Training of overseas qualified doctors in Britain

EDITOR,—The changes in postgraduate training for British graduates that are about to be implemented with the introduction of the specialist registrar grade offer an opportunity to achieve the goal of "planned, coordinated, and tailored" training for overseas qualified doctors.¹ It will require not only commitment but funding.

The way forward is to integrate overseas trainees into regional training programmes in a way that complements the experience they can obtain in their own country. The specialty of urology receives many requests from overseas doctors for training in Britain; unfortunately, for historical reasons it has virtually no spare capacity in its higher surgical training programmes. Nevertheless, many overseas doctors have been accommodated by being offered senior house officer posts or registrar posts not recognised for higher surgical training. With the implementation of the Calman proposals even these opportunities will disappear.

An increase in training posts is urgently needed to meet the burgeoning demand for urology services and to reach the modest target of one consultant per 100 000 population. During this period of expansion, which is likely to continue for at least 10-15 years, the training of overseas doctors will virtually stop unless some additional numbered posts are specially allocated and funded. The creation of just two such overseas posts per region would be a considerable contribution and would have the additional benefit of enabling British trainees to take full advantage of the "one year off service" that the training programme allows. This would be a splendid opportunity for the NHS and the profession to foster international good will and to contribute to the needs of the developing world.

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1 Holcombe C, Watters DK. Training of overseas qualified doctors in Britain. *BMJ* 1995;311:642-3. (9 September.)

Urban hypothermia

Many elderly people cannot keep warm in winter without financial hardship

EDITOR,—L J Hislop and colleagues' finding that patients who were found hypothermic inside their own homes were mainly elderly people who had heating available but were not using it is of great concern.¹ We have performed a questionnaire study of domestic heating, in which 200 mentally competent elderly inpatients were interviewed (mean age 82).² All were admitted to acute geriatric wards last winter. Most patients (138) were aware that value added tax was added to their fuel bill, and 62 said that they had reduced the amount of heating they used because of this. A third of patients said that they had had difficulty keeping warm before admission. Most (128) said that they could not manage to keep warm in winter without financial hardship. In addition, 58 said that they had reduced amounts spent on food in order to pay for fuel bills. Important factors associated with feeling cold before admission included living alone, owning their own property ($P < 0.02$), and using coal as their main fuel ($P < 0.02$). Only one patient had a diagnosis of hypothermia.

Some elderly people do not use their domestic heating during cold weather because of concern about the increasing cost of fuel. Since cold is associated with lowered resistance to infection and reduced functional mobility³ it may contribute to

hospital admissions among older people due to falls, respiratory infections, etc.

Elderly people need to be encouraged to use domestic heating during cold weather. Since a major deterrent seems to be concern about cost, the issue of payment for domestic fuel by elderly people needs to be addressed. Perhaps domestic heating should be subsidised for older people or value added tax on fuel should be abolished for senior citizens (at least for those who do not pay income tax) as the losses may be offset by a reduction in the number of hospital admissions. This not only could provide a cost saving but, more importantly, might result in a reduction in morbidity and mortality caused by low environmental temperatures in older people.

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- Morgan R, Blair A, King D. Winter survey of domestic heating in elderly patients. *J R Soc Med* (in press).
- War Office. *Manual of army health*. London: HMSO, 1959:85-8.

Number of excess deaths during winter is large

EDITOR,—In discussing the incidence of hypothermia L J Hislop and colleagues touch on the larger issue of excess deaths in winter.¹ Research in many countries has confirmed this phenomenon,^{2,4} which can be ascribed only in part to hypothermia itself and the effects of influenza and other respiratory infections.² A major factor seems to be the effects of cold stress on the cardiovascular system.^{3,4}

The figures for deaths from all causes and from ischaemic heart disease during summers (April-September) and winters (October-March) over the past five years give some indication of the size of this problem in Scotland (table). Between 1989 and 1994 the winter excess of deaths from ischaemic heart disease was over 1000 annually, rising to nearly 1500 in 1993-4. The winter excess of deaths from all causes reached 7382 in 1989-90 but has usually been between 3000 and 4000 (an epidemic of influenza probably accounted for the high figure in 1989-90).

