Improving the Quality of Medical Care
Building Bridges Among Professional Pride, Payer Profit, and Patient Satisfaction

Richard Grol, PhD

Attention to the quality of patient care has become an important health care issue in the last decade, not only among authorities, policymakers, and managers, but also among physicians and patients. Articles published in top medical journals regularly highlight problems with health care delivery, such as underuse, overuse, and/or misuse of care. Blumenthal7 believes that physicians should fully understand the debate on quality or they may lose the confidence of patients. The question for practitioners, however, is how to improve clinical performance.

A variety of approaches have been introduced during the last decade, and all of them claim to provide solutions to some of the main problems in patient care. Approaches such as evidence-based medicine (EBM), total quality management (TQM), assessment, accreditation and accountability, professional development, patient empowerment, and others have gained popularity. These approaches represent different perspectives on optimal care and the best method for improving care. By summarizing recent reviews and debates in this field, this article critically reflects on the value of some of the approaches that have gained popularity during the last decades: evidence-based medicine and clinical practice guidelines, professional development, assessment and accountability, patient empowerment, and total quality management. Evidence regarding the impact and feasibility of the various approaches is mixed or simply lacking. In particular, the health care community lacks an understanding of which approaches are most appropriate for what types of improvement in what settings and of the determinants of successful performance change. Given the complexity of improvement and change in patient care, it is not realistic to expect that one approach can solve all the problems in health care delivery. None of the popular models for improving clinical performance appear to be superior. Therefore, bridges must be built and models must be integrated to be truly effective.

For editorial comment see p 2600.
METHODS
For the critical reflection, I used a search for systematic reviews on improving the quality of care and implementing change performed in our department; 36 systematic reviews that addressed a variety of quality improvement strategies and followed accepted methods were analyzed in detail. The findings are summarized in Table 2. The Cochrane Library was checked for specific reviews on implementing change. In addition, some of the main general medical journals (New England Journal of Medicine, JAMA, BMJ, Lancet, Annals of Internal Medicine, and CMAJ: Canadian Medical Association Journal) and relevant health services research journals (Health Services Research, Milbank Quarterly, The Joint Commission Journal on Quality Improvement, Quality in Health Care, Medical Decision Making, and International Journal on Quality Health Care) were searched by hand for both reviews and articles published from 1995 to 2000 that debated the selected approaches (EBM and guidelines, professional development, assessment and accountability, patient empowerment, and TQM). This search led to additional articles in other journals.

EBM AND EVIDENCE-BASED CLINICAL PRACTICE GUIDELINES
The EBM movement is aimed at helping health care practitioners, patients, and policymakers make decisions with regard to health care by basing these decisions on the best evidence available. This is considered necessary because the number of new scientific insights that emerge each year is overwhelming. International review groups, for instance, in the context of the Cochrane Collaboration, perform systematic analyses of the literature with the expectation that clinicians base their decisions on the best evidence and consult databases containing such reviews. In addition, EBM is presented as a method for continuous learning and for improving care by critically reflecting on clinical performance. However, there is a growing consensus that although physicians like to be informed of scientific results, they have problems acquiring the skills needed to search and review the relevant literature or to consult databases within the context of their daily work. For example, new methods for rapid access to evidence through specific services that provide direct answers to clinical questions may offer a solution, but there is little research in this area.

The inclusion of scientific evidence within clinical practice guidelines has now become more or less standard in the Western world. Practical, evidence-based recommendations on how to manage health problems are seen by practitioners, payers, and policymakers as potentially powerful tools for the achievement of effective and efficient care, provided that they are well developed and implemented. We can, however, observe some problems here. First, there are currently too many guidelines of low quality. We see a “guideline industry” emerging in many Western countries, and physicians may be overwhelmed by all these guidelines. Many of the guidelines are not based on the best evidence, have not been developed systematically, or present the vested interests of specific parties or industries. Various studies that assess the quality of clinical

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Table 1. Approaches to Quality Improvement and Their Assumptions on Improving Medical Care

