

Between evidence-based practice and total quality management: the implementation of cost-effective care

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Abstract

There is an increasing number of studies showing that patients often do not receive necessary care or receive care that is not needed, inefficient or even damaging. There is no lack of ideas and approaches on how to improve practice. In the last decades we have seen the rise of fascinating models for quality improvement, for instance Evidence Based Medicine, Total Quality Management and Patient Partnership. These models are interesting and potentially very valuable in improving patient care. However, the evidence for their (cost-) effectiveness is very limited. The challenge for the years to come is to design strategies for quality improvement that integrate elements from the different models and to set the step from anecdotal evidence for these strategies to systematic evaluation in order to distinguish between faith and fact in the field of improving care.

Keywords: assessment, change, clinical guidelines, patient involvement, quality improvement, total quality management

Implementing a guideline on cholesterol management

Changing and improving patient care and making it effective and efficient proves to be a complex but challenging undertaking. An example to set the stage: cholesterol level testing. A national, evidence-based guideline for management of high cholesterol levels in primary care was developed and introduced in the beginning of the 1990s in The Netherlands. At that time we performed an audit in 20 practices that showed that many patients who should have their cholesterol tested did not get a test, while at the same time many patients had unnecessary tests. Almost 60% of the patients tested had a test without an indication; of the patients who should have been tested because of a positive risk profile almost 70% were not tested [1]. The practices were next divided into two comparable groups and allocated to an experimental and a control condition. The experimental group participated in a multi-faceted programme, as recommended in the scientific literature [2–4] to support the implementation of the guideline. This included small group education, feedback on performance, desk-top tools for decision-making and an outreach visit by the researcher to explain and stimulate use of the guideline. Nevertheless, appropriate cholesterol testing in the intervention group, measured through chart audits, did not change at all after 1 year of effort. Interviews with family

doctors afterwards showed some of the obstacles to change: doubts about the scientific basis and feasibility of the guideline; a resistant attitude towards prevention in general and towards motivating patients to change their life-style; the algorithm for diagnosis and treatment was found too complex for use in daily care; the guideline demanded extra workload (extra testing, diet advice); and many patients demanded unnecessary tests. The results of the interviews showed the factors playing a role in successfully implementing cost-effective care: the quality of the guideline itself; the knowledge, attitudes and routines of the doctors; the attitudes and behaviour of patients as well as organizational and financial arrangements. Actually, the results of this study were used in the updating of the evidence-based guideline for cholesterol management recently: focus in the 1999 cholesterol guideline is now much more on testing in a selected group of patients with a high risk for cardiovascular disease, using evidence as well as the results of cost-effectiveness studies. However, implementation of this guideline will fail without strategies aimed at changing the attitudes of the doctors, changing the knowledge and attitudes of the patients towards cardiovascular risk and cholesterol tests and redesigning the organization of prevention of cardiovascular disease in small office-based family practice. So, the message is that we need a well designed plan that integrates different types of approaches and strategies to achieve optimal care.

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Table 1 Methods and strategies for quality improvement proposed by different parties in health care improvement

Participants	Methods and strategies
Professionals	Professional development Continuous medical education Recertification/licensing
Epidemiologists	Systematic reviews Evidence-based guidelines Decision aids
Policy makers, payers Managers	Laws, regulations, contracts, budgets Monitoring care, indicators, feedback Process improvement, CQI Organizational changes
Patient (representatives)	Patient rights, complaint procedures Shared decision making

Different approaches to implementation of cost-effective care

An enormous number of new valuable or evidence-based insights, techniques and procedures are published each year; innovations that claim to contribute to optimal patient care. An analysis of Medline showed that in the 1970s about 500 new randomized studies were added to this file, while in the 1990s this increased to almost 10 000 per year [5]. From an increasing number of studies, nowadays found in the top medical journals, we learn that these innovations often do not find their way to normal daily care routines. This implies that patients may not receive necessary care (e.g. beta-blockers after myocardial infarction) or receive care that is not needed or that is even potentially damaging (e.g. unnecessary hysterectomies or transurethral resection of the prostate) [6]. This increases the costs of care as well. Most parties in health care, professionals as well as policy makers, payers and politicians are well aware that patients often do not get the best, most effective, rational, efficient and patient-centred care. There is, on the other hand, no lack of ideas and approaches on how to improve care and implement optimal care. Different parties and disciplines in health care have different opinions on effectively changing care (Table 1) and propose different, sometimes conflicting approaches to improvement of patient care [7,8].