These Scottish figures, if extrapolated, support the contention of the charity Help the Aged that each year in Britain at least 30 000 people aged over 65 die as a consequence of winter conditions.⁵ The figures give some indication of the true consequences of "fuel poverty"—poverty being the

operative word as the harmful effect of cold stress is ameliorated by higher income.³

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- Kunts AE, Looman CW, Mackenbach JP. Outdoor temperature and mortality in the Netherlands; a time series analysis. *Am J Epidemiol* 1993;137:331-41.
- Larsen V. Short term fluctuations in death by cause, temperature and income in the United States, 1930-1985. *Social Biology* 1990;37:172-87.
- Goudas Y, Deklunder G, Lecroart JL. Cold exposure and ischaemic heart disease. *Int J Sports Med* 1992;13 (suppl 1): S179-81.
- Winter. London: Help the Aged, 1994. (Information sheet 17.)

Prioritised ambulance call out may be necessary

EDITOR,—Alison Tonks's report on a new system for answering emergency calls to the ambulance service¹ coincided with a survey into the use of emergency ambulances to reach the accident and emergency department at the General Infirmary at Leeds. The survey aimed to seek evidence of inappropriate use of the service. Details of all patients arriving at the department by emergency ambulance were collected over 14 days, notes were then retrieved, and departure details were recorded.

A total of 831 patients were brought in by emergency ambulance during the study period; two of these had incomplete records and were excluded from the analysis. Of the remainder, 274 had been referred by a general practitioner and 555 came in after a 999 call. Seventy (26%) of the patients referred by a general practitioner were discharged home, while 291 (52%) of those brought in after a 999 call either were discharged home or left the department. Of those brought in after a 999 call who were discharged, 221 either had no follow up or were referred to their general practitioner; this represents 40% of the total number of patients arriving after a 999 call. There was a generally higher proportion of these patients in the younger age groups (11-20 and 21-30), which probably reflected the increased incidence of assaults and excess alcohol consumption in younger adults.

Accident and emergency and ambulance staff tend to think that many 999 calls are inappropriate and that many patients using the service could either wait to see their general practitioner or use other modes of transport to reach the accident and emergency department, and the results of this survey agree with this. The results also broadly reflect those of previous work: in 1980 Morris and Cross found that 51.7% of 999 calls to the emergency ambulance service resulted in an unnecessary journey.² Pennycook *et al* reported in

Deaths from all causes and deaths from ischaemic heart disease during winters (quarters 4 and 1) and summers (quarters 2 and 3), Scotland, 1989-90 to 1993-4

Year	Deaths (all causes)			Deaths from ischaemic heart disease (ICD 410-414)		
	Winter (Oct-Mar)	Summer (Apr-Sep)	Winter excess	Winter (Oct-Mar)	Summer (Apr-Sep)	Winter excess
1989-90	36 224	28 842	7382	9518	8030	1488
1990-1	32 030	28 705	3325	8947	7738	1209
1991-2	32 569	28 692	3877	9031	7703	1328
1992-3	32 493	29 572	2921	8854	7846	1008
1993-4	33 965	28 271	5694	8706	7213	1493

Source: Table 1.2 of *Annual Report of the Registrar General, Scotland, 1994*, and registrar general for Scotland's quarterly statistics.

1991 that half of 999 calls resulted in the patient being discharged with no follow up.³

Campaigns to educate the public about making more appropriate use of the service may help to reduce the burden on emergency ambulances, but with attitudes such as "It's free—why shouldn't I call an ambulance?" then perhaps the only way forward is to implement a tiered system.

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- 1 Tonks A. New ambulance targets could save 3000 lives a year. *BMJ* 1995;311:281. (29 July.)
- 2 Morris DL, Cross AB. Is the emergency ambulance service used or abused? *BMJ* 1980;281:121-3.
- 3 Pennycook AG, Makower RM, Morrison WG. Use of the emergency ambulance service to an inner city accident and emergency department—a comparison of general practitioner and "999" calls. *J R Soc Med* 1991;84:726-7.

