Figure. Factors that enter into clinical decisions.

der of the papers in the series are divided into two categories: using systematic reviews in practice and conducting reviews.

These articles are primarily broad narrative overviews. In preparing them, their authors have drawn on widely varying sources, including electronic searches of the published literature, reference lists, the Cochrane Library (3), personal files, colleagues, and personal experience. Most of the articles are directed toward practitioners who wish to learn more about what systematic reviews are and how to use them. A few are directed primarily toward specific audiences, such as physician–educators. And we hope that the last articles in the series will entice some readers to join the growing number of groups that are doing the hard but intensely rewarding work of preparing systematic reviews.

Some of the articles inevitably delve into technical and seemingly arcane methodologic topics, but we make no apologies for this. Medicine at all levels is technical, and "pushing the envelope" inevitably involves moving out into unfamiliar and sometimes uncomfortable territory. Perhaps more important, however, is that many aspects of the systematic review process will be familiar to clinicians because these techniques are similar to the ones they use every day: collecting, filtering, synthesizing, and applying information.

How can the full potential of the knowledge contained in systematic reviews be realized in clinical practice? There is no simple answer, but the following would help. First, developers of electronic databases must, at the very least, pioneer improved—that is, more transparent and clinically meaningful—approaches to searching, thereby giving physicians rapid, sensitive, and specific access to multiple data sources. Second, we need many more systematic reviews that address the natural history and diagnosis of disease and the benefits and potential harms of health care interventions. Third, we need to champion the production of new, well-designed, high-quality research that evaluates important patient outcomes—the "raw material" of systematic reviews that is a crucial part of clinical decision making. And, finally, both physicians and the health care systems in which we work need to fully embrace and tangibly support lifelong learning as an essential element in the practice of good medicine.

A recent related development is an international movement to improve the reporting of clinical research, particularly the results of randomized, controlled trials (9) and meta-analyses (10). These efforts focus on clear, comprehensive communication of the methods and results of clinically relevant research through the development and application of reporting standards that are being suggested by editors, researchers, methodologists, and consumers. These standards should allow readers to better appraise, interpret, and apply the information in published reports of research in their own practices and situations. Perhaps equally important is the possibility that these standards will create a positive "ripple effect," starting at the earliest stages of research planning and extending through the conduct of clinical trials.

Exciting new information pouring out of the molecular biology revolution has the potential to transform medicine. But even this enormously powerful information will be of little use to physicians and their patients unless 1) the diagnostic and therapeutic interventions that flow from it are stringently tested in clinical trials and 2) the results of those trials are synthesized and made accessible to practitioners. Systematic reviews are thus a vital link in the great chain of evidence that stretches from the laboratory bench to the bedside. From this perspective, the awesome task of extracting the knowledge already encoded in the tens of thousands of high-quality clinical studies, published and unpublished, is arguably every bit as important to our health and well-being as the molecular biology enterprise itself. The task can only grow in size and importance as more and better trials are conducted; indeed, the task has already been likened in scope and importance to the Human Genome Project (11).

It is our earnest hope that these articles on systematic reviews will play a useful part in strengthening the chain of evidence that links research to practice.

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