

## BOOK REVIEWS

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**Principles of Clinical Measurement.** By M. K. SYKES, M. D. VICKERS, C. J. HULL, and P. J. WINTERBURN. Oxford, London, Edinburgh, Boston, Melbourne, Blackwell Scientific Publications, 1981. Pages 325, Price \$55.50.

Technology is tough. Without an up-to-date physics or engineering background, we practicing clinicians are finding it difficult to understand the new technologies that frequently pop up to surprise us. Our attempts to keep up with the literature are often frustrated when some fancy new gadget is used to get data or some complicated analysis technique is used to interpret it.

These authors have set out to provide us with a means of coping with this technology overloaded by giving us the necessary information to understand what we need in order to take good care of patients. Their effort is sterling in some areas but sticky in others.

Three divisions in the presentation are made. General principles of measurement are outlined in the first part, specific measurements are described in the second part, and the handling of data so obtained is considered in the third part.

The best of these divisions is the second part of the book, which describes how the measuring instruments which we use do their job. Indirect and direct methods of measuring blood pressure are described, as are methods for measuring gas flow and volume. Blood flow, gas and vapor analysis, blood-gas analysis, thermometry, thermography, and humidity measurements are explained also. This section provides us with an excellent reference when we are trying to understand how the gadgets work, and what their limitations are.

Part I deals with the general principles of measurement. What is written is well-written, but what is not written is critical to the understanding of measurement principles—the definitions! What is accuracy? What is precision? Resolution? Reproducibility? This knowledge is presumed when, at least for us clinicians, it shouldn't be. When we have to choose between buying this widget or that one, the numbers expressing accuracy, precision, resolution, and reproducibility become important to us.

Part III deals with statistics. The objectives are noble. We have developed many ways to obtain information from our patients, but our capacities to analyze that information need some development, too. The authors discuss descriptive and deductive statistics in one chapter and inferential statistics in another. This section is very bad, and I would encourage the reader to look elsewhere for a good statistics basis. Student's *t* test should be used to compare no more than two samples, but application to "two or more fairly small samples" is suggested here. This is a serious statistical mistake often seen in journal articles. Analysis of variance should be used to compare more than two groups, but this technique is not mentioned at all. The distinction between the correlation coefficient (*r*) and significance (*P*) in regression analysis is also misunderstood by the authors. How nearly values fit a line is indeed indicated by *r*, but the likelihood that the line is, in fact, a slope is indicated by the value of *P*, not *r*. Finally, the difference between clinical (substantive) and statistical significance is not explained. This is something we clinicians should know about.

In summary, the book does well in one of the three areas it addresses—how measuring devices work. The principles of measurement and the analysis of measured data are not covered adequately. I would

recommend this book for purchase only by medical school libraries and medical libraries in large hospitals.

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**Drug Interactions in Anesthesia.** Edited by N. TY SMITH, RONALD D. MILLER, and ALDO N. CORBASCIO. Philadelphia, Lea & Febiger, 1981. Pages: 351. Price \$27.50.

The stated objective of this textbook is to provide a detailed and clinically oriented guide to drug-drug interactions of importance to the anesthesiologist. The objective is largely realized in the eight chapters dealing with drugs affecting the nervous system and neuromuscular junction. In these chapters, drug-drug interactions are presented succinctly with an appropriate assumption of the intended reader's knowledge of pharmacology, physiology, and pathology. Most of the interactions are pertinent to the anesthesiologist.

Unfortunately, the seven chapters dealing with drugs affecting the cardiovascular system fail to focus on the primary topic of drug-drug interactions. They include extensive discussions of basic physiology and pharmacology (better covered in standard textbooks devoted to these disciplines), treatment of disease states (*e.g.*, hypertensive crisis, shock), and anesthetic problems that have little to do with drug-drug interactions *per se*.

The five general introductory chapters by-and-large present an appropriate framework in which drug-drug interactions should be viewed, although some topics are elaborated in more detail and made more complex than necessary.

As is true for most books authored by many individuals, the quality of the text varies from chapter to chapter in the selection and discussion of case reports, in the documentation of claims, in the extent of speculation, in the critical discussion of controversial topics, and in the attention to details of fact, composition, illustrations, and bibliographic citations. The repetitious presentation of the same interactions in different chapters accomplishes little.

Of course, the topic of drug-drug interactions is complex, involving knowledge of a large number of seemingly isolated facts. Most of the important facts are included in the text, and it is sufficiently well-indexed to serve as a reference compendium for on-the-spot use by the anesthesiologist facing the circumstances of multiple drug use in a single patient. It may also be helpful to the individual reviewing for examinations because it presents basic information in a different context that may serve to solidify the student's grasp of it or to alert him to his deficiencies. It places sufficient emphasis on anesthesiology to set it apart from the many other textbooks dealing with drug-drug interactions.

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