Misleading meta-analysis

"Fail safe N" is a useful mathematical measure of the stability of results

EDITOR,—Matthias Egger and George Davey Smith¹ have responded to our letter² about their editorial on meta-analysis³ by pointing out that measurement of the heterogeneity of, or variability in, study results (as a guide to the likely robustness of the averaged finding) is plagued with statistical problems, notably low statistical power. The power of tests for heterogeneity improves considerably, however, when larger numbers of studies are used in the computation.⁴

Egger and Davey Smith are also right to call for wider use of funnel plots in meta-analyses as a way of detecting whether selective publication of small studies with positive results and non-publication of small studies with negative results unduly influence the outcome of meta-analyses. However, the importance of precise mathematical measures of the likely influence of this possibility on the result obtained, as well as visual methods such as funnel plots, should surely be emphasised.

One example of such a statistic is the "fail safe N," which can be calculated in any meta-analysis and may be defined as the number of new, unpublished, or unretrieved non-significant or "null result" studies that would be required to exist to lower the significance of a meta-analysis to some specified level—for example, to barely significant or non-significant.

An example of a fail safe N calculation found that for a meta-analysis in which 300 studies showed a large average effect size it would take 32 960 unpublished null result studies to bring the new combined P to a non-significant level.⁵ The existence of that many unpublished studies is improbable, and hence this fail safe N adds greatly to the confidence it is possible to attach to that particular result of meta-analysis.

Hence this statistic indicates the stability of results of meta-analysis when additional findings are included, no matter what their source. The interpretive usefulness of the fail safe N is analogous in some ways to that of the confidence interval: the fail safe N aids in the assessment of the degree of confidence that can be placed in a particular result of meta-analysis, which is what funnel plots try to do visually. The fail safe N therefore communicates information about the stability of the obtained results in the face of systematic non-randomness of the effects not measured—in other words, a mathematical estimation of the same problem that the funnel plot investigates, but with the additional advantage of arithmetic precision over visual subjectivity.

If the fail safe N is relatively small, particularly in comparison with the number of studies in the meta-analysis, then only tenuous conclusions

should be drawn, regardless of the magnitude of the effect size—hence the recent call for all meta-analyses to include a calculation of the fail safe N.⁶

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- 1 Egger M, Davey Smith G. Misleading meta-analysis. *BMJ* 1995;311:753-4. (16 September.)
- 2 Perry A, Persaud R. Misleading meta-analysis. *BMJ* 1995;310:1604. (17 June.)
- 3 Egger M, Smith GD. Misleading meta-analysis. *BMJ* 1995;310:752-4. (25 March.)
- 4 Hedges LV, Olkin L. *Statistical methods for meta-analysis*. Orlando, FL: Academic Press, 1985.
- 5 Rosenthal R. The file drawer problem and tolerance for null results. *Psychol Bull* 1979;86:638-41.

Statistician's comment

EDITOR,—The idea of the "fail safe N" is to some degree sound, but there are two problems with it as an approach to the issue of publication bias. Firstly, it is a crude method for testing whether a significant result of meta-analysis can be made not significant by the addition of N studies that have an average null effect. This overemphasises the importance of statistical significance, which is a disadvantage. Secondly, the method will always have a resultant effect in the same direction as the observed result of the meta-analysis. There are circumstances in which the unpublished studies have an average effect that is in the opposite direction to the observed meta-analysis, and when this happens the fail safe N is misleading.

R Persaud is wrong when he states that "the fail safe N therefore communicates information about the stability of the obtained results in the face of systematic non-randomness of the effects not measured." It in fact allows only for one form of non-randomness of the obtained results. He is correct in saying that it is analogous to the confidence interval, and this is more useful for readers. What is required in this instance is not another new statistic but better understanding of the meaning of confidence intervals.