Clinical professionals usually emphasize (lack of) clinical expertise and skills as crucial in (sub)optimal care and self-regulation as more effective than external control in improving care. Professional development, continuous education and systems for licensing and recertification should guarantee quality of care. Clinical researchers and epidemiologists see the lack of convincing scientific information on efficacy and efficiency of specific clinical actions and decisions as the problem in achieving optimal care. They propose systematic reviews to summarize the evidence and the development and dissemination of evidence-based guidelines. Policy makers and payers usually have more belief in laws, regulations,

rationing, contracts and budgets to influence health care and clinical performance. Assumption is that care providers and institutions are particularly sensitive to what happens to their budgets or to potential consequences of not meeting specific requirements. They also demand public accountability of the care provided: systems for monitoring care, using quality indicators, and feeding back data on variation between care providers, practices and hospitals as a method of changing practice. In a management perspective on improving care the emphasis is less on good or bad performance of professionals, but on the organizational context and the systems of care provision. Influenced by experiences in industry, improvement of care processes is undertaken by teams, who analyse the processes and try to redesign them. A customer focus, attention to the culture, and team work in the institution are also part of the approach. Patient representatives, often using an ethical perspective, emphasize the rights and autonomy of patients and the importance of their participation in decisions on optimal care.

These are only a few approaches to improving care and implementing cost-effective practices. There are more and they may overlap to a certain degree. It is, however, important to note that they are based on different theories and traditions and that their proponents often do not speak each other's language, do not know the achievements of other approaches and usually exhibit a profound belief in their own approach. The evangelism of some is considerable and some can be really conflicting, at times, with others. For instance, a statement by the famous British economist Alan Maynard was: 'Unless we tackle the doctors, health reforms will fail to deliver ... processes of health care are dominated by clinicians, who merely represent their own vested interests ... we must strengthen the role of health managers and economists, who would speak for society at large' [9]. The answer of the doctor Hart to this statement was: 'If health managers and economists really believe that they appear to society at large as more credible or less absurd than doctors when claiming to speak on its behalf, they have completely lost touch with reality' [9]. In this type of debate on the value and superiority of the different perspectives on improving patient care it is first of all important to know to what extent they really can contribute to the best care possible against acceptable resources. What is the evidence, what are the facts and where starts faith, hope, religion and fantasy? Below a few approaches or religions concerning implementing cost-effective care will be discussed critically, asking both about the evidence and the wide implementation of these approaches, respectively evidence based-guidelines, audit and accountability, total quality management and patient empowerment.

Evidence-based guideline setting

The Evidence-Based Practice movement aims to help care providers in their decisions on best care for patients by basing these decisions on the best evidence available [10]. International working groups, in the context of the Cochrane

Collaboration, are searching for and summarizing the scientific literature and these summaries are included in the so-called Cochrane Library, now containing over 200 000 well designed studies on different clinical problems. This evidence is increasingly used in setting clinical practice guidelines. Developing evidence-based guidelines is now a very popular undertaking in many countries. Scientific organizations of clinical professionals, hospitals, payers, and health authorities are involved in it. The expectations of the value of evidence-based guidelines are, as far as their contribution to effective care against acceptable costs concerns, high. Basic belief is that care providers are rational beings who are sensitive to convincing information or arguments in order to change their performance. There is a convincing point in this approach. Nobody can object to an evidence-based patient care in which sense and nonsense in performance are distinguished. But are these expectations justified? Although many examples of guidelines improving care can be presented, there are some problems. Introduction of guidelines often does not change practice. Analyses of many hundreds of controlled trials by the Cochrane Centre on Effective and Organizational Practice, studying the impact of introducing guidelines in practice, showed that this impact is limited in most cases [4, 11]. Small to moderate improvements in care provisions (usually not more than 10%) are found in most studies, dependant on the method of introduction (more intensive programmes for implementation are more effective but cost more). The impact of the guidelines on patient outcomes are often absent or not studied at all: an analysis of 91 studies on implementation of guidelines showed 17 studies that had included the impact on patient outcomes [12]; 12 resulted in significant improvements. In 18 studies on outreach visits only one contained patient outcomes [13]. A review of 68 studies on the effects of decision support showed that only seven included patient outcomes of which four had significant improvements [14].