<table>
<thead>
<tr>
<th>Approach</th>
<th>Assumptions</th>
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<tbody>
<tr>
<td>Evidence-based medicine</td>
<td>Provision of best evidence and convincing information leads to optimal decision making and optimal care</td>
</tr>
<tr>
<td>Clinical practice guidelines</td>
<td></td>
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<tr>
<td>Decision aids</td>
<td></td>
</tr>
<tr>
<td>Professional education and development</td>
<td>Bottom-up learning based on experiences in practice and individual learning needs leads to performance change</td>
</tr>
<tr>
<td>Self-regulation</td>
<td></td>
</tr>
<tr>
<td>Recertification</td>
<td></td>
</tr>
<tr>
<td>Assessment and accountability</td>
<td>Providing feedback on performance relative to peers, and public reporting of performance data, motivate change in practice routines</td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
</tr>
<tr>
<td>Accreditation</td>
<td></td>
</tr>
<tr>
<td>Public reporting</td>
<td></td>
</tr>
<tr>
<td>Patient-centered care</td>
<td>Patient autonomy and control over disease and care processes lead to better care and outcomes</td>
</tr>
<tr>
<td>Patient involvement</td>
<td></td>
</tr>
<tr>
<td>Shared decision making</td>
<td></td>
</tr>
<tr>
<td>Total quality management and continuous quality improvement</td>
<td>Improving care comes from changing the systems, not from changes in individuals</td>
</tr>
<tr>
<td>Restructuring processes</td>
<td></td>
</tr>
<tr>
<td>Quality systems</td>
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<td>Breakthrough projects</td>
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</table>

Table 2. Effects of Different Strategies to Improve Patient Care

<table>
<thead>
<tr>
<th>Strategy</th>
<th>No. of Reviews</th>
<th>No. of Studies</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational materials, mailed information</td>
<td>9</td>
<td>3-37</td>
<td>Limited effects</td>
</tr>
<tr>
<td>Continuing medical education</td>
<td>4</td>
<td>3-17</td>
<td>Limited effects</td>
</tr>
<tr>
<td>Interactive educational meetings</td>
<td>4</td>
<td>2-6</td>
<td>Few studies, mostly effective</td>
</tr>
<tr>
<td>Educational outreach visits</td>
<td>8</td>
<td>2-8</td>
<td>Particularly affects prescribing and prevention</td>
</tr>
<tr>
<td>Use of opinion leaders</td>
<td>3</td>
<td>3-6</td>
<td>Mixed effects</td>
</tr>
<tr>
<td>Feedback on performance</td>
<td>7</td>
<td>16-37</td>
<td>Mixed effects, effect on test ordering</td>
</tr>
<tr>
<td>Reminders</td>
<td>5</td>
<td>5-68</td>
<td>Mostly effective</td>
</tr>
<tr>
<td>Substitution or delegation of tasks</td>
<td>7</td>
<td>2-14</td>
<td>Pharmacist: effect on prescribing Nurse: no effect</td>
</tr>
<tr>
<td>Use of computer (systems)</td>
<td>4</td>
<td>7-21</td>
<td>Computerized decision support, mostly effective</td>
</tr>
<tr>
<td>Total quality management and continuous quality improvement</td>
<td>1</td>
<td>55</td>
<td>Limited effects, weak study designs</td>
</tr>
<tr>
<td>Patient-oriented interventions</td>
<td>7</td>
<td>2-34</td>
<td>Mixed effects, reminding patients mostly effective in prevention</td>
</tr>
<tr>
<td>Combined and multifaceted interventions</td>
<td>16</td>
<td>2-39</td>
<td>Mostly (very) effective</td>
</tr>
</tbody>
</table>
guidelines show that most guidelines do not meet important quality criteria.18-22 A second problem with evidence-based guidelines is that, despite a rigorous search and analysis of the scientific literature, clear evidence is available for only part of the practical decisions and actions recommended in the guidelines. There is a large area where expert opinions, preferences of the health care practitioners and patients, and societal priorities are much more important in setting the guidelines than the results of research.23 Even when adequate evidence is found and summarized, the translation of evidence into recommendations for actual practice often proves difficult. The users of the guidelines regularly address much more heterogeneous populations and more complex care processes involving different health care practitioners than those addressed in the original research.24,25 The best manner of managing such processes and chains of related actions has hardly been studied. It also is often difficult to translate the recommendations contained in the evidence-based clinical guidelines into decisions for individual patients because the guidelines can never cover all of the relevant clinical details for specific cases. The consequences of a guideline in terms of acceptance by patients and the resources, staff, skills, and equipment needed are mostly not considered during the development of the guideline.26,27 For example, the implementation of a new dyspepsia guideline in the United Kingdom could have resulted in a 3-fold increase in the number of gastroscopies.28 Whether a society is willing to and capable of paying the bill for a particular innovation cannot be determined on the basis of scientific evidence, but instead relates to the setting of priorities.

