

Review articles: 1. Looking over the field

From the Editors

Perhaps a third of the words printed in a medical journal are in review of previously published work. These reviews appear throughout the journal: in research reports, in editorial reviews, or "leading articles", and under the heading of review articles. As the complexity and number of scientific articles increase, the review of researchers' work by others becomes more important. Even if researchers eagerly read the relevant new studies in their core area as soon as they appear, to plan today's complex and interdisciplinary studies they must also rely on reviews written by other experts for essential information that is not at their fingertips. Researchers planning a study cannot even be sure they have asked the right questions until they have reviewed and evaluated the relevant literature: the methods they choose are based on those of previous studies, and their results have to be placed in the context of previous work.

The practising physician, too, has an increasing need for reviews of the literature. There is simply too much information — and too much of it conflicting — for a nonspecialist in a topic to review it with balance and depth. Medical publishers try to meet a seemingly inexhaustible demand for reviews by producing textbooks, databases, reports of symposia, annual monographs, review journals and peer-reviewed medical journals. This essay will focus on the review article in the general medical journal; competing forms of reviews will be discussed in a later essay.

Although there are some parallels in structure between a research report and a review article — the statement of a re-

search question and the examination and interpretation of evidence — the target readerships, even in a general medical journal, are different. While a research report has to be written to satisfy the experts in its field, the review article is wasted unless it is pitched to a wider readership, ideally those only marginally interested in the subject. This means that the authors of a review article will have to consider how to interest and inform the second group. If they choose a complex subject like the immunologic features of thyroid disease they will have to remind their readers, as succinctly as possible, of the thyroid's relations to other endocrine glands as well as glance at some of the relevant principles of immunology. If the subject is a rarity that clinicians are unlikely to encounter, authors can increase reader interest by emphasizing features that are relevant to commoner diseases or to the general principles of medicine. The authors need a keen sense of what the reader needs to know — and wants to know.

There are two general styles in writing a review: the descriptive and the evaluative. Both appear in every review article, but the predominant style will be determined by the subject, the intended readership and the research questions being examined. One would expect a review article simply entitled "Passive immunization" to be primarily descriptive, while one that attempts to answer a specific question, such as "Do antiarrhythmics reduce 5-year mortality in patients with coronary heart disease and frequent ventricular premature beats?", will have to be strongly analytic.

The authors of research reports are obliged to review the literature, but why do people write editorial reviews and review articles? These efforts are thought to bestow far less prestige than does reporting on original research. One reason why experts write the shorter editorial reviews is that they can be produced relatively easily. Many are, I suspect, spin-offs from writing or reviewing grant proposals, from letters to a colleague or a journal or even from peer reviews of manuscripts. But the full-fledged review article can be a massive project. I like to think that most are undertaken for intellectual satisfaction and as a form of self-education. Even the expert will have to tackle much reading, rethinking and rewriting. Knowledge does not grow by accretion, by just being appended to previous knowledge, but rather by insertion and deletion — by being thrust into the middle of a line of thought or evidence, where it may expand, distort or destroy what it comes into contact with. Whether the review is a novice's bland résumé of current articles on a subject, a vigorous consensus document prepared by coworkers for a grant proposal or thunderings from an Olympian, editors and readers must be grateful to the authors who have laboured so hard to bring together and interpret scientific studies that they otherwise might never have heard of — or understood.

The next essay will review the ways of gathering information for review articles — and writing them so that they will be remembered.

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