Fig 1—Proportion of editorials devoted to medicine, administration, and other topics in first four months' issues of BMJ at five year intervals, 1958-93

latter figure being the highest in the previous 35 years. The proportion of editorials about medical matters fell from a peak of 77% (86/113) to 49% (47/96) over the same period (fig 1).

This audit shows a shift in the subject matter covered by editorials in the *BMJ* since 1978, from medical to administrative topics. The audit covered only the editorials, and we are aware that the *BMJ* has taken initiatives to increase its coverage of medical topics—for example, it has introduced the ABC and Recent Advances series. Scheckler, however, advised that when one reads a journal one should always read the editorials first.³ It is important that the *BMJ* brings the effects of any changes in NHS administration to readers' attention, but it must surely be a matter for concern when this results in fewer editorials on medical topics. We have not yet assessed whether this trend is occurring in other medical journals.

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Standardising crash call numbers

A minor issue compared with need to change concept of cardiac arrest team

EDITOR,—Salem A Beshyah and colleagues imply that the adoption of a national telephone number to summon emergency medical help might increase survival from cardiac arrests that occur in hospital.¹ It is disturbing that the authors focus on the side issue of how to summon help and do not address the problem of when to summon help.

At present the only systematic and universal response to serious illness in general wards occurs after the patient has almost died, when the cardiac arrest team is summoned and cardiopulmonary resuscitation started. Despite widespread awareness and teaching of both basic and advanced life support, however, the outcome in patients who have had an arrest has changed little since such teaching was introduced.² More depressing is the knowledge that up to three

fifths of cardiac arrests that occur in hospital have easily recognisable antecedent factors, such as hypotension, tachypnoea, and tachycardia.³ The conclusion must be that serious illness is not managed well in general wards.

If we are to improve survival from cardiac arrest appreciably then we must change the concept of the cardiac arrest team. Instead of having a reactive system that allows the patient to all but die before action is taken we must develop a proactive system that will be initiated according to physiological abnormalities such as tachypnoea, hypotension, and tachycardia; a sudden fall in level of consciousness; and potentially life threatening complications such as airway problems. Such a medical emergency team has been described⁴; it not only may prevent some cardiac arrests but will ensure that appropriate treatment is started while the patient has maximal physiological reserve to respond. This is of great importance because limited physiological reserve has been shown to be an important determinant of mortality.⁵ Additionally, inappropriate admissions to the intensive care unit may be avoided.

It would be also interesting to know which staff make the most telephone calls requesting the cardiac arrest team. From experience, we suspect that it is the nursing staff and not the rotating junior medical staff, who, if present, ought to be beginning resuscitation.

Although we agree with Beshyah and colleagues that a standard emergency telephone number would be appropriate, this is only a minor issue. No matter what telephone number is used, the current system must be changed to one that is activated before the patient is found to be pulseless.

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A recommendation already exists

EDITOR,—Salem A Beshyah and colleagues report their survey of switchboards of acute hospitals in the North Thames regions to establish the crash call numbers used.¹ A similar (unpublished) study that I carried out earlier this year in the Oxfordshire region gave similar results. As a result of my study I wrote to ask the chief medical officer to recommend standardisation of crash call numbers along the lines of the 999 emergency system. A reply from the NHS Estates Agency directed me to a publication on telephone services (one of the "health building notes").² In this document a paragraph deals with calls to the emergency services, and a recommendation is given that "the telephone number for emergency services should be easy to remember and easy to dial. Staff moving from one location to another will not be confused if health care premises use the same number, but this may not be practical in every case. The preferred number to call is 222 or 2222 as appropriate."

I understand that this advice is now being revised to recommend that the number 222 or 2222 be reserved for cardiac arrests and 333 or 3333 for all other emergencies (in Northern Ireland the preferred number for all emergencies is 6000 or 6666). It is hoped that the publication will be reissued by the end of this year.

Notwithstanding this advice, I am sorry that the chief medical officer did not take up my invitation to issue a recommendation to the profession; perhaps he believes that this little known health building note is adequate. I hope that all interested clinicians will now draw this recommendation to the attention of their estates managers and telephone switchboard managers so that we can accept Beshyah and colleagues' recommendations without further delay.

