 to 108)
13	104 (102 to 106)
14	103 (102 to 105)
15	102 (101 to 103)
16	101 (99 to 102)
17	99 (98 to 101)
18	98 (96 to 100)
19	97 (95 to 99)
20	96 (93 to 98)
21	95 (92 to 98)
22	93 (90 to 97)
23	92 (88 to 96)
24	91 (86 to 95)
25	90 (85 to 95)

Regression of standardised mortality ratio on age: slope = -1.225 (SE 0.26). t Test for $b = 0$: $t = -4.7$, $p < 0.0001$ (two tailed probability).

tricts were classified as north or south, and the regression analysis showed similar results for both groups.

This finding raises fundamental questions about the way in which age structure should be used to allocate resources. We contend that the most likely explanation for the low standardised mortality ratios in districts with a high percentage of elderly people is selective migration: those who cannot afford to move to affluent retirement areas are likely to be less healthy than those who can. Therefore there are health differentials between elderly populations: old people who live in district health authorities with the lowest percentage of elderly people probably have the greatest needs. It follows that a resource allocation formula that moves money away from younger populations to retirement areas will move resources away from deprived inner city areas.

In our view, the current national formula, if used at a district level, is likely to increase the health differential between affluent and deprived populations. The Department of Health and regional health authorities should take account of this when deciding whether age structure should affect the distribution of resources in the NHS.

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1 Resource Allocation Working Party. *Sharing resources for health in England*. London: HMSO, 1976.
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Europe and nutrition

SIR,—Michael O'Connor makes a plea for a food policy in the European Community that puts human health before farmers' profits.¹ He assumes that a healthy diet will prevent the “coronaries” from which his group takes its name. He ignores the facts.

Keys's seven countries study showed significant association between the proportion of dietary energy derived from saturated fatty acids and the 10 year coronary death rate.² When intake of saturated fatty acids is plotted against coronary death rate for 23 European countries (including five of Keys's seven), however, there is no significant relation,³ which makes a causal basis for Keys's unconfirmed statistical association unlikely.

More importantly, some of the most extensive

(and expensive) trials have thoroughly field tested Keys's experimental conclusion that changes in plasma cholesterol concentration reflect changes in dietary intake of saturated fatty acids.⁴ In the American multiple risk factor intervention trial, a randomised prospective controlled trial, 6428 middle aged men were persuaded to stick to a diet low in saturated fatty acid, low in cholesterol, and high in fibre (it was also low in salt for people with hypertension and low in energy for obese people).⁵ The special intervention regimen, much as proposed by the Committee on Medical Aspects of Food Policy⁶ and the World Health Organisation⁷ for coronary prevention, was aggressively pursued. There was no significant effect on mortality from coronary heart disease or any clinically important effect on plasma cholesterol concentration over the seven years of the study.

These results were confirmed by the WHO European Collaborative Group's prospective controlled study, which randomised 80 factories across Europe (over 60 000 men aged 40 to 59) to intervention or control status.⁸ The intervention was similar to that proposed by O'Connor's group. The trial lasted for five years, and the effects of intervention on both mortality and plasma cholesterol concentration were even smaller and less clinically relevant than those in the American trial.

Before campaigners like the Coronary Prevention Group—they are proliferating exponentially—try to rouse an uncritical populace to a state of dietary hysteria and demand action from the government of the day they should do their homework and review the evidence in support of a useful outcome from their activities. Currently the evidence is much more strongly in favour of walking briskly for half an hour each day and eschewing all dietary advice save that which recommends not eating more than is needed to stay fit and slim.⁹

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Who speaks for whom in Europe?

SIR,—In our view Tessa Richards gives a negative picture that is not quite accurate of the efforts of European organisations to represent European doctors in Brussels and wherever else decisions are made of relevance for the medical profession.¹

Richards's picture of the Standing Committee of Doctors of the EC does not correspond to our own experience. Innuendo about "generous entertainment" misses the point that, in fact, a meeting of the committee consists of long days of hard work in committee rooms, corridors, and reception lines to attempt to determine the united view of the

profession in the 12 countries of the European Community on matters important to the profession. We do not agree that what took place last October in Madrid was "too little too late." The decisions made there for the standing committee's future work were vital ones that will lead to even stronger representation of the profession in Europe, as evidenced by the effective start made by the new Portuguese presidency.