Example: guideline implementation in family practice in The Netherlands

Evidence-based guideline development has been undertaken by the Dutch College of Family Physicians since 1987 [15]. More than 70 guidelines have been developed since then with use of a rigorous procedure, combining systematic analysis of the scientific literature, consensus discussions and testing of the guidelines among ordinary family doctors. Issues of efficacy as well efficiency are addressed in these guidelines. Development of a guideline takes about 1.5 years and costs about 50 000 \$US. These guidelines are published in the scientific journal for family doctors, read by about 70% of the doctors. Implementation is supported by a multi-faceted, comprehensive programme, including educational programmes for each guideline, sent to the 100 local coordinators for local continuing medical education and small group quality improvement. The guideline programme has been accepted very well by the family physicians and a majority regularly discusses them in their local group. Acceptance is particularly high because development is 'owned' by family

doctors themselves. We performed evaluations of the use of the guideline recommendations in decision-making in 1993 and in 1998 among, respectively, performance of 66 doctors on 10 guidelines (79 700 decisions), and performance of 200 doctors on 29 guidelines (63 500 decisions). On average, recommendations were followed in 71% of the decisions in 1993 and in 72% in 1998. For recommendations to perform a specific action this was 67% in both years; for recommendations to refrain from action this was 79% in 1993 and 78% in 1998. There were, however, large variations between the use of different guidelines (some scored less than 50%, others almost 90%), different recommendations (range, 10–100%) and between different doctors (some had an average score of less than 50%, the maximum was around 85%). These figures show the complexity of guideline use and impact: whether a guideline is used will depend on the type of action required, the quality and feasibility of the guideline and its recommendations, the features of the target group and setting, as well as the method of introduction. Implementation of guidelines for cost-effective care should deal with all of these different factors.

There are various problems preventing guidelines from contributing to cost-effective care. For instance, despite rigorous searching and analysing the scientific literature scientific evidence is usually found for only a minority of the decisions and actions addressed in a guideline. When evidence is found it often concerns other patient groups or care provision situations than those needed for the development of a guideline feasible and effective in normal practice. Normal practice deals with complex care processes, chains of mutually related actions and interventions, involving different care providers most of the time [16,17]. Guidelines often focus more on decision-making by individual professionals than on such multi-disciplinary care processes. Best management of these processes have hardly been studied in well designed research. Often the applicability of the guidelines and the consequences in terms of financial considerations, additional resources, new skills or necessary changes in the organization have not been considered well in the process of setting them. For instance, introducing a new dyspepsia guideline in the UK would imply three times as many endoscopies – who will be responsible for these costs? [18]. Another problem is that patients often do not co-operate in making the guidelines effective: they may not be compliant with the guideline-based prescriptions or advice of care providers, or they may have different expectations and demand unnecessary actions or treatments. Even when research evidence is available it is often interpreted differently by different guideline developers from different settings and cultures. Comparing the US guideline for treating acute low back pain with the national guideline of the Dutch College of Family Physicians for the same clinical problem, we see that the American guideline recommends sending a patient to a physical therapist or chiropractor for exercises, while the Dutch guideline recommends not to refer such a patient. Finally, the methods to disseminate and implement the guidelines may not be effective. Although research has shown that publishing guidelines and presenting them in courses and conferences does

not have any impact on performance this is still the preferred method of introduction used in most countries – a potential waste of budget.

Should we forget about evidence-based guidelines on the basis of these experiences and research findings? I still think that they are a potentially very valuable and powerful aid, a necessary tool with which to improve patient care. But there are too many guidelines issued now that are of low quality: guidelines not based on evidence available, not developed systematically or that include vested interests of specific parties. For example, an assessment of 279 guidelines in the US issued between 1985 and 1997, showed that, on average, 35–45% of the guidelines met specific criteria for appropriate guideline setting [19]. Comparable figures were presented on guidelines in Germany, Finland and the UK. We see a guideline industry and a potential overproduction of guidelines in many western countries; this is confusing for clinicians who may become negative about the use of guidelines in general. In order to achieve optimal care for patients by introducing guidelines the first requirement is that the guidelines are of excellent quality. Using previous instruments from Field and Lohr and from Cluzeau, an international group of researchers in Europe and North America is developing an internationally standardized instrument for appraising guidelines critically (so-called AGREE-instrument). Criteria have been formulated and are now validated on guidelines in over 12 countries: criteria related to the scope of the guideline, the stakeholders, the evidence behind the recommendations, the presentation, the applicability in normal care and the feasibility for use in audit and assessment. Even when we manage to influence the process of setting guidelines positively, guidelines will be ‘only one option to improve the quality of care. Too often advocates view guidelines as a “magic bullet” for health care problems and ignore more effective solutions. Clinical guidelines make sense when practitioners are unclear about appropriate practice and when scientific evidence can provide an answer. They are a poor remedy in other settings’ [20]. So, we need additional methods to create bridges between the evidence-based practice approach and other approaches – for instance, between setting guidelines and assessment of care.

