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LEADING ARTICLES

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MEDICAL PRACTICE

NEWS AND NOTES

SUPPLEMENT

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Outpatient consultations

SIR,—Messrs R S Kiff and P A Sykes (28 May, p 1511) outline the shortcomings of services at a district general hospital where "much of the large volume of work is performed by tired, incompletely trained doctors." Experience suggests that this inappropriate delegation of work is common throughout the United Kingdom.

As a general practitioner, when I refer a patient I expect a carefully considered opinion. It is unlikely that stressed, exhausted, and inadequately trained doctors are able to fulfil this obligation. The establishment defends this situation as "on the job training." Few benefit from this arrangement, least of all the patients. Training requires supervision and feedback so that mistakes can be corrected and behaviour modified. Who is tutoring the hapless junior doctor in these clinics? Certainly not the consultant.

Instead of excusing this by inadequate appointment times or referrals it is more appropriate to attack the root of the problem—the iniquitous career structure in hospital practice. An imbalance exists between the glut of experienced registrars in teaching hospitals and the inadequate number of consultants in district general hospitals. *Achieving a Balance* has hardly tipped the scales.[1]

Why has this situation been allowed to continue? I suspect that lack of professional self respect allows junior doctors and patients to be used and abused in this way. This behaviour is likely to be perpetuated unless we shed our macho image and look after ourselves and our patients.

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1 Department of Health and Social Security, Joint Consultants' Committee, chairmen of regional health authorities. *Hospital medical staffing: achieving a balance: plan for action*. London: DHSS, 1987.

SIR,—Messrs R S Kiff and P A Sykes (28 May, p 1511) present a case for more time to be allocated to the initial outpatient consultation and for a greater proportion of the work to be done by fully trained staff. One aspect of outpatient work is omitted from their equation—undergraduate teaching.

In the present climate of cost-benefit analysis it is easy to forget about our students. For surgical students in particular the reduction in acute surgical beds, the emphasis on day case surgery, and the reduction in clinical academic staff have necessitated ever increasing utilisation of outpatient departments for teaching. Adequate facilities, in terms of examination rooms and nursing staff, are essential to ensure a suitable environment for clinical teaching. It is difficult for a surgeon to see more than 15-17 new patients in a three and a half hour general surgical clinic and provide adequate tuition to medical students. As increasing numbers of students now receive training in district general hospitals these factors should be considered in all outpatient calculations.

Students can absorb a tremendous amount of clinical experience in general surgical clinics provided the atmosphere is reasonably relaxed and time is made available for teaching. This aspect should be considered when formulas are devised for improving efficiency in outpatient departments.

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Confidence intervals for relative risks

SIR,—Mrs Julie A Morris and Professor Martin J Gardner state in their paper (7 May, p 1313) that for the Mantel-Haenszel pooled estimate of the odds ratio, "no method of calculating confidence intervals has been developed for this estimate." Several large sample variances for the Mantel-Haenszel estimate have been proposed over the past 10 years in biometrics.[1-5]

A general variance—that is, consistent in both large strata and sparse data—for the log Mantel-Haenszel odds ratio has recently been derived by Robins *et al*[3]; the formula for this variance using the notation of Morris and Gardner is:

$$\mathrm{var}(\log_e \mathrm{OR}_{M\text{-}H}) = \frac{\Sigma P_i R_i}{2R_\bullet^2} + \frac{\Sigma(P_i S_i + Q_i R_i)}{2R_\bullet S_\bullet} + \frac{\Sigma Q_i S_i}{2S_\bullet^2} = V_{M\text{-}H}$$

where $R_i = a_i d_i / n_i$, $S = b_i c_i / n_i$, $R_\bullet = \Sigma R_i$, $S_\bullet = \Sigma S_i$, $P_i = (a_i + d_i)/n_i$, $Q_i = (b_i + c_i)/n_i$, and the summations are taken over all strata (see p 461 of Armitage and Berry[6]). Hence a large sample 95% confidence interval for the Mantel-Haenszel odds ratio may be calculated as follows:

$$\exp(\log_e \mathrm{OR}_{M\text{-}H} - 1{\cdot}96 \times \sqrt{V_{M\text{-}H}}) \text{ to } \exp(\log_e \mathrm{OR}_{M\text{-}H} + 1{\cdot}96 \times \sqrt{V_{M\text{-}H}}).$$

It is noted that the above large sample variance for the Mantel-Haenszel estimate is appropriate in both unmatched and matched case-control studies.

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1 Hauck WW. The large sample variance of the Mantel-Haenszel estimator of a common odds ratio. *Biometrics* 1979;35:817-9.
2 Breslow NE. Odds ratio estimators when data are sparse. *Biometrika* 1981;68:73-84.
3 Breslow NE, Liang KY. The variance of the Mantel-Haenszel estimator. *Biometrics* 1982;38:943-52.
4 Flanders WD. A new variance estimator for the Mantel-Haenszel odds ratio. *Biometrics* 1985;41:637-42.
5 Robins J, Breslow NE, Greenland S. Estimators of the Mantel-Haenszel variance consistent in both sparse and large strata limiting models. *Biometrics* 1986;42:311-23.
6 Armitage P, Berry G. *Statistical methods in medical research*. 2nd ed. Oxford: Blackwell, 1987.

AUTHORS' REPLY,—We agree with the contribution by Messrs Mock and Berry in that approximate large sample formulae for calculating confidence intervals for the Mantel-Haenszel combined