

# Many recommendations within practice guidelines not supported by high-quality evidence

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More than half of the recommendations in current practice guidelines for infectious disease specialists are based on opinions from experts rather than on evidence from clinical trials, according to a report in the January 10 issue of *Archives of Internal Medicine*.

"During the past half century, a deluge of publications addressing nearly every aspect of patient care has both enhanced [clinical decision](#) making and encumbered it owing to the tremendous volume of new information," the authors write as background information in the article. "Clinical practice guidelines were developed to aid clinicians in improving patient outcomes and streamlining [health care delivery](#) by analyzing and summarizing data from all relevant publications. Lately, these guidelines have also been used as tools for educational purposes, performance measures and policy making."

Interest has been growing in critically appraising not only individual guidelines but also the entire sets of guidelines for specialists and subspecialists, the authors note. Dong Heun Lee, M.D., and Ole Vielemeyer, M.D., of Drexel University College of Medicine, Philadelphia, analyzed the strength of recommendations and overall quality of evidence behind 41 guidelines released by the [Infectious Diseases](#) Society of America (IDSA) between January 1994 and May 2010.

Recommendations within the guidelines were classified in two ways. The strength of recommendation was classified in levels A through C, with A indicating good evidence to support the recommendation, B indicating moderate evidence and C indicating poor evidence; some guidelines also included levels D and E. The quality of evidence was classified in levels I through III, with level I signifying evidence from at least one randomized controlled trial, level II indicating evidence from at least one well designed clinical trial that was not randomized and level III indicating evidence was based on opinions of respected authorities based on clinical experience, descriptive studies or reports of expert committees.

The 41 analyzed guidelines included 4,218 individual recommendations. Of these, 14 percent were classified as backed by level I evidence, 31 percent as level II and 55 percent as level III. Among class A recommendations, 23 percent were level I and 37 percent were level III.

In addition, the researchers selected five recently updated guidelines and compared them to their previous versions. In all but one case, the new versions cited an increased number of articles, and in every case the number of recommendations increased. However, most of these additional recommendations were supported only by level II or III quality of evidence. Only two updated guidelines had a significant increase in the number of level-I recommendations.

There are several possible explanations for these findings, the authors note. In comparison to other specialties, relatively few large multicenter randomized controlled trials have been conducted in the field of infectious diseases. "Many infectious diseases occur infrequently, present in a heterogeneous manner or are difficult to diagnose with certainty," the authors write. "For others, a randomized controlled trial would be impractical or wasteful or might be deemed unethical." In addition, some of the recommendations address questions about

diagnosis or prognosis, neither of which could be studied in a [randomized controlled trial](#) and thus could never receive the highest quality rating.

"Guidelines can only summarize the best available evidence, which often may be weak," the authors conclude. "Thus, even more than 50 years since the inception of evidence-based medicine, following guidelines cannot always be equated with practicing medicine that is founded on robust data. To improve patient outcomes and minimize harm, future research efforts should focus on areas where only low-level quality of evidence is available. Until more data from such research in the form of well-designed and controlled clinical trials emerge, physicians and policy makers should remain cautious when using current guidelines as the sole source guiding decisions in patient care."

**More information:** Arch Intern Med. 2011;171[1]:18-22.

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