Audit, assessment, accountability

There is increasing consensus that making care provision transparent is required, both for external purposes (accountability to society) and internal purposes (learning from mistakes and gaps in performance). There is also optimism about the potential of measuring quality. The first statement of a National Round Table on Quality in the USA was that quality can be precisely defined and measured with a degree of scientific accuracy comparable with that of most measures used in clinical medicine [21]. Many of the measures used in medicine are not very sensitive, so this may not be something to be particularly proud of. However, we see in most western countries considerable and successful efforts to develop indicators and performance criteria which can be used in

quality assessment. Considerable progress has been made in this field in recent years. Many parties, particularly authorities and payers have high expectations of systematic data collection, feeding these data back to institutions and practices and publishing these data to make care transparent to the public. Are these expectations justified? To what extent does audit and assessment contribute to implementation of optimal patient care? Actually, this approach to quality improvement induces a lot of debate. There is concern about the validity of the indicators used – do they really refer to quality of care? – about the reliability of the data sources (for instance the use of routinely collected data in the medical records) and about the effects of feeding data back and publishing them. Some of these concerns may be justified. We performed a study in seven practices in which we measured, through three different methods, whether 17 national evidence-based guidelines were used or not. Indicators were carefully developed with use of panels of experienced family doctors and the national evidence-based guidelines as a solid basis to guarantee validity of the indicators and criteria. This study showed that in order to come to valid assessments the patient records only provided 40% of the necessary data, the observer 72% and the self-recording method over 90% [22]. The agreement between data from the records and the self-recording proved to be high. This study showed the limitations of patient records as a source for audit and valid quality assessment.

Another point of concern is the value of the usual feedback as it is given by authorities or payers. A Cochrane review on the effectiveness of audit and consequent feedback showed mixed results; improvements in patient care were moderate or missing most of the time [23]. In a randomized controlled trial among 2240 full-time family physicians in Australia, an experimental group was given regular feedback on their prescribing patterns [24]. They got graphical displays of prescribing rates relative to their peers as well as educational newsletters. This is a feedback method that is widely used in almost all health care systems by health authorities or payers to influence performance and reduce costs. However, in this project there was no change after the intervention period at all and no difference between the experimental and the control groups. The conclusion of the authors was that such a feedback method, with mailed feedback, organized by a central organization and based on aggregated data has no impact on the quality and costs of prescribing. It is interesting to compare this outcome with that in a project on providing feedback to family doctors on ordering laboratory tests in the district of Maastricht in The Netherlands [25]. The Diagnostic Centre of the Academic Hospital provides personal feedback to all 85 doctors in the district twice a year. Quantitative data are used, but also a comparison with national evidence-based guidelines and personal comments by a respected internist who knows all the doctors in person. Enormous reductions in the number of tests ordered and the costs of these tests were seen since the feedback started in 1985, while the national trend shows a continuous increase. My explanation is that this specific mix of strategies – personal feedback, use of a respected colleague, use of

national evidence-based guidelines, as well as integration of this method within the regional structures for continuing medical education and quality improvement – is responsible for the success.

The debate becomes even more difficult when data are published in the form of report cards or physician or practice profiles. Critics point out the lack of reliability of the data, but also on the confusion it will raise in the public and the possible inappropriate interpretation of the data [26,27].

Should we forget about audit, assessment and accountability on the basis of these criticisms and research findings? My opinion is that making care provision transparent is obligatory in quality improvement, it is an indispensable part of each quality improvement system. However, there are yet many questions left about the methods of developing indicators, the best approach to providing feedback and the usefulness and dangers of publishing data and making them accessible to the public. Assessing care is preferably integrated within a more comprehensive approach of formulating (evidence-based) goals for patient care, improving care to achieve these goals and measuring care to see whether the goals have been achieved. This has brought us to a third approach to improving patient care: total quality management (TQM) or continuous quality improvement (CQI).