Even when clear research evidence is available with regard to a particular guideline, it is often interpreted differently by guideline developers in different settings, from different cultures, and with different backgrounds. Fahey and Peters29 compared, for example, the guidelines for the treatment of hypertension with a group of 876 patients at risk and found that 82% needed treatment when the US guideline was applied, vs 53% with the UK guideline and 15% with the Canadian guideline. The US guidelines for the management of patients with a high risk of breast cancer recommend regular self-examination and preventive mastectomy (requiring only the consent of the patient). The French guidelines, in contrast, do not recommend self-examination (because this may induce fear) and are very strict with regard to mastectomy (as reflected by a waiting period of several months before final decisions are made).30 The authors of this study observe that the setting of evidence-based guidelines is often largely a product of specific cultural beliefs.

One last important problem concerns the effective introduction of evidence and guidelines in daily care. Results of many controlled trials and systematic reviews show that efforts to implement guidelines are often not very successful.31,32 At best, small-to-moderate improvements in the processes of care have been found (usually not more than 5%-10%), whereas the impact on patient outcomes has often not been studied.33,34 What is the best approach for future work in EBM and evidence-based clinical guidelines? We need an optimal method for guideline development that deals well not only with a systematic search for the evidence, but also with the use of expert opinions, patient preferences, cost considerations, and application in practice. Based on instruments developed in the United States and the United Kingdom, an international group of researchers recently validated a set of criteria (ie, the AGREE [Appraisal of Guidelines for Research & Evaluation] instrument35) for optimal guidelines, including all these aspects. Wide dissemination and use of these criteria may contribute to solving the problem of low-quality guidelines. To improve the use of high-quality guidelines in normal practice, the process of guideline setting should be integrated within a more comprehensive system of quality improvement that also includes translation of the guidelines into protocols, care pathways, and valid indicators for monitoring patient care and effective strategies and programs to implement them.36 Development and evaluation of the effectiveness, costs, and feasibility of such systems is one of the future challenges for quality improvement.

PROFESSIONAL DEVELOPMENT

Often, EBM is criticized for being an overly top-down process and not taking the complexity of actual clinical practice sufficiently into consideration.37 Approaches to the improvement of care involving professional education and development emphasize this complexity and therefore propose bottom-up improvement based on professional pride, self-regulation, and ownership by clinicians. They also emphasize consideration of their individual learning needs and experiences within the context of daily life as a more effective path to optimal care. These approaches are based on theories of adult learning and the assumption that people will inherently strive toward maximum competence and improvement when provided with the appropriate learning environment. In light of the fact that systematic reviews by Davis et al38,39 and Oxman et al40 have shown classic continuing medical education (CME) approaches (providing educational materials, courses, and conferences) to not be very effective for changing clinical performance, we now see a tendency to adopt new educational approaches with such intriguing names as continuous professional development, self-directed or self-instructional learning, problem-based learning, portfolio learning, and professional revalidation.41,42 Effective learning and improvement are assumed to be more individualized, based on personal learning needs, and require the active participation of the clinician within these approaches. There is considerable optimism among educational experts with regard to these approaches. A recent review by Davis et al39 suggests that learning based on interactive forms of edu-
small group learning and preventive care. In a review by Wensing et al., small group learning and peer review by physicians were found to be particularly useful in outpatient office-based practice settings. Nevertheless, there are a number of questions about these new educational approaches as well. Information on self-directed and portfolio learning and on professional revalidation from well-designed studies is not yet available, and just which methods are most effective in which settings is not at all clear. We also need to investigate the cost-effectiveness of such new methods because they require considerable staff time and cost for their implementation and maintenance.

A related issue is the level of competence of physicians. There is increasing awareness among clinicians that society expects evidence of their competence. This aspect of the professional development of clinicians is now typically handled in most Western countries via professional self-regulation, licensing, and recertification systems, which are usually based on credit points attained via participation in specific educational activities. The impact of such systems, however, remains unclear, and there is virtually no information on the quality and effects of the educational systems themselves. More formal systems of regular assessment and “revalidation” of physicians have been proposed in various countries but have yet to be implemented, at least in most countries. Problems can be foreseen in this domain because of a lack of valid and reliable measures and the nature of the data to be used (see the next section). Also, a cultural change is basically needed among professionals; as the editor of the BMJ wrote, “medicine has a culture of hiding errors and forgiving those who make them . . . we need a culture that allows doctors to express fears, doubts and vulnerabilities.”

