

Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies

Agency for Healthcare Research and Quality



www.ahrq.gov

The mission of AHRQ is to improve the quality, safety, efficiency, and effectiveness of health care by:

- Using evidence to improve health care.
- Improving health care outcomes through research.
- Transforming research into practice.

Background

The Institute of Medicine's (IOM) 2003 report, *Priority Areas for National Action: Transforming Health Care Quality*, identifies 20 diseases and clinical conditions that may be significantly improved or effectively managed by using best practice treatment guidelines. Scientific studies have proven that following best practice guidelines reduces suffering and patient mortality, while improving quality of life and clinical outcomes.

The IOM report and other, much older literature note that the rate of adoption for best practice guidelines has been frustratingly low. As a result, many thousands of American lives are lost each year to medical conditions that can be treated successfully.

New and more effective health care treatment practices often do not quickly find their way into clinical practice, despite attention garnered in professional journals and at medical

conferences. Recent studies indicate an average of 17 years is needed before new knowledge generated through research, such as randomized clinical trials, is incorporated into widespread clinical practice—and even then the application of the knowledge is very uneven.

The disturbing gap in quality—the difference between present treatment success rates and those thought to be achievable using best practice guidelines—led the Agency for Healthcare Research and Quality (AHRQ) to examine the issues surrounding the adoption of improved clinical practices.

In an effort to determine which strategies are more effective than others for introducing proven treatment methods, AHRQ commissioned researchers at the Stanford University–University of California at San Francisco EPC¹ to study the quality improvement literature for a number of the priority conditions identified in the



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¹The Agency oversees 12 Evidence-based Practice Centers (EPCs), tasked with analyzing and synthesizing the scientific literature related to medical conditions/issues that consume a significant share of health care resources and affect large numbers of Medicare or Medicaid users. The contractor organizations operating the EPCs include universities, nonprofit research organizations, and health care organizations (<http://www.ahrq.gov/clinic/epc/>).



IOM report. These studies, to be undertaken and published over a 2-year period, will be diverse in their focus and are intended to address best practice implementation issues across the full spectrum of health care—from wellness and prevention, to chronic and acute disease treatment, to end-of-life care.

The EPC studies will be published as a series of AHRQ Technical Reviews called *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies*, and will explore the human and organizational factors influencing various quality improvement strategies. Many reasons exist for the quality gap between the best, evidence-based models of patient treatment and the actual care received by patients. Chief among them are increased treatment-related expenses, a lag in the spread of knowledge concerning an improved treatment technique, skepticism regarding the observed increase in effectiveness, and insufficient staffing or equipment resources. There is also the possibility that a practice shown to be highly effective in a specialized research setting is not practical for some clinical settings.

Moreover, the coordinated delivery of health care has become so complex that physicians, nurses, and other providers with responsibilities for patient care often find they can no longer devote the time necessary to assimilate the ever-expanding numbers of clinical studies and emerging treatment advances.

The *Closing the Quality Gap* series will address many of the IOM-identified treatment priorities, and it is AHRQ's hope that the series will stimulate ideas for further quality improvement across a broad range of users; for example:

- Policymakers can use the detailed evidence review to prioritize quality improvement strategies and choose how best to narrow the quality gaps in their organizations.
- Researchers can find detailed information about well-studied areas of treatment, while learning of areas in need of greater exploration.
- Clinicians and trainees can see a broad spectrum of approaches to improving the quality of care. Some of these approaches fall within the control of individual practitioners, while others will require major systemic changes at the local level or beyond.
- Patients can learn quality improvement strategies that they can help to promote, while gaining a deeper understanding of the nature and extent of quality gaps, as well as the systemic changes necessary to close them.
- Groups and individuals charged with funding research will be able to identify high-yield areas of concern that warrant future research support.

Theories on creating positive change in the behaviors of patients, clinicians, and organizations often draw from studies that try to determine the overall effect of changing a single factor, or combinations of factors, in otherwise controlled situations. Other studies focus on the clinical setting, on particular treatment interventions, or on specific targets for change. Researchers studying the literature must accurately interpret a diverse range of journal articles and analyze the overall statistical findings, as well as the circumstances unique to each included study.

Methodology

To help users assess the validity of the studies presented in each volume of the series, the EPC researchers restricted their review of quality improvement strategies to those studies most likely to produce scientifically valid results. These include randomized controlled trials—considered the gold standard of experiment designs—as well as other high quality studies. They did so with the knowledge that the relatively strict study criteria may have excluded some possibly relevant results. Findings from the most valid studies were analyzed using accepted statistical tools; further analyses of combined data also were performed when studies were found to be consistent in their design and population, and had comparable outcomes.

Nine quality improvement strategies were evaluated for their effectiveness in the priority condition reports. The researchers defined a *quality improvement (QI) strategy* as any tool or process aimed at reducing the quality gap for a group of patients typical of those seen in routine practice.

The following QI strategies were used in the priority condition studies as a measure of potential gains in best practice adherence:

1. Physician reminder systems (such as prompts in paper charts or computer-based reminders).
2. Facilitated relay of clinical data to providers (patient data transmitted by telephone call or fax, from outpatient specialty clinics to primary care physicians).
3. Audit and feedback (physician performance tracking and reviews, using quality indicators and reports, comparisons with national/State

quality report cards, publicly released performance data, and benchmark outcomes data).

4. Physician education (workshops and professional conferences, educational outreach visits, distribution of educational materials).
5. Patient education (classes, parent and family education, pamphlets and other media, etc.).
6. Promotion of disease self-management (workshops, materials such as blood pressure or glucose monitoring devices).
7. Patient reminder systems (telephone calls or postcards from physicians to their patients).
8. Organizational changes (Total Quality Management or Continuous Quality Improvement programs, multidisciplinary teams, shifting from paper-based to computer-based recordkeeping, long-distance case discussion between professional peers).
9. Financial incentives, regulation, and policy (performance-based bonuses and alternative reimbursement systems for physicians, positive or negative financial incentives for patients, and changes in professional licensure requirements).

Looking Ahead

The first volume in the *Closing the Quality Gap* series outlines the challenges inherent to the process of translating research into clinical practice, as well as the methodology used by the EPC staff to review the included studies. Volumes 2 and 3 are devoted to improving treatment for patients suffering from conditions that adversely affect the lives of millions: diabetes and hypertension. Other



volumes in the series will examine the relation of quality improvement strategies to broader issues, such as medication management and care coordination.

While medicine has a long history of investigating what works and why, the behavioral mechanisms that spur the adoption and widespread implementation of new and more effective treatment practices are not entirely understood. Remarkably—and despite the millions of lives at stake—relatively little information exists on the most effective ways for translating research into clinical practice.

It is AHRQ's hope that the Closing the Quality Gap series will advance the knowledge of best practice guideline implementation, and will help to reduce the numbers of lives lost each year to painful, debilitating, and all-too-often fatal medical conditions.

For More Information

For additional information on AHRQ's projects involving evidence-based treatment practices and quality improvements in the delivery of health care, visit the AHRQ Website www.ahrq.gov or contact:

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