Total quality management and continuous quality improvement

In this approach emphasis is not on individual care providers, but on customer friendly, efficiently organized care processes; on optimal teamwork, collaboration, and a quality culture in the institution; and on improving the structures, processes and systems in care provision in order to achieve optimal patient care [28,29]. Improving quality is stimulated by systematic monitoring and feedback of data, concrete quality improvement projects following the Plan-Do-Check-Act cycle, and analysis and redesign of care processes. Almost all aspects of care can be seen as processes, a chain of related steps aimed at achieving a specific outcome, such as improvement of the health or reducing costs. By analysing these steps and the problems in the process it is possible to make care more efficient and patient centred. This approach has had a fundamental influence on quality policies and activities in most countries, particularly in hospitals. The influence in primary care is yet limited. There are many examples of successful quality improvement projects. They succeeded, for instance, in reducing the time between referral for possible breast cancer or vascular problems and the diagnosis and start of a treatment from weeks to 1 or 2 days. However, there is also criticism. One is that the evidence that TQM works is still largely anecdotal and not systematical. A systematic review of the literature on the effects of TQM and CQI on patient care describes a total of 55 studies: 42 were performed in just one hospital and only three had a controlled design [30]. The conclusion of the authors was that there is

insufficient evidence that this approach has a real hospital-wide impact on patient care. Also opinion leaders, the CQI-guru's, admit that the movement has not met their expectations, so far [31,32]: wide implementation has failed; doctors in particular are sceptical, probably because the process was embraced originally by managers; many doctors saw it as another social science approach or as a method to contain costs. In addition, the customer focus in this approach was often restricted to satisfaction surveys – lip service to patients without any consequences. The question remains whether the investment in training staff and other resources needed for TQM implementation is balanced by its benefits.

Should we skip this approach on the basis of current experiences and evidence? My personal view is that the CQI approach is a very valid, important, attractive and useful philosophy. It meets some of the basic requirements of effective implementation: it sees care not as single events, but as processes organized around patients and their health problems and it integrates different methods and strategies towards improving patient care. However, it is crucial that it is combined with other approaches, that clinical patient-centred improvements get more emphasis and that physicians will have a central, leading role in it [33]. New models for integrated care management and CQI have now been introduced, such as disease management systems or the 'breakthrough series', in which best practices in improving quality are identified, expertise exchanged and then implemented on a wide scale in many hospitals. These show fascinating results, but the challenge is nevertheless to study the effectiveness against the investment of resources and time and the feasibility of such models to convince a wider audience of their value.

Patient empowerment and partnership

A last approach has to do with the most crucial group in health care, the patients. There is an increasing awareness that patients can play an important role in defining optimal quality of care and in improving care. This is, according to the World Health Organization, not only desirable, but a social, economic and technical necessity [34]. New concepts such as patient centred care, patient empowerment and patients as partners illustrate this emancipation of the patient. Involving patients in their care and in the improvement of it is not only an ethical requirement. Patients are better informed than before, they have experiences that can be very educational and of great value for care providers in order to improve health care, their priorities and expectations can differ from those of care providers and, very importantly, they are co-producers of the outcomes of care. Whether the use of evidence-based guidelines will result in good patient outcomes depends largely on the behaviour of the patient. So far, patient involvement has been promoted mainly by patient laws, complaint procedures, satisfaction surveys and training of professionals to improve the communication with patients. For instance, patients have shown to be very able to express their opinions on the care they receive and this

may provide interesting data. We performed a study in 16 European countries and questioned more than 20 000 patients with an internationally standardized questionnaire about their satisfaction with family practice care. The results showed that patients were most positive about the time they got and the communication with the doctor; they were relatively negative about organizational aspects of care, such as waiting times and accessibility of the practice by telephone [35].

In recent years we have seen new methods, such as use of patient panels, methods of needs assessment, interactive videos and CD-ROM to educate patients, information sites on Internet, teleconferences and consultations through e-mail, as well as tools for shared decision making. What is the value of all these innovative approaches to improving care? Is this the path to a patient's and a payer's paradise? We need to conclude that there is much theory and policy here, but research on the value and effects is still in its absolute infancy [36,37]. For instance, we can predict that the Internet can potentially become a very powerful tool in educating patients on the best, the most effective and cost-effective care. About 40 million Americans used the Internet in 1997 and 43% did so to find medical information [38]. Patients can consult doctors through e-mail nowadays; however, the quality of the information and the accessibility for the public is still highly variable; the exact use by patients is unknown, as is the consequences this innovation will have for the relationship and communication between care providers and patients [39–41]. A journalist in The Netherlands recently introduced a new type of patient, the 'Cyberchonder' – the 'webjunkie' who has developed a more confidential and deep relationship with the search machine on the Internet than he has with his family physician.

