

## THE CONSULTANT'S FORUM

### Training of Statisticians for Clinical Trials

**A Series of Three Papers Presented at the Spring Meeting of the Western North American Region of the Biometric Society, 26-28 June 1979, Los Angeles, California**

#### Introduction

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The increasing influence of multicenter clinical trials in medicine since World War II, and the contributions of statistical methods to the success of such trials, are uncontested. The burgeoning interest in the methodology of clinical trials has been followed by the establishment of formal mechanisms for exchange of ideas, such as the Annual Symposium on Coordinating Clinical Trials and the newly founded Society for Clinical Trials. Nevertheless, as recently as February 1978, Robert S. Gordon, Jr wrote the following words in an editorial (Gordon, 1978):

How does one learn to plan and design a clinical trial? Unfortunately, there is no standard textbook on clinical-trial methodology, and no courses in the subject are offered in schools of medicine or public health. Published results are catalogued in relation to the medical questions addressed, not for methodologic issues.

Dr Gordon went on to describe the educational need that a society or publication for clinical trials methodology could serve. His question presumably applies equally well to the training of the clinical scientist and the biostatistician. As in certain other subjects in the health sciences there are good arguments for some of the training taking place with the two groups of students learning side-by-side. However, the papers which follow are directed largely to the preparation of the statistician for work in the field of clinical trials.

The three papers were prepared by invitation for a session on the Training of Statisticians for Clinical Trials held at the 1979 Spring Meeting of the Western North American Region of the Biometric Society. The authors were chosen to address the training problem from the differing vantage points of the clinician, the instructor and the practising statistician. Writing on the optimal preparation of the clinical trials statistician as seen by a clinical investigator is Denman Hammond, the long-time chairman of a multicenter cooperative group conducting therapeutic trials in pediatric cancers. Arthur V. Peterson, Jr and Lloyd D. Fisher both contribute regularly to clinical trials as statisticians, but are writing here as teachers of a formal graduate course in the design of medical experiments. Edmund A. Gehan has worked as a statistician in the clinical trials field for 20 years and represents the view of an experienced practitioner.

A number of questions about training relate the three papers. What statistical techniques are most useful, prevalent or important in clinical trials today? What general scientific and nonstatistical attributes or skills are desirable in the consulting statistician? How important is detailed biomedical knowledge for the statistician in the clinical trials setting? What are the relative merits of classroom versus apprenticeship training? The answers suggested in these papers are timely because the statistical aspects of clinical trials represent a full-time specialty for many statisticians and a part-time commitment for still more.

#### REFERENCE

Gordon, R. S., Jr (1978). Clinical trials. *New England Journal of Medicine* **298**, 400–401.