BRITISH MEDICAL JOURNAL

SATURDAY 14 AUGUST 1982

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SUPPLEMENT

NO 6340 BRITISH MEDICAL JOURNAL 1982 VOLUME 285 459-526
BRITISH MEDICAL ASSOCIATION TAVISTOCK SQUARE LONDON WC1H 9JR.
WEEKLY. ISSN 0007-1447
ASTM CODEN: BMJOAE 285 (6340) 459-526 (1982)

CORRESPONDENCE

We may return unduly long letters to the author for shortening so that we can offer readers as wide a selection as possible. We receive so many letters each week that we have to omit some of them. Letters should be typed with double spacing between lines and must be signed personally by all their authors, who should include their degrees. We cannot acknowledge their receipt unless a stamped addressed envelope or an international reply coupon is enclosed.

Accuracy of hospital activity analysis data

SIR,—Mr J L Rees (19 June, p 1856) raises a number of important issues concerning the accuracy and use of hospital activity analysis data. Two different exercises are reported. In the first, data for cases of proximal femoral fracture were used to calculate age- and sex-specific incidence rates for nine geographic areas in the Northern Region. The resultant rates are not quoted, even though the results are likely to be of considerable interest to those concerned with services for the elderly. Reference is then made to "multivariate procedures" which were used to detect "statistically significant between-area differences in incidence rates." There is, however, no mention of the models or assumptions underlying the "multivariate procedures" nor even any indication of the results of the analysis other than that they were "statistically significant."

The second exercise was concerned with the accuracy of the hospital activity analysis coding of these fractures. A sample of data was drawn from operation records of two hospitals and from the admission books of three other hospitals. No indication is given of the size of sample or the basis on which it was chosen. In the case of operations records, it was assumed that the proportion of cases not operated on as recorded in a sample of hospital activity analysis data could be used to produce an estimate of the total number of cases of proximal femoral fracture. The sample of data thus constructed for the five hospitals was then compared with the number of cases of proximal femoral fracture recorded on the hospital activity analysis. In the case of three of the five hospitals the comparison was judged to be statistically significantly different at the 1% level. No mention was made of the statistical criteria adopted.

The inference made from these comparisons was that hospital activity analysis recording and coding procedures were at fault. An alternative and, in our opinion, equally likely interpretation (given the lack of detail in the paper) is that significant errors are inherent in the set of assumptions employed to produce the "estimated true number" of cases against which the hospital activity analysis data were compared.

We are not suggesting that the accuracy of hospital activity analysis data is beyond question, but before such important conclusions were made about this question, a more complete account of the methods of study should have been provided. Ideally an independent and valid source of data which is not subject to questionable uncertainties and assumptions should have been used as a comparison for hospital activity analysis coding.

Important questions are also raised by the article which follows by Mr Peter D Whates and others (p 1857). These authors considered the accuracy of hospital activity analysis coding of operations for proctocolectomy, ileostomy, and ileorectal anastomosis performed over 10 years in hospitals of the North Western Regional Health Authority and for splenectomy performed by members of a professorial unit at one hospital in the same region.

The results presented in their paper suggested a failure by "non-medically qualified hospital activity staff" to enter, in a substantial number of cases, the correct Office of Population Censuses and Surveys operation code for the procedure as recorded in the operation notes. This applied to both the bowel surgery and the splenectomy with or without associated lymph node "mapping" procedures. These results led the authors "seriously to doubt the statistical validity of any random sampling exercise undertaken on the basis of hospital activity analysis operation codings" and to advocate "properly kept internal records" (presumably in each surgical department) as a more reliable source of information for research and planning.

While sharing with the authors their concern that the error rate apparently revealed for these operations in the North Western Regional Health Authority is so high, we would question the validity of extrapolating from their rather limited study to the validity of hospital activity analysis data on all operations conducted in the other 13 regions of the NHS. Their article has, however, prompted us to conduct a small study of hospital activity analysis coding of these same operations in the East Anglian Region, and we wish to present the initial results of this study which we hope to develop as a regular method of monitoring several aspects of the validity of clinical coding in the region.

The theatre records of one major hospital in East Anglia were searched for all cases of colonic or rectal resection or both performed by one general surgeon in 1980 and for cases of splenectomy performed by all general surgeons operating at that same hospital in the same year. This