Editorials

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Users' Guides to the Medical Literature

Medical practice is constantly changing. The rate of change is accelerating, and physicians can be forgiven if they often find it dizzying. How can physicians learn about new information and innovations, and decide how (if at all) they should modify their practice?

Possible sources include summaries from the medical literature (review articles, practice guidelines, consensus statements, editorials, and summary articles in "throwaway" journals); consultation with colleagues who have special expertise; lectures; seminars; advertisements in medical journals; conversations with representatives from pharmaceutical companies; and original articles in journals and journal supplements. Each of these sources of information might be valuable, though each is subject to its own particular biases.[1,2] Problems arise when, as is often the case, these sources of information provide different suggestions about patient care.

See also p 2093.

Without a way of critically appraising the information they receive, clinicians are relatively helpless in deciding what new information to incorporate into their practice. They may choose to believe the most authoritative expert or the trusted colleague, but they have difficulty exercising independent judgment. To address this problem, in 1981 the Department of Clinical Epidemiology and Biostatistics at McMaster University published a series of Readers' Guides for busy clinicians to use when reading clinical articles about the diagnosis, prognosis, etiology, and therapy of their patients' illnesses.[3] Clinicians were eager for tools that would allow them to make their own assessments of the original literature. The series became one of the most commonly requested set of reprints in the history of the host journal and has been reprinted in seven foreign languages. The series is heavily cited in the clinical literature, has been modified for use by the general public, and has appeared in two editions of a text in clinical epidemiology.[4]

Experience over the subsequent decade has taught us that although the guides are still scientifically sound and clinically useful, they can be improved. A group of old and new users, including clinicians at McMaster University and colleagues across North America, have been working together to create a new set of guides that will be published in *JAMA* over the next year. The new guides have been inspired by the need for an even more intense focus on using the medical literature to solve real patient problems. This reflects an approach to medical practice that has been called "evidence-based medicine" and involves an ability to access, summarize, and apply information from the literature to day-to-day clinical problems.[5] The Readers' Guides have therefore been transformed into a set of Users' Guides.

What differences can readers who are familiar with the previous guides expect to find in the new series? As before, the guides aim to assist physicians' reading in order to keep up-to-date in their clinical disciplines and to find the best way to manage a particular clinical problem. Greater emphasis, however, is given to the latter type of reading and the skills that are required to find information when it is needed. Before one can decide whether to believe an article, one first has to find it. The Users' Guides series introduces strategies for efficiently searching the medical literature.

Once the clinician identifies the relevant studies, the decision must be made whether to believe the information, and also how to apply it accurately and efficiently to patient care. This involves understanding the magnitude of the impact of a treatment, or the relative usefulness of different diagnostic tests. The new series therefore includes expanded sections on interpreting results of clinical studies, and on deciding how to apply them in patient care. The Users' Guides have also rejected the criterion for reading an article from the Readers' Guides based on the authors' track record, since we do not wish to encourage reliance on authority.

Another change follows from the ongoing revolution in the application of scientific approaches to summarizing information from medical research. THE JOURNAL has been among the leaders in recognizing the importance of quantitative reviews (or "overviews") in providing bottom-line messages that are both clinically applicable and scientifically valid.[6,7] Clinicians need help in fully understanding these new methods, in differentiating a good overview from a poor one, and in applying their results. The Users' Guides put much greater emphasis on integrative studies, including systematic overviews, practice guidelines, decision analysis, and economic

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analysis, than did the Readers' Guides. Indeed, we now recommend that resolving a clinical problem begins with a search for a valid overview or practice guideline as the most efficient method of deciding on the best patient care.

We believe that optimal patient care in the 1990s requires an ability to use the medical literature to solve clinical problems. What impact might the Users' Guides have on physicians who read them carefully and bring their messages back to their clinical practice? Clinicians may find themselves relying less on sources of information like throwaway journals or pharmaceutical detailing personnel, symposia, and medical advertising.[1,2] They may restrict their browsing of the medical literature to summaries, such as the *ACP Journal Club*, which include only methodologically strong articles.[8] They may address clinical dilemmas more often through a careful definition of the problem, an efficient literature search, and a brief and efficient screening of the articles to find the most relevant and valid information. They are likely to find themselves being more quantitative in their clinical thinking, addressing issues such as "how big an effect can I expect from my treatment in this patient" or "how much does the probability of disease increase as a result of this diagnostic test result." They will find themselves more clearly differentiating between clinical practices based on sound evidence from studies in human beings and those that are based on physiological rationale or standard practice. Perhaps most important, they may expect a sense of empowerment when faced with enthusiastic reports of a new technique or approach to care, or with the conflicting recommendations of experts or expert panels.[9] A lot to ask from a series of articles on using the medical literature? Perhaps, but we are confident that the Users' Guides will meet the expectations of clinicians who want to base their clinical decisions on evidence rather than hope or authority.

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Screening Young Men for Chlamydial Infection

Chlamydia trachomatis is a major cause of sexually transmitted diseases (STDs). In the era of the acquired immunodeficiency syndrome, it is easy to lose sight of the damage done by this vexing organism. Chlamydial diseases mimic those caused by the more virulent gonococcus, such as urethritis and pelvic inflammatory disease. Because the acute illnesses *Chlamydia* produces are generally less severe than gonococcal diseases, *Chlamydia* is more likely to escape detection. Chlamydial disease may remain asymptomatic but still result in chronic infection and, in women, scarring of the fallopian tubes, leading to infertility and ectopic pregnancy. In men, infection causes urethritis, epididymitis, and possibly infertility.[1]

See also pp 2057, 2065, and 2071.

Chlamydial infection is most often asymptomatic in women.[2] Less well known is the observation that asymptomatic infection is also common in men.[3] Because asymptomatic or minimally symptomatic men could serve as an important reservoir for the transmission of infection, chlamydial control efforts might include case finding in asymptomatic men.

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The failure of public health efforts to more effectively control STDs caused by this organism is a consequence of several factors. Among them is the biology of the organism and the traditional dependence on expensive and technically difficult tissue culture methods to detect this infection. Recently, however, a new generation of rapid diagnostic tests has emerged that are commercially available and relatively inexpensive. These tests, using immunofluorescent assays, enzyme-linked assays, and nucleic acid hybridization techniques, are sufficiently sensitive and specific for consideration as screening tests. The tests currently available provide physicians and public health officials tools to diagnose chlamydial STDs quickly and cheaply. In asymptomatic young women at risk, use of these tests on endocervical specimens collected at the time of routine pelvic examination is a cost-effective strategy[4] and is recommended by the Centers for Disease Control and Prevention.[5] The promise of even more powerful tools as reported in this issue of *JAMA* by Workowski et al,[6] using polymerase chain reaction techniques to detect minuscule amounts of chlamydial DNA, offers even greater hope.

Less data are available on chlamydial screening strategies in men. The standard method of collecting specimens to detect urethral infection in men has been the urethral swab. The discomfort caused by the swab has precluded its widespread use in asymptomatic men. The demonstration that a positive dipstick test for leukocyte esterase (LE) or a microscopic examination showing polymorphonucleocytes on the first por-