stay and bed use factor are better than the average for Wales, where most hospitals have parallel systems for admitting acute medical and geriatric emergencies.

The appointment of a bed manager, flexible use of all acute beds in the hospital, and protocols for early discharge and transfer have failed to prevent constant overflows into non-medical wards, waits on trolleys in the accident and emergency department, and temporary closures, even though some general practices have access to community type hospital beds. Brief analysis (to be audited in more detail) suggests that few of the admissions are inappropriate. Major factors include patients' increased demands and expectations and general practitioners' fear of complaints and litigation. Given this, it is difficult to envisage any reduction in beds, let alone the 30% predicted in acute district general hospitals,³ whose surgeons are already practising day case surgery to a maximum.

General practitioners have neither the time nor, probably, the skill needed to treat most of our acute medical admissions, even if they were provided with more facilities. Planning must be modified to take account of these issues.

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Bed crises are occurring almost daily in some hospitals

EDITOR,—Richard Hobbs is correct in stating that emergency admissions are increasing.¹ The figure shows the trend in acute admissions through the accident and emergency department of a large general hospital. After a period of stability between 1984 and 1991 the number has almost doubled. It has taken a great deal of hard work and managerial flexibility from all doctors in the hospital to help the department cope with this throughput.

A medical admissions ward has been opened, bed managers have been introduced, and the hospital allows emergency admissions into any available bed regardless of specialty; a surgical directorate even funded an increase in medical beds during the winter to enable continued elective surgical activity. Despite these measures, however, bed crises occur almost daily and staff find themselves on the seemingly endless treadmill of processing these large numbers of admissions. The reasons for the increase are many, but we think that the following points are important.

Firstly, there are increasing numbers of frail elderly patients living alone at the margins of safety in the community, in whom a minor fall, infection, or other small mishap can seriously impair independence. This often necessitates admission for rehabilitation. When community care fails it is easy to phone the emergency services whatever the time, whereas it is not easy to mobilise social

Quarterly admissions through accident and emergency department 1984-94

services to provide support for elderly patients requiring emergency social care.

Secondly, expectations that doctors should not make errors are increasing. To this end, our junior staff are advised to have a low threshold for seeking a further opinion and admission in cases of atypical chest pain; it is better to admit a patient for a day than run the risk of complaint, litigation, or even a charge of manslaughter.

Thirdly, use of the emergency services has increased. Partly, this may be accounted for by policies that encourage patients with chest pain to phone for an ambulance rather than phone their general practitioner.

Finally, early discharge of patients may result in early readmission.

Hospitals can be made more efficient in their handling of acute medical cases, but with every step taken to increase efficiency the size of the problem seems to increase. It is a tribute to the hard work and dedication of staff that hospitals do not grind to a halt because of people requiring emergency care.

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More resources are required to facilitate the discharge of acutely ill elderly people

EDITOR,—Richard Hobbs's editorial on the increase in emergency admissions draws attention to an important trend, which, as he states, should be the subject of urgent research to see exactly what is happening and why.¹ It is surprising that he does not mention demographic changes leading to relative increases in the numbers of very elderly people as these changes are likely to be one important reason for the rising rates of emergency admissions. Unfortunately, in advance of any results from research he suggests solutions that are born of political correctness rather than reasoned appraisal.

The trends towards shorter stays in surgery seem unlikely to happen quickly enough for the problems on medical wards to be solved simply by the renaming of surgical beds as medical beds. For example, on the basis of retrospective studies a substantially shorter stay was one of the benefits expected from the widespread introduction of laparoscopic cholecystectomy. Prospective studies, however, have shown only marginal advantages over minicholecystectomy.²

More sinister is Hobbs's rediscovery of "low dependency medical crises." He presumably has elderly people in mind since he advocates that general practitioners should be allocated budgets to place patients perceived to have conditions in this category into nursing homes. We believe, however, that this solution signals a return to the days of the workhouse since it was the exposure of the myth of this approach that led to the development of modern geriatric medicine.³ Hobbs's own example of acute myocardial infarction well illustrates the reasons for our concern. As he states, modern treatment of this condition is one of the driving forces behind appropriate increases in acute medical admissions. Like many other acute medical problems in older people, however, myocardial infarction commonly presents with atypical symptoms, and specialised investigations are often required to establish the true diagnosis.⁴ Yet it is these patients, presenting perhaps with a fall or with confusion, whom Hobbs would consign to nursing homes or, in some localities, to low tech

community hospitals. Leaving aside the moral question of the re-creation of an underclass of acutely ill elderly people not thought to be worthy of investigation and treatment in acute hospitals, the denial of timely fibrinolytic treatment to such patients is likely to lengthen their stay in institutions and thus be more expensive; it would also increase dependency after the acute illness, leading to less successful or unsuccessful discharge.