Persaud has confused two entirely separate issues—namely, heterogeneity and publication bias. He refers to the problem of heterogeneity in his initial paragraph, in which the last sentence is tautologous: obviously, power increases as sample size increases. He is wrong when he implies that it is the larger number of studies alone that has an effect: it is a function of the size of those studies as well. With regard to publication bias, no simple statistical summary can deal with this.

I am not sure that Rosenthal still thinks that the fail safe N is a useful approach, although I have no direct evidence of this. He has not cited it in his recent work on meta-analysis, and it has been criticised by others.¹

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- 1 Cooper H, Hedges LV, eds. *The handbook of research synthesis*. New York: Russell Sage, 1994.

Incidence of HIV infection decreases because of nature of epidemics

EDITOR,—Daan Mulder and colleagues' report of a decrease in the seroprevalence of HIV-1 among young adult Ugandans is heartening.¹ It is also consistent with reports of a decreasing prevalence in young Thai men² and with the overall decrease in incidence in Germany³ and probably the United States⁴ (changes in the definition of AIDS in the

United States in 1993 led to some confounding).

Although the decrease has been attributed to government intervention programmes,^{1,2} some reflection on the natural course of epidemics is in order. Epidemics generally follow a bell curve of incidence by time (albeit with highly variable kurtosis and skewness). They abate because of changes in the infecting pathogen and in the host.⁵ This is apparent in the study by Mulder and colleagues as few people in the survey area availed themselves of treatment for sexually transmitted disease or other interventions. In other countries there may be an illusory effect (also known as superstitious learning) of massive public health campaigns promoting the use of condoms and a reduction in the number of sexual partners.

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- 1 Mulder D, Nunn A, Kamali A, Kengeya-Kayondo J. Decreasing HIV-1 seroprevalence in young adults in a rural Ugandan cohort. *BMJ* 1995;311:833-6. (30 September.)
- 2 Mason CJ, Markowitz LE, Kitisiripornchai S, Jugsudee A, Sirisopana N, Toruga K, et al. Declining prevalence of HIV-1 infection in young Thai men. *AIDS* 1995;9:1061-5.
- 3 Robert-Koch Institute. *Quartalsbericht 1995. 117. Bericht des AIDS-Zentrums im Robert-Koch-Institut über aktuelle epidemiologische Daten*. Berlin: Robert-Koch Institute, 1995.
- 4 Centers for Disease Control and Prevention. *HIV/AIDS surveillance report: 1994 year-end edition*. Atlanta: CDC, 1995.
- 5 Ampel NM. Plagues—what's past is present: thoughts on the origin and history of new infectious diseases. *Rev Infect Dis* 1991;13:658-65.

People's cultural beliefs should be respected

EDITOR,—David Berger should indeed lie down when he is in his canoe and sees something fiery coming at him, for some sea devils may be more rational than he realises.¹ His description of Elizabeth's rash does not suggest the fern-like burns of lightning, but his nurse's description of the behaviour of Tamalokolo, the sea devil, fits that of tropical lightning.

Lightning will certainly "fly through the air in a fiery form and strike people out in canoes," particularly if they stand up or raise a wet paddle. Tonic extensor spasm may flip the victim backwards into the water, almost invariably dead. The exit current may leave charred marks where the victim's knees or feet were touching the hull and may even leave splinter holes through a hardwood dugout canoe at the water line. Fellow travellers may be flipped over, stunned, or momentarily paralysed but usually survive to tell the tale, bearing flash-like or fern-like burns: the marks of Tamalokolo?

"Lie down quietly in your canoe" if caught in an electric storm is good public health advice; standing or kneeling up to paddle for the shore carries a high mortality.

But even if some sea devils are lightning, Berger's conclusions about respecting the cultural beliefs of other people remain sound. A rational scientific explanation may be taken by a Western mind as a statement of cause, whereas in other cultures it is seen as a description of process. Hence an attempt to substitute a river spirit with rational lightning as the cause of deaths of people in canoes in Papua New Guinea met the equally rational response: "All right, we accept that the deaths are caused by lightning. But who sends the lightning?"

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- 1 Berger D. Of sea devils and things. *BMJ* 1995;311:730. (16 September.)