

A Guide That Begins Before the Writing

Publishing Your Medical Research Paper: What They Don't Teach in Medical School. Daniel W Byrne. Baltimore: Williams & Wilkins; 1998. xv + 298 pages. Softcover \$23.95. ISBN 0-683-30074-1

The cottage industry called faculty development has been mentioned in these pages before. Along comes another text designed to help academics compensate for weak formal training in academic survival skills. This one, *Publishing Your Medical Research Paper*, bears little similarity to other such books reviewed here in recent months. Its strengths largely differ, as experimental design receives the strongest emphasis.

Organized into a 5-part structure consisting of Planning (the research), Observing (the facts), Writing (the report), Editing, and Revising, this book is "designed for those who want to publish their work without spending endless amounts of money on epidemiologists, computer consultants, statisticians, technical writers, and graphic artists." I would rather consider it a book designed to help physicians who want to succeed in academe learn how to ask important questions, design experiments that answer those questions, collect appropriate data and test them, and finally write a report that can be published. In every case, knowing how makes the advice of experts in statistics, graphics, and editorial revision more useful to the author.

The book takes a World Wide Web-like approach to design, isolating key facts and assertions and marking them with graphic symbols. Sometimes the device seems useful, especially at review time; sometimes it seems gratuitous. The author has surveyed manuscript reviewers about trends they

have seen in the literature and their beliefs about what makes a good article; results of this survey are scattered through the text, again distinguished by special graphic treatment.

Much text is devoted to planning the study, including formulating the hypothesis, choosing the study design and sample size, and designing data-collection meth-

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ods. There are chapters on minimizing experimental bias, selecting patients, randomization, and sample-size estimation. They too are laced with tips and advice from manuscript reviewers. Those reviewers indicate that they support the author's emphasis. And so do I, for I too have edited manuscripts based on studies whose designs were so flawed that they could not be rescued.

Data collection, interpretation, and analysis are covered in 7 succinct chapters. These chapters are surely not enough to turn an untrained author into a competent statistician, but the author who reads them would have a well-grounded understanding of how to choose the appropriate statistical tests and how to apply them to the data.

The text at this point turns to the writing of the report. Eight chapters cover the parts of the manuscript and special situations. The ability of a good introduction

to attract readers is made clear, as is its obligation to orient the reader to present knowledge and the study's purpose. Chapters on methods and results are effective, but the discussion chapter is too brief.

Finally, there are chapters on revising the manuscript and improving the writing. Tips are tabulated and common errors corrected. If a reader could follow this advice, his or her writing would be eloquent. But very specific advice (for example, use help instead of assist, uninterested instead of disinterested) is sometimes wrong or correct only in specific situations that the author does not describe. Furthermore, the principles that underlie these specific tips are often not described, so they cannot be generalized.

Those caveats aside, the book is an exceptionally valuable contribution to the faculty-development library. Weak writing can be fixed, and poor organization of manuscripts repaired, but poor study design is irreparable. Byrne's emphasis on planning and his systematic approach to experimentation and data collection and analysis may save expensive data from the scrap heap. It is disheartening to read a report of a poorly designed study that examined the treatment of willing volunteers who have rare diseases. Perhaps this book will reduce the incidence of such bad studies. And it should help editors understand better what constitutes a good study.

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