

# Knowing What Works in Health Care

A Roadmap for the Nation

Committee on Reviewing Evidence to Identify Highly Effective Clinical Services  
Board on Health Care Services

Jill Eden, Ben Wheatley, Barbara McNeil, and Harold Sox, *Editors*

INSTITUTE OF MEDICINE  
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*“Knowing is not enough; we must apply.  
Willing is not enough; we must do.”*  
Goethe



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## REVIEWERS

This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the NRC's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their review of this report:

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Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations nor did they see the final draft of the report before its release. The review of this report was overseen by **SHELDON GREENFIELD**, Center for Health Policy Research, University of California, Irvine, and **JOHANNA T. DWYER**, Tufts University School of Medicine & Friedman School of Nutrition Science, Tufts-New England Medical Center. Appointed by the National Research Council and Institute of Medicine, they were responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

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## PREFACE

The United States has the most expensive health care in the world by a large margin. However, by many measures of the health of the public, the United States ranks well down the list of nations. How can we understand this paradox? The wide regional variation in practice style implies that our knowledge about effective health care is weak enough to support a wide range of accepted practice. Since health care outcomes are the same in high and low intensity regions, a lean style of practice is safe and an extravagant style is wasteful.

The regional variation story offers further hints about a way out of this problem. Variation is very low for some practices (e.g., coronary bypass surgery or surgery for fractured hip), which implies secure knowledge and strong consensus. Regional variation is very high for other practices (e.g., MRI and CT scans, ICU admissions in the last six months of life, referral to a specialist), which implies weak knowledge and no consensus. Taken as a whole, the evidence implies that better knowledge could lead to a stronger consensus, less regional variation, and probably lower costs. In short, we need better knowledge of which health care services are the most effective and which patients are most likely to benefit from them.

Concern about the cost of health care has grown in the past 20 years, and organizations that pay for health care have sought to obtain trustworthy information about what works in the practice of medicine. Payers, government, health care delivery systems, and professional organizations have taken the lead in efforts to develop standards of care. The result has been movement in the right direction, but also chaos. The positive features of these efforts include steady movement away from sole reliance on expert opinion and toward scientific, systematic reviews of the pertinent medical literature and increasing recognition that we need a common language for rating the evidence. The negative features are those inherent in a pluralistic, uncoordinated health care system: large-scale duplication of effort, wide variation in process, far too little attention to avoiding conflict of interest, and lack of standards. We must build on the developing strengths of the present system as we correct these problems.

In the past several years, people have begun to talk about imposing order on the system for identifying effective health services. Many people—ranging from health care experts to payers to presidential candidates—have proposed a national organization to identify the most effective health care services. Somewhat in advance of these proposals, the Robert Wood Johnson Foundation asked the Institute of Medicine (IOM) to convene a committee to recommend methods to identify highly effective health care services. The confluence of these two developments creates what the committee hopes will be a useful contribution to the emerging consensus that the United States needs a more systematic approach to evaluating the evidence for clinical effectiveness.

The IOM committee has focused on specifying the principles underlying the methods to accomplish three crucial tasks for a national system for identifying highly effective health services: priority setting, evidence review, and development of recommendations. We believe that this report would serve to guide an organization tasked with putting a working system into place. In effect, it would be the starting point for a detailed manual of operations for a new organization. In accord with its charge, the committee did not make recommendations about funding for clinical effectiveness research or the institutional home of a national organization for clinical effectiveness.

We expect considerable debate about the committee's recommendation about the structure of this organization. The committee proposes a hybrid structure that exerts control over the processes of setting priorities for which services to evaluate and conducting evidence reviews on the high priority topics. For

the last step—the development of clinical recommendations—the committee proposes to use the nation’s existing capacity for developing practice guidelines and insurance coverage policy. The committee proposes standards to guide these organizations in making clinical recommendations and strongly recommends that organizations preferentially use recommendations that were developed in accord with these standards. For all three tasks, the committee has specific recommendations about minimizing bias due to conflict of interest.

The committee wrote this report for several audiences. One will decide how to allocate resources for a national clinical effectiveness assessment system. Among these are members of the U.S. Congress and private organizations that would benefit from a national clinical effectiveness assessment program. Another audience consists of the organizations that would use the evidence that the new system would produce: payers, health insurance companies, and health care delivery systems. A third audience is the organizations that develop recommendations that will shape practice measures, practice guidelines, and insurance coverage policy. Finally, we hope that members of the general public—the ultimate beneficiaries of the committee’s work—will read the report and support efforts to move in the directions proposed in the report.

The IOM chose committee members who—individually and collectively—have the expertise to make credible proposals. Among its members are medical directors of large health insurance companies, health care delivery systems, and companies. The committee also includes physicians with experience in evidence-based guideline programs, experts on extracting evidence from the medical literature, and experienced advocates for the public interest. The breadth of interests represented on the committee is the best guarantee that its recommendations would meet the needs of a diverse community of interest. The committee developed a common vision early in its deliberations, and it speaks with one voice in this report. In a series of workshops, the committee listened to an array of experts who kindly donated their time to help the committee. Above all, the committee had a remarkable group of IOM staff members who supported the committee’s efforts and kept the project moving forward. To all, we give thanks.

*Barbara McNeil, Chair  
Harold Sox, Vice Chair*

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