

RISMED 00196

Hippocrates

Publication bias: getting at the facts

A very long time ago it was suggested in facetious vein in a leading American medical journal that there might be a place in the medical literature for a *Journal of Negative Results*. The response was unexpected: the proposal proved to have some quite serious merit since, as various correspondents hastened to point out, there was reason to believe that not much more than half the truth about medical investigation gets into print. What appears as a rule is the half which will hopefully bring glory to the investigators concerned, and will at least serve to show that they have brought medical science a tiny step further. What does not appear? As a rule one can only guess. Unsuccessful surgical experiments, it is said, tend to disappear into a void, as do drug studies with rather too many side effects for comfort; and our own *Journal* is one of the very few which have encouraged physicians to publish critical retrospective views of their own practice, whatever the conclusions. Publication bias is bad enough for the general reader of the medical literature, for it leaves a trail of misleading impressions behind; it is no less a problem for the specialist or institution looking for the truth on a specific issue and finding that the known has to be weighed against the unknown [1]. In some situations the patient is very clearly disadvantaged by all this; Thorogood et al. have introduced the concept of the “Type III error” — the situation in which an inferior new treatment gains an undeserved aura of superiority and patients are therefore deprived of the more traditional and better treatment [2].

To some extent, the veil is gradually lifting. Dickersin and his colleagues took a major step in 1987 when they took a careful look at publication bias in clinical trials [3], later going on to study the explanations for it [4,5]. Various statistical techniques have been developed to reduce the influence of publication bias when undertaking meta-analysis, though all depend on using certain suppositions as to the missing data [6]. Others have made efforts to track down unpublished material. The best of all practical approaches so far is to ensure that all clinical investigation is registered at some central point before it is undertaken so that in a later phase one can track down all the results and not merely those which the authors have decided to publish; some institutional review boards can do that very well on a local basis [5]; the Oxford data base of perinatal trials [7] and the initiative of the “Early Breast Cancer Trialists Collaboration Group” are further moves in the right direction. Beyond that, only a trifle more honesty and a lot less vanity are likely to help.

References

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 - 3 Dickersin K, Chan S, Chalmers TC et al. Publication bias and clinical trials. *Contr Clin Trials* 1987;8:343–353.
 - 4 Dickersin K. The existence of publication bias and risk factors for its occurrence. *JAMA* 1990;263:1385–1389.
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 - 7 Chalmers I, Hetherington J, Newdick M et al. The Oxford database of perinatal trials. *Contr Clin Trials* 1986;7:306–324.
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Surgery and the terminally ill

In the autumn of 1993 the Royal Medical Colleges in Britain produced their “Confidential Enquiry” into peri-operative deaths in Britain, studied over the period 1991–1992 [1]. If the report has one outstanding facet which deserves attention beyond the coasts of Britain it is the firm stance which it takes on surgery in the terminally ill patient — operations which for one reason or another are carried out “without a realistic hope of success”. Sometimes, the surgery may be undertaken at the insistence of the patient or the family, even against the surgeon’s better judgement; but the report also pinpoints instances in which there has been too ready a delegation of such matters to young practitioners seeking experience, or quite simply a lack of research into the prognosis of such an operation. Recommended reading for surgeons — and geriatricians as well.

Reference

- 1 Report of the National Confidential Enquiry into Peri-operative Deaths 1991–1992. Royal Colleges, Lincoln’s Inn Fields, London WC2A 3PN, £9.00.