The scandal of poor medical research

Sloppy use of literature often to blame

EDITOR,—Douglas G Altman highlights the need for improvement in research studies and publications.¹ Editors of the *BMJ* have been active in trying to tighten the standards of published articles,^{2,3} and formal statistical appraisal is now part of the peer review process. However, four papers chosen haphazardly from last year's *BMJ* provide examples of sloppy use of the literature, which could be tackled by explicit guidelines and perhaps formal appraisal of the literature. The *BMJ*'s current instructions to authors include guidance only on referencing style. We suggest three guidelines for discussion.

Firstly, authors should adequately review the literature by using available bibliographic databases and should provide documentation of search methods for referees. In particular, statements beginning "To our knowledge no previous reports have..." need support by documentation of searches made by the authors. For example, Kelly *et al* claimed that "no previous reports have assessed illness in diabetic patients in relation to social deprivation,"⁴ but a literature search elicits numerous papers that would be relevant. These include reports of the influence of social status on glycaemic control,⁵ the development of diabetic complications,⁶ and the link between socioeconomic status and vascular disease in diabetic patients.⁷

Russell *et al* claimed that "no study has investigated the nature of backache after childbirth."⁸ This is an ambitious claim as backache after childbirth has been reported and examined before, although it was not the main subject of the studies.^{9,10,11}

Secondly if systematic reviews pertaining to subject studied exist these should normally be referenced. For example, the National Perinatal Epidemiology Unit published a systematic review of controlled perinatal trials¹² which Day and Primhak did not reference in their review of current practices in neonatal intensive care,¹³ although it was important and appropriate to their study.

Thirdly, authors should use appropriate papers to illustrate a point. In particular, inappropriate use of the authors' own papers should attract special attention from referees. It is easier to quote your own work than someone else's more appropriate reference, but this is bad for those who wish to do further reading. For example, Smith¹⁴ uses his own paper¹⁵ to support an assertion that the Carstairs and Morris score discriminates well between areas with different health and behavioural patterns rather than using a better comparison of deprivation indexes by Morris and Carstairs.¹⁶ (Smith also failed to refer to several studies that were directly relevant to his paper—for example, that by Wilson.¹⁷)

RAY JONES JANICE SCULLER
FELICITY GRAINGER MAGGIE LACHLAN
SIAN EVANS NICOLA TORRANCE

Department of Public Health,
University of Glasgow,
Glasgow G12 8RZ

1 Altman DG. The scandal of poor medical research. *BMJ* 1994;308:283-4. (29 January.)

2 Lock S. The future of medical journals. London: British Medical Journal, 1991.

Priority will be given to letters that are less than 400 words long and are typed with double spacing. All authors should sign the letter. Please enclose a stamped addressed envelope for acknowledgment.

- 3 Lock S. The future of biomedical communication; a symposium. 1. Perspective from the editor of the British Medical Journal. *Bull Med Libr Assoc* 1992;80:107-9.
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Researchers forced to do boring research...

EDITOR,—Douglas G Altman attributes much of the blame for the increased ratio of poor research to worthwhile research to the pressure on untalented, unenthusiastic, and innumerate people to publish.¹ This may be true, but he needs to consider why it is the case.

The pressure on individual people reflects the pressure on institutions. Increasingly, institutions are judged by the crude number of research publications (as in the recent research selectivity exercise) and, more depressingly, on grant income from certain highly selected sources. The pressure to do uninteresting but revenue intensive research therefore grows. A person who wrote one path breaking paper every five years but did not require much in the way of grant income would be regarded as a failure by his or her institution.

I question Altman's assumption that everyone doing research has to have an advanced understanding of statistics. In a developed society some differentiation of labour occurs, and the finitude of life and the limitations of the storage capacity of the brain do not permit people to become expert in everything: they have a responsibility to collaborate with the relevant experts. Researchers should collaborate with statisticians when they are designing their study, as Altman points out, and statisticians' influence should be exercised throughout.

Finally, the experience of doing research is not necessarily useless for those who do not continue with a career in research. Successful completion of a research project depends at least as much on organisational ability as on statistical flair and is a test of the ability to see to completion a complex, frustrating project despite many setbacks. This is excellent training for future clinicians, particularly those who are going to be leaders of their profession and will be responsible for organising services and evaluating the benefits or otherwise of organisation.

RAYMOND C TALLIS

Department of Geriatric Medicine,
University Hospital of South Manchester,
Manchester M20 8LR

1 Altman DG. The scandal of poor medical research. *BMJ* 1994;308:283-4. (29 January.)

... while poor leadership fuels mediocrity

EDITOR,—In contrast with the uncritical views expressed by the *Lancet*,¹ Douglas G Altman's editorial on the scandal of poor medical research adds impetus to increasing disillusion with the policy of "research for all."² In part the fault lies in "a system of advancement based almost quantitatively on publications to the exclusion of other factors."³ Leaders of the profession have fuelled the mediocrity. Maintaining the impetus of a research programme or the output of a department is often the dominant motive for recruiting trainees to short term research, rather than dispassionate consideration of their aptitude and career intentions. In addition, an emphasis on research is repeatedly observed in appointment committees and during visits of the senior advisory committees of the royal colleges.

Although many doctors shed the deception of their scientific mantles once their career aspirations have been secured, some become addicted, not so much to research but to the quick fix of publication. Gratification of this need, like that of actors who long to see their name in lights, becomes self perpetuating. Enthralment by the accumulation of publications not only may result in mediocrity but underlies more serious abuse. The fact that progress in a clinical career may be secured on the basis of evidence of apparent commitment to research at the expense of critical—though admittedly more difficult—evaluation of clinical competence devalues the latter at the expense of the former. In addition, some doctors, leaders of the profession among them, have become so enthralled by research that their clinical experience and their perception of the worthiness of clinical excellence as a lifelong challenge have suffered irreparably.

Now that the duration of clinical training is to be curtailed, devoting part of the time to research, especially during surgical training, will have less attraction than before. This, together with an inhospitable financial climate, should lead to fewer opportunities for short term research during clinical training and to a more rational and honest attitude to its worth in relation to a person's talents and career intentions.

NORMAN A MATHESON

Milltimber, Aberdeen AB1 0HX

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2 Altman DG. The scandal of poor medical research. *BMJ* 1994;308:283-4. (29 January.)

3 Haggie JA. Dual publication—again. *Br J Surg* 1992;79:1249.