In sum, there are indeed very interesting new educational approaches within the field of self-regulatory professional development, but we need further evaluations of their impact, cost, and possibilities for implementation. Linking them to the implementation of the best research evidence and to high-quality clinical guidelines on the one hand, and to systems for monitoring clinical performance on the other, may guarantee a better impact on patient care. In particular, it is a challenge to link systems for self-regulatory professional development with systems for external assessment and accountability and with systems that focus on the organization of care; it is also a challenge to evaluate the impact and feasibility of such integrated systems.

ASSessment AND ACCOUNTABILITY

There is wide consensus on the need for regular assessment and monitoring of clinical performance for both professional development and quality improvement (see previous section); in addition, there is widespread agreement on the need for public accountability. Considerable optimism exists with regard to the measurability of the quality of care as well. In an impressive review of 48 MEDLINE articles, Schuster and colleagues demonstrated that it is possible to clearly describe many aspects of the quality of care (about 50%-70% of the patients in the United States were found to receive the recommended care). In most Western countries, we see recent progress in the development of performance indicators and criteria. Such an approach is clearly favored by payers and other authorities who want transparency and control and expect systematic data collection, feedback, and publication of data to improve the quality of care and also reduce health care costs. The assumption is that when health care practitioners are confronted with negative information regarding their performance relative to that of their peers and these results are presented openly for everyone to see, the behavior of the practitioners will change. But is this assumption correct? Concerns regarding the reliability and validity of the indicators and the data currently being used have been raised in the medical literature along with questions about the effects of feedback based on such indicators and the effects of the public reporting of evaluation results. For instance, the selection of indicators and measurements is said to be often driven by what can be measured and provides “simplicity at the expense of meaning.” Little information is usually collected at the individual patient or case level, which makes the validity of such measurements doubtful. A study of the measurement of diabetes showed, for instance, valid and reliable assessment of physician performance to simply be impossible because of too few cases per decision. In a review article by Eddy, it is observed that “today’s measures tend to be blunt, expensive, incomplete and distorting. And unless great care is taken, they can be easily misunderstood.” Another point of concern is the actual impact of assessment and feedback on physicians. We found 8 systematic reviews that analyzed large numbers of randomized controlled trials that consistently showed only mixed or moderate improvements in patient care. The most effective forms of assessment and feedback are still unclear, but certain studies suggest that targeted feedback provided by a well-respected peer or opinion leader using clearly credible (eg, evidence-based) guidelines may be most effective, particularly when it is embedded in a comprehensive program of continuous monitoring and improvement.

Another concern is related to the publication of performance data in the form of report cards or physician profiles as a tool for external accountability. This has become a multimillion dollar industry in the United States and raised considerable debate in the 1990s. A recent systematic review of the impact of such performance information (21 publications on 7 different systems) revealed only 1 controlled study. This study showed the consuming public to...
frequently not use the information, not understand it, or simply not trust it. It did, however, influence the quality improvement activities within the institutes. Additional studies in the United States confirmed these findings. In an editorial in JAMA, Bindman concludes that physician profiles bring considerable cost, may cause considerable frustration and resistance among physicians, and may even lead to a declining quality of care rather than improved care. In a recent inventory of systems of external assessment in the world (such as accreditation programs, Baldrige and European Foundation of Quality Management models, and International Standards Organization assessments), Shaw found that governments, insurers, consumers, and professions almost everywhere in the Western world hurry to set up new schemes to ensure public accountability and transparency in health care. He concludes, “What do we know about the schemes’ evidence base, the validity of their standards, the reliability of their assessments, or their ability to bring improvements for patients, staff, or the general population? In short, not much.”

Reflecting on the current state of the art and debates about assessment and accountability, we may conclude that measurement systems are absolutely essential for improving clinical performance, but many challenges lie ahead of us. These can, for instance, be found in building bridges between evidence-based guidelines and systems for monitoring quality with valid (evidence-based) indicators. A challenge is to develop simple, valid, case-based process measures with sufficient clinical detail that can be easily integrated within the monitoring systems in practices and hospitals. Methods should be developed and evaluated to solve the tensions between self-regulatory professional development and revalidation on the one hand and programs for external assessment and accountability on the other. In some countries, such as France, experiments are under way to solve such tensions, but their feasibility and effects have to be studied. Another important question is how to involve patients systematically in the assessment of quality and how to use their input in continuous quality improvement. This brings us to the approaches discussed below.