Research is indeed needed, as Hobbs suggests, but it should start in acute hospitals, not in nursing homes. Meanwhile, community resources should be directed at facilitating discharge from hospital rather than at placing hurdles in the way of the appropriate investigation and treatment of acutely ill elderly people.

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Health promotion in general practice

EDITOR,—We wish to respond to A S Wierzbicki and T M Reynolds's letter¹ regarding our study of health promotion in general practice.² Our objective was to observe the effect of personal health education on the lives of patients with angina; hence this was our obvious criterion for inclusion in the study. It is incorrect that a 50% reduction in the incidence of angina was the criterion chosen to indicate a successful outcome. Rather, in determining our sample size we suggested that effective intervention might reduce the frequency of episodes of angina in those who were categorised as severely affected by about 50%. This criterion was purely arbitrary, but other relevant criteria for determining sample size were unavailable.

The difference in death rate was an incidental finding: further follow up may elucidate the importance of this observation. Our report stated that 38 of the 42 deaths that occurred were attributed to cardiovascular causes.

Our study did not show that personal health education had any additional effect on body mass index, but this may have been because our intervention emphasised the frequency of consumption of various foodstuffs rather than quantities. As a change in frequency of consumption was reported, more detailed dietary intervention might have been of further value. Full validation of reported smoking habit was not completed for all patients, but errors of underrecording would be unlikely to affect our conclusion. While more of the intervention group, as might be expected, reported having stopped smoking, the reported change in smoking habit did not differ significantly between the two groups.

Unfortunately, Wierzbicki and Reynolds seem to have misread our paper. We stated that the intervention group reported a decrease in frequency of attacks of angina and that significantly more of those patients reported taking prophylactic treatment: the possibility of self prophylaxis before exercise was not neglected. Exercise tolerance was not validated independently, but this would not have been appropriate in the study, which was carried out fully within general practice.

The conclusion of our paper supports, rather

than precludes,¹ a fully integrated approach to the management of risk factors in a group of high risk patients. We would seek to justify the value of personal health education for these patients in terms of improvements in their reported diet, activity, freedom from symptoms, and quality of life.

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Criteria for authorship

Acceptance of a paper should not depend on where the researchers work

EDITOR,—We agree with the criteria for authorship set out by the International Committee of Medical Journals Editors but wish to comment on the opposite case—that is, the criteria for exclusion from authorship, a topic that occupies part of the policies of some journals. In principle, these criteria should be the contrary of those mentioned by Goodman and should be related to the lack of scientific contribution of the author.¹ This, however, is not always the case. For example, a recent editorial in the *New England Journal of Medicine* stated that analyses of cost effectiveness would not be considered for publication if one of the authors had a personal financial conflict of interests (that is, he or she was an employee of the company that made the product under study).² The editor's main justification for this policy is that studies of cost effectiveness are partly review articles based on data chosen selectively from the literature and that the choices could be biased.

It is true that analyses of cost effectiveness are particularly liable to bias. Bias may, however, operate in different directions. A potential source of bias could be for a payer to reduce its total health expenditure budget. Would it not be possible for a so called "neutral source," such as a government agency, to have an interest in showing that the cheapest drug is the most cost effective—particularly so when these institutions are the ones financing medicines, as in many European countries?

The question here is this. If a researcher working in, for example, the pharmaceutical industry has contributed to the elaboration of a pharmacoeconomic analysis, together with other researchers of a university or hospital, what is the "correct" attitude: to exclude his or her name from among the list of authors, refusing the right to authorship? Or not to publish the study, so increasing publication bias? Probably the researcher would choose the exclusion of his or her name so that the article was published.