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Goals and methods of audit should be reappraised

Audit as an essential part of summative assessment needs reconsideration

EDITOR,—Over 25 years ago Thorne wrote, "Magpie collection of statistics for no better reason than the accumulation of raw data followed by an aimless feeding of figures into a computer produces nothing of scientific value."¹ The recent critics of some audit activities echo Thorne's statement and express doubts about less than rigorous methods of audit design and analysis.^{2,3} Where an important subject has been audited and a robust method of follow through has been adopted, however, there are good examples of how quality of care can probably be improved.⁴

Summative assessment for registrars in general practice has led to an industry of standardised testing. Audit has been sucked into this and may be inadvertently stifling creativity. The desire for regional audit programmes for training practices⁵ has to be matched with a recognition that audit by itself has only a limited part to play in the overall development of young doctors. Attempts to compress audit into short time scales merely to satisfy regulations often result in the exercise being seen as a chore rather than a learning experience. Audit has its place but would be more acceptable to many young doctors if it was an optional, rather than a compulsory, means of showing competency to be a principal in general practice.

Summative assessment is a good idea in principle but depends on trusted and reliable methods backed up by adequate support systems. Because adequate support systems are in short supply, people at various different levels in my region are finding it increasingly difficult to justify the time and effort required for an ever increasing number of assessment procedures that seem to be more about quantity than quality. I recognise that those of us charged with responsibility in higher education have to try to help people learn new techniques, but the appropriate application of these techniques requires thought, time, adequate resources, and opportunities for feedback, all of which are at a premium. We also have a duty to ensure that expensive systems for collecting data do not expand too quickly before we become engulfed in Thorne's "meaningless collection of statistics."

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Evidence of effectiveness of audit in improving care is growing

EDITOR,—Andrew Miles and colleagues' letter about audit exemplifies the confusion in the debate about the achievements of the national audit programme.¹ There are misunderstandings about the true nature of audit among both clinicians and researchers, and this results in opinions that are poorly supported by evidence. In evaluating the impact of audit it is essential to distinguish between audit as a method and the way in which it has been implemented. Although only limited evidence exists about the effectiveness of the audit programme, there is growing evidence of the potential and actual effectiveness of audit in improving standards of care.

Audit consists of a series of steps, beginning with the selection of a topic, followed by the identification of explicit, evidence based, and prioritised criteria against which to judge performance as determined by the collection of valid and reliable data. Discrepancies between performance and criteria are addressed by selected strategies, which may include feedback, facilitation, and reminders, after which data are collected again to check progress.² Activities that comply with this definition bring about improvements in care³; activities that do not comply with this definition often involve aimless collection of data, resulting in the disillusionment and demotivation of participants because they can see no benefit.

Given that audit as a method can be effective, how effective has the audit programme been in applying it? Because concerns have been expressed, it would be wise to investigate the programme in different settings. It cannot be assumed that, because some so called audit meetings for hospital specialists seem to have little impact, audit by general practitioners, physiotherapists, nurses, or hospital specialists who adopt more appropriate methods is also without impact. Participation in audit in general practice is high,⁴ and a growing number of examples are leading to change.⁵ To increase the achievements of the audit programme, clinicians' understanding of audit methods must be improved, and those aspects of the programme that are most effective should replace those that have been less effective.

In common with many colleagues in the NHS in both primary care and beyond, we take a much more positive view of the past achievements and the future potential of audit than do Miles and colleagues.

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- 1 Miles A, Bentley P, Polychronis A, Price N, Grey J. Goals and methods of audit should be reappraised. *BMJ* 1996;313:497. (24 August.)
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Blood donated after vaccination with rabies vaccine derived from sheep brain cells might transmit CJD

EDITOR,—Janet Morgan reports that the National Blood Authority in Britain has decided to tighten the donor screening programme to exclude transmission of Creutzfeldt-Jakob disease or its variant through blood donations.¹ Prospective donors will be prevented from donating blood if they have a history of treatment with human growth hormone or if one of their siblings, parents, or grandparents developed the disease. I would point out that similar care should also be taken when immigrants from Asia and Africa offer to donate blood, in case they received rabies vaccine derived from culture of sheep brain cells when they were living in their country of origin.