**PATIENT EMPOWERMENT**

Placing the patient at the center of the provision of care is yet another new and important approach to improving the quality of medical care. From an ethical perspective, patient autonomy is seen as a basic value and underlying premise for the provision of health care in itself. From a psychological perspective, greater patient involvement and greater patient control are assumed to lead to better adherence to treatment recommendations and thus to better health. From an epidemiologic perspective, patients are seen as rational beings who, after being informed of the relevant benefits and risks of treatment alternatives, can share in decision making. Different methods can be used to “empower” patients: satisfaction surveys; complaint procedures; communication training for professionals; needs assessment; interactive education; the provision of information on the Internet; consultation via e-mail; and the use of decision analysis, decision aids, and risk tables for “shared decision making.” Very promising methods indeed, but research into their value is in its infancy. A systematic review by Grilli et al showed that educating people at risk through mass media programs (eg, vaccination programs and programs intended to reduce numbers of hysterectomies) can be effective. The use of instruments to collect data on patients’ health care needs (eg, the needs of elderly patients or those with depression) can lead to better detection of health problems, but the results of studies that evaluate the impact of such measures on the processes and outcomes of care are still unclear. Studies that evaluate the impact of satisfaction surveys on the provision of care are virtually nonexistent or methodologically limited. Most of the research on improving the role of patients in their own care has been focused on patient-physician communication. Various reviews show patient-centeredness on the part of the physician to be related to greater patient satisfaction and better adherence to treatment or advice. The involvement of patients in decision making has recently received considerable attention. The conclusion of one review was that, although most patients like to receive adequate information on their condition and the various treatment alternatives, many do not want to be involved in the decision making related to their medical care. Some patients are found to refuse any responsibility for the management of their illness, particularly when they are seriously ill. According to the authors of the review, in fact, the positive effects of involving patients in decision making related to their care have yet to be demonstrated. This conclusion is in line with the results of a systematic review of 17 trials that analyzed the impact of decision aids. Decision aids improved the knowledge and involvement of the patients in decisions, but had little effect on satisfaction with the care and variable effects on the decisions actually made and the outcomes of the care. The potential role and impact of the Internet and teleconsultations in the future are even more unclear. Approximately 40% to 50% of the people accessing the Web are said to do so to find medical information. This suggests that this medium can play a crucial role in educating the public and informing them of the optimal evidence-based options for care. The quality and accessibility of information for patients are nevertheless still variable, and research on the impact of such information on their care and on patient-physician communication is only starting.

The new emancipation of the patient may also raise new problems in the relationship between physician and patient. There is now increasing concern about unrealistic patient autonomy and increased consumerism and the expectation that this may foster laissez-faire attitudes and loss of morale among professionals. We need a new conceptualization of patient-centered care; new
roles for both clinicians and patients in
the provision of medical care should be
explored and defined to establish a “dia-
logue-centered care” with clear rights
and responsibilities for both parties.81 Al-
though patient empowerment is a fasci-
nating new approach to the improve-
ment of medical care, many steps have
to be taken before it can be used with
maximum effectiveness. Methods should
be developed with real input from pa-
tients and consumers. We need to iden-
tify which methods of involving pa-
tients should be used for which patients,
with what problems, and at what point
in time, and we need to explore their
costs and feasibility. We also need to find
effective ways to bridge the gap and ease
the tensions between EBM and a patient-
centered approach. This obviously con-
stitutes a major challenge for the field
of quality development and research.