We do not agree that the standing committee has been ineffective in getting its views across to the decision makers. Certainly the task is difficult, but the committee and the other groups have succeeded in the past: with the doctors' directives in 1975; the general practice directives in 1986; the advanced informatics in medicine programme; the numerous major cooperations such as the consensus conference on cancer training in general practice organised by the European Union of General Practitioners and the European Commission in 1991; and the many, continuing details the profession has put forward successfully regarding specific issues under consideration in Brussels—for example, the draft directive on liability for services; the genome working group; and ethical, social, and legal considerations.

With regard to Richards's comments on the European Union of General Practitioners, introducing a three year minimum training for general practice will naturally be difficult, but it would be pitiful if an organisation such as the union did not set and follow political objectives in the long term. Our British colleagues in the union have themselves contributed enormously to the effort to raise standards of training for general practice, not only in Great Britain but everywhere in Europe—standards that in the past seemed perhaps an impossible uphill run.

The British delegation on the Standing Committee of Doctors of the EC also contributes greatly, most recently in the work of the task force that established a permanent secretariat for the committee in Brussels. We believe that the work of these organisations has proved to be of real value for the profession and will continue to do so. The British delegation has taken a leading and positive role and we salute that effort.

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One car down

SIR,—I support R S Bhopal for setting an example by using public transport¹ and applying some of the lessons brought out in Fiona Godlee's article on transport and public health issues.² As a pathologist working in an area where the annual number of deaths in road accidents has increased, whereas the national average has decreased, I too often see the disastrous results of road traffic accidents. When people with credibility in the community, such as hospital doctors and scientists, set an example by walking or using cycles or public transport this should substantiate concern about the fairly obvious detrimental effects of overusing the car.

Doctors were the first group to stop smoking, and many years later the battle against smoking, if not won, is at least not lost. Lord Gort, the governor of Malta during the blitz, set an example to the rest of the population to save fuel by walking to work. If sufficient numbers of people transferred from using private cars to other forms of transport this should ultimately have an effect on those making decisions about transport, such as city planners and politicians.

Perhaps the BMA should set an example: now

that BMA House is smoke free perhaps its courtyard should be made car free.

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- 1 Bhopal RS. One car down. *BMJ* 1992;304:451-2. (15 February.)
- 2 Godlee F. Transport: a public health issue. *BMJ* 1992;304:48-50. (4 January.)

SIR,—Congratulations to R S Bhopal for giving up his car and for his eloquent exposition of his reasons for doing so.¹ It is appropriate that a professor of public health should set an example and draw attention to the scale of the damage to health and the environment wrought by the car. I agree that all health professionals have a responsibility to act on this issue.

As part of a two car, two general practitioner family I, however, have not been able to act on my convictions. In my practice we have considered having one practice car for the on call doctor, with the other doctors doing nearby house calls on foot or bicycle. In reality "nearby" is not near enough, given time constraints, and some patients expect the doctor of their choice to visit them. I believe that we may look back on this phase of general practice, when at any weekday lunchtime roughly 34 general practitioners are driving over the same large area of west Newcastle to visit perhaps 150 people, as a period of inefficiency and extravagance.

Urban general practitioners generally operate from bases sited by historical accident and serve populations scattered over wide areas, overlapping with several other doctors' territories. There is also the tradition of patient choice, and patients can live anywhere if the doctor can be persuaded to visit them. Until environmental concerns take priority over these traditions—that is, until general practice is geographically based, which does not exclude a degree of patient choice—general practitioners will not be able to follow Bhopal's example.

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- 1 Bhopal RS. One car down. *BMJ* 1992;304:451-2. (15 February.)

SIR,—R S Bhopal is courageous to take to his feet and abjure his car.¹ He is right to rank this forbearance above not smoking and reducing fat intake, but I was disappointed that he didn't mention the advantage of the bicycle as an alternative to the car. Two thirds of journeys to work and well over half of trips made for social and entertainment reasons are under 8 km long—ideal cycling distance. A 10-fold increase in the use of cycles in the United Kingdom would save up to 0.75×10⁶ tonnes of carbon monoxide, 100 000 tonnes of nitrogen oxide, and 16×10⁶ tonnes of carbon dioxide from being emitted into the atmosphere each year.² And this is not to mention the health benefits of cycling: regular cyclists typically enjoy a fitness level equivalent to being 10 years younger.³

I cannot better Williams's words about the bicyclist: He moves easily, intelligently, and cleanly about his city or countryside with an energy expenditure equivalent to over 1400 miles to the gallon. . . . He combines a relatively simple machine with a propulsion unit of quite incredible functional elegance, and in the league of all movers—caterpillars, comets, or Cadillacs—there is nothing to touch him.⁴

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