In many countries in Asia and Africa limited supplies of imported rabies vaccines derived from culture of human cells have been available. Many people continue to be offered indigenously produced sheep brain vaccine after exposure to a rabid animal. Scrapie is known to exist in sheep around many centres where the vaccine is produced. In the mountain sheep of the Kumaon foothills in the Himalayas, for example, scrapie was established more than four decades ago and 1-10% of the flock was reported to have the disease in 1961.² In the Himalayan foothills the Central Research Institute continues to produce four to five million doses of sheep brain vaccine annually. Transmission of abnormal prion protein, PrP^{Sc}, in sheep brain vaccine might have occurred in some of the 30 documented cases of Creutzfeldt-Jakob disease in different regions in India.³ Because Creutzfeldt-Jakob disease has a latency of about 20 years, many recipients of sheep brain rabies vaccine could emigrate to Britain before becoming ill.

Before accepting blood donations from immigrants it would be desirable to ask the potential donors whether they were exposed to a rabid animal and immunised with sheep brain rabies vaccine in their country of origin. Furthermore, indirect assessment should be possible through, for example, assay looking for antibodies specific to rabies.

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Royal Medical Benevolent Fund's Christmas appeal

EDITOR,—As one of the great festivals of the year, Christmas affects everyone in Britain irrespective of their race or creed. Above all, it means so much to children. Most of us will enjoy this traditional occasion: it is a time for Christmas cards, gifts, and a special dinner. Some people, however, because of poverty, will not be able to

celebrate Christmas as they would like for themselves or for their children.

The beneficiaries of the Royal Medical Benevolent Fund range from very young children to elderly people. Their need for help is carefully assessed, and only those in real need are eligible. At Christmas the fund sends something to each beneficiary. Children receive special gifts. The fund receives many letters of thanks, which show how much the gifts and cards are appreciated.

This will be my last Christmas appeal, as I believe that it is now time for someone younger to take over. I have appreciated the generous response to the appeal over the years and hope that the 1996 appeal will equal or exceed its predecessors. Contributions marked "Christmas appeal" may be sent to the secretary, Royal Medical Benevolent Fund, 24 King's Road, London SW19 8QN or to the treasurer or medical representative of any local guild of the fund.

JOSEPHINE BARNES
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Race may be hard to define

EDITOR,—One can classify pretty well anything as long as one has a clear idea of the purpose and axes of the classification: books, plants, race-horses, diseases—even humans.¹ If educational planners were classifying humans they might choose first language as the axis; health planners might choose socioeconomic class; housing authorities might choose immigrant status.

Who would need to classify humans by race, though, and how would they do it, given our propensity to travel the globe and breed where we rest? One of England's greatest journalists summed up the difficulty of defining his own race 300 years ago²:

The Romans first with Julius Caesar came,
Including all the Nations of that Name,
Gauls, Greeks, and Lombards; and by
Computation,
Auxiliaries or Slaves of ev'ry Nation.
With Hengist, Saxons; Danes with Sueno came,
In search of Plunder, not in search of Fame.
Scots, Picts, and Irish from th' Hibernian Shore:
And Conqu'ring William brought the
Normans o're.
All these their Barb'rous Offspring left behind,
The Dregs of Armies, they of all Mankind;
Blended with Britains who before were here,
Of whom the Welsh ha' blest the Character.
From this Amphibious Ill-born Mob began
That vain ill-nature'd thing, an Englishman.

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- 1 Describing race, ethnicity, and culture in medical research [letters]. *BMJ* 1996;313:425. (17 August.)
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Correction

QTc dispersion and risk of cardiac death in peripheral vascular disease

An authors' error occurred in the last letter in this cluster, by Dawood Darbar and Allan D Struthers (26 October, pp 1082-3). The values given for QT dispersion in the penultimate sentence in the second paragraph were incorrect, and the sentence should have read: "QT dispersion and heart rate were not reported due to limitation of space; QT dispersion was significantly prolonged in those dying of cardiac causes compared with those who survived (110 (70) v 50 (20) ms respectively, P<0.001)."