TOTAL QUALITY
MANAGEMENT

The last approach to be discussed herein,
TQM and continuous quality improve-
ment, has its roots in the management
perspective on quality improvement. The
emphasis is not on the performance of
individual clinicians, but on the ongo-
ing efforts to improve the whole health
care organization: the efficient organi-
zation of the care processes, optimal
teamwork, committed employees, a
stable infrastructure, and a culture of
quality within the hospital and prac-
tice.82-84 A crucial element is “to un-
derstand, design, and simplify the pro-
cesses as seen through the eyes of the
patients.”85 Systematic monitoring of
clinical performance, the provision of
feedback, and the conduct of concrete
quality improvement projects in a cy-
clic process should help make the care
processes more efficient and patient
friendly. The assumption is that the es-
tablissement of the necessary structural
and organizational conditions for change
will clearly help to improve clinical per-
formance: “Real improvements come
from changing the systems, not chang-
ing within the systems.”86 The TQM ap-
proach has considerable influence in
many Western countries and particu-
larly in Western hospitals. Many ex-
amples of successful improvement
projects can be found in the literature.
Recent considerations of the impact of
TQM suggest, however, that the evi-
dence for its effectiveness is still largely
anecdotal.87 There is as yet only 1 sys-
tematic review available, which in-
cludes 55 studies; 42 of these studies
were actually performed in the same hos-
pital, whereas only 3 had a controlled de-
sign.88 The authors therefore con-
cluded that there is as yet insufficient
evidence for real hospital-wide impact of
TQM on health care delivery. The im-
 pact observed for primary care is even
more limited.89,90 The first experiments
with the use of TQM in small office-
based primary care practices in the
United States, the United Kingdom, and
the Netherlands indicated that both long-
term and intensive external support by
expert facilitators is required for suc-
cessful change.91-93 Opinion leaders
within the field of TQM admit that the
approach has yet to meet their expecta-
tions.87,94 Widespread implementation
has not been achieved; support from the
management in institutions is often lack-
ing, and physicians are either skeptical
or do not understand the approach be-
cause it was developed by managers and
first applied to the organization and not
to specific clinical problems. The costs
of hospital-wide TQM and staff train-
ing outweigh the benefits.

As we reflect on our current knowl-
edge about the value of TQM, the ques-
tion remains: how to make TQM more
effective and how to implement it more
successfully within health care? Theo-
retically, the TQM approach is very
attractive, particularly because care
 provision is not viewed as just the per-
formance of single actions by physi-
cians, but also as processes organized
around patients and their problems, and
because improving the quality of care is
not seen as just single improvement
actions by physicians, but also as an orga-
nization-wide change of the culture
toward quality. Integration of different
approaches is one of its characteristics.
However, the current TQM approaches
should be better adapted to the realities
of health care to be maximally effective.
Links to other approaches (eg, profes-
sional development and external assess-
ment) should be established. Physi-
cians should be actively involved and
occupy leadership roles, and the quality
improvement activities should be related
to their needs and to patient-related
problems more directly.95-97 Multi-
disciplinary collaboration within small
quality-improvement teams receiving
specific training is another important ele-
ment.98 New TQM methods that meet
these requirements have recently been
introduced, such as business redesign
and the breakthrough series. Preliminary
evaluations of these methods show some
fascinating results, but the real chal-
lenge is to study their effectiveness in light
of their cost, the time demands on the
professionals involved, and their appli-
cability to daily medical practice.

BUILDING BRIDGES

Where are we now and how should we
continue with improving medical care?
Considerable progress has been made
in the last decades. We have gained
good experiences with some new and
challenging approaches to quality im-
provement; our knowledge about ef-
ectic improvement in patient care has
grown. Nevertheless, we still face large
problems (overuse, underuse, and mis-
use) in the quality of medical care. The
current approaches to quality improve-
ment have been, so far, only partly suc-
cessful in tackling these problems. This
article does not provide a systematic re-
view of the impact of all the ap-
proaches to improving medical care;
that would be impossible within the
context of one article. Only a few were
addressed herein; some other interest-
ing ones, such as risk management,
managed care, disease management, or-
ganizational development, and learn-
ing organizations were not, but the con-
clusions will probably be similar.

We can observe a body of knowledge
in this field to be found in hundreds of
well-designed studies and some dozens
of systematic reviews on strategies to im-
prove patient care. They show that we
have sufficient information on the im-

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study on factors that support the implementation of evidence-based guidelines. A mixture of professional and organizational factors (such as the presence of an infrastructure for quality and the involvement of clinical leaders and enthusiastic volunteers) is said to be crucial. “Give attention to many different factors and use multiple strategies” is the conclusion of this study and of many other reflections on effective change. They all point in the direction of the need for building bridges among the different approaches to quality improvement. There is a need for integrated methods and comprehensive programs that combine, for instance, evidence-based guidelines, clinical pathways, indicators for continuous assessment, and quality improvement projects embedded within a wider quality system of a hospital or practice. We can observe the development of such programs in some countries (eg, the clinical governance program in the United Kingdom, some disease management programs in the United States, accreditation and continuous quality improvement in France, guideline development and implementation integrated in the Netherlands, and new programs for professional development combining education, guidelines, assessment, and revalidation in some countries). However, we lack information on the impact of such complex interventions. Most quality improvement activities in the world are still largely a reflection of the specific beliefs of specific parties about the best way to improve patient care. Crossing borders among professional pride and self-regulation, external accountability, payer profit, organizational development, and pleasing and involving patients can help us overcome the obstacles to optimal medical care.

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