We believe that for review articles it would be preferable to encourage the use of scientific selection criteria, such as meta-analysis,³ or to establish methodological guidelines for economic assessment, as exist for clinical trials or statistical analyses. The quality of any article must be judged a posteriori, after the necessary methodological requirements to prevent bias have been established. In that sense, the recent series articles on methodology for reviews may be useful in tackling the problem of bias analyses of cost effectiveness.⁴

We are in favour of basing the acceptance or rejection of a manuscript on the quality of the research and not on where the researchers work.

Basing it on where the researchers work constitutes a scientific prejudice.

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Statisticians should be coauthors

EDITOR,—Neville W Goodman outlines criteria for authorship of published material.¹ Medical research is often, by its nature, multidisciplinary, and frequently the authorship of papers reflects this. As statisticians we find that analysis is rarely just a "simple manipulation on a computer" but involves a great deal of time and care from the study's design stage, through checking of the data and statistical analysis, to presentation of the results. The application of "standard statistical tests" does not necessarily imply that the analysis was straightforward; it may imply that more complicated methods of analysis, which are often less easy to interpret, were considered to be inappropriate.

We therefore believe that statisticians' contribution to medical research should generally be recognised through coauthorship and not simply through their receiving "credit for what they have done and nothing more." Our criterion for a substantial contribution worthy of coauthorship is: processing the results; providing new insight into the data; or making a contribution without which the paper could not be published. These apply whether or not the statistician has been involved at the design stage. None of these, however, would be deemed as meriting coauthorship according to Goodman's criteria.

Mere acknowledgement of a statistician does not guarantee that appropriate statistical analysis has been done or its interpretation published. It is important that the statistician coauthors the paper, and implicit in this is that he or she approves the final version. The recommendation in Goodman's paper undervalues statisticians' contribution to medical research and if generally applied could act as a deterrent to statisticians' collaboration.

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Continuing medical education and gift authorship

EDITOR,—The Royal College of Pathologists recently published details of the system that it will adopt for awarding points for continuing medical education.¹ A minimum of 250 points will have to be acquired over five years. The points can be earned through a variety of activities, including authorship of refereed articles in journals: 10

points for the first author, five for the second, and one for other authors. I have not examined the details of schemes run by the other royal colleges but suspect that they are similar. My reservations about the wisdom of awarding different numbers of points according to the order of authorship were reinforced and extended by the report of gift authorship at St George's Hospital Medical School.² The survey by Neville W Goodman³ and the editorial by Jane Smith⁴ present a challenge to editors and authors alike.

Authorship of a scientific or medical paper should be for the few who make a substantial contribution; acknowledgment should be for the many valuable, even essential, supporters. If we fail to correct the practice, endemic in the scientific and medical world, of authorship by association or seniority we deserve the contempt of colleagues and will have to accept that the laudable system of continuing medical education will penalise the honest and reward the unscrupulous.

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****Dr Halloran's reservations about points being awarded on the basis of the order of authorship are well founded. Conventions over order differ between departments, specialties, and countries. When the Vancouver group (the International Committee of Medical Journal Editors) investigated the issue in order to produce some sensible guidance all it could conclude was: "Because order of authorship is assigned in different ways, its meaning cannot be inferred accurately unless it is stated by the authors."—EDITOR, *BMJ***

Royal College of Pathologists' reply

EDITOR,—During the past year the Royal College of Pathologists has been conducting trials of its continuing medical education scheme¹ in the Wessex and South East Thames regions as a prelude to introducing continuing medical education for all doctors holding relevant career grade posts in pathology in Britain by April. Minor modifications to the scheme are currently being made to take account of comments by members on the original proposals and the feedback received from participants in the trials. Among the changes to be introduced is one that addresses the reservations expressed by S P Halloran about the method of allocating credits for continuing medical education among authors of refereed papers. Many other members have expressed disquiet about different numbers of credits being awarded for this self learning activity according to the order of the authors' names, but opinions on what would be acceptable have varied. Recently it was decided that, to satisfy the majority of critics, from April a fixed number of credits will be shared equally among all the authors, the number allocated to each being rounded up to the nearest whole number when necessary.

In preparation for the British launch of the college's scheme other adjustments are being made with the object of achieving harmonisation with the other medical royal colleges' plans for continuing medical education; this policy is being pursued by a committee of directors of continuing medical education formed under the aegis of the conference of colleges. Other changes will