Most research in the field of patients as partners has been performed on the effects of a patient centred style of communicating and on involving patients in decisions on their care. Many people have high expectations of the effects of shared decision-making on the quality of patient care [42,43]. But the results of the studies are yet mixed and sometimes confusing. For instance, a recent systematic review in the *British Medical Journal* on the effects of decision aids for patients facing health treatment or screening decisions, including 17 studies, showed that such aids can improve knowledge and stimulate patients to be more active in the decision process without increasing their anxiety. However, they had little effect on satisfaction and variable effect on decisions made, as well as on the outcomes of care [44].

For a long time there was concern about a paternalistic attitude in care providers leading to a dependant attitude in patients. Now, there is an additional concern on an unrealistic autonomy of patients leading to consumerism in patients and to a *laissez-faire* attitude and loss of morale in professionals who do not want to lose clients or just cannot cope with these patients. The expectations of the public on the potential of health care are enormous and intensive education of the public on appropriate health care use through all channels and methods is one of the most important challenges for the next years to implement cost-effective care. A bridge between evidence-based practice and guidelines on the one

hand, and patient empowerment and shared decision making on the other, needs to be built and effective methods in this area need to be developed and evaluated in the years to come. Otherwise this new, fascinating approach to implementation of cost-effective care can be skipped within a few years.

Conclusions

I come to some conclusions. Firstly, we have seen many new, very interesting models and approaches for improving quality and implementing cost-effective care in the last decades. The challenge for the years to come is to combine and integrate these and to build bridges between different conflicting approaches. Some of the approaches have been developed into religions and missionary movements. We need to be constantly aware that the evidence for their effectiveness and applicability on a wide scale is still limited. So, a second challenge is to make the step from anecdotal evidence to systematic evaluations in order to be able to distinguish between sense and nonsense, between faith and fact in the field of improving patient care. This is just as necessary here as in clinical care. The costs for society of all types of quality improvement are too large to leave this field to the fashion of the day. We need evidence that the methods to implement cost-effective care are themselves effective against acceptable costs. Therefore, research efforts on the different methods and models should be intensified, for instance research on the most effective and efficient methods to develop and implement clinical guidelines and indicators for health care assessment, research on new models for CQI (e.g. Break-through Series) and disease management, research on determinants of effective leadership and collaboration between professionals and institutions in quality improvement, and research on different models for partnership in improving health care. Particularly interesting in research on models and methods for quality improvement is the integration of different approaches (Evidence-Based Medicine, TQM, Audit, Professional Development, Patient Partnership) – for instance models that combine guidelines and clinical pathways for relevant clinical problems, using the best evidence available, process analysis and redesign, identification of patients' needs and expectations, continuous monitoring of outcomes and costs, etc. Such integrated models, if implemented and applied well, may gradually lead us into a new, reshaped place of health care delivery.

So, the third challenge is located in the wider implementation of such integrated approaches of quality improvement, particularly those of proven cost-effectiveness. Most success stories on quality improvement models come from projects focusing on the innovators and early adopters in the field [45]; those people or institutions that are curious and prepared to try new approaches. This normally leads to an overestimation of the value of the model. Late adopters will probably have other types of problems and experience other barriers than those of the innovators and early adopters; programmes aiming to reach them should take into account

those problems. Implementing improvements in patient care is usually a complex process demanding different methods and strategies at different levels of the health care system and optimally integrated within existing structures for education and improvement of quality.

I have been working in the field of quality improvement for more than 20 years. Twenty years ago this field was relatively simple: we had Donabedian, medical audit, the first consensus guidelines and maybe a few other methods. In the last decade quality improvement has become an adult, but increasingly complex field. Many different, usually very interesting approaches have been introduced. Actually, the field of quality improvement is broadly accepted and institutionalized now and is highly political correct. What is left is the question whether it really contributes to a better, a more effective, efficient and patient centred care. You, as leaders and researchers in this field should provide the answer.

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