

Integration of Formal CME

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Purpose of the document

Continuing Medical Education (CME) and Quality Improvement (QI) Initiatives have the same ultimate objective: to provide optimal care for patients.

We believe that formal CME and QI strengthen each other in the process of Continuing Professional Development (CPD).

This policy document, prepared by both EURACT and EQUIP is needed to inform and support national/local authorities and national colleges in their efforts to improve their CPD activities.

Aim

The basic aim of this document is to give recommendations on the characteristics and conditions needed for effective integration of formal CME and elements of QI. As a result of our evaluation of integration of formal CME and Quality Improvement initiatives we will identify characteristics and conditions needed for implementation.

These recommendations intend to outline an evolving model of Continuing Professional Development, combining QI interventions and more traditional forms of CME.

The document will not describe the different methods of CPD, but focuses on the place of Quality Assurance in the newer definition of CPD.

Background

Contextual changes

The medical scenery is constantly changing necessitating new concepts, strategies and options concerning services, education and quality. Science and knowledge, especially medical knowledge, change rapidly, leading to a limited lifetime for a "diploma". In each country Governments policies result in changes from "medicine by status" to "medicine by contract".

Modern high technology care, changes in demography, morbidity and social needs, growing expectations of patients, the demand of a humanistic approach and many other issues, as doctors' shift to part-time work, development of electronic communication and free movement between countries are going to have their impact on education and quality as well as on expectations towards the medical profession. In addition, the pharmaceutical industry is also changing its strategies with increasing use of scientific evidence.

Authorities stress the importance of basic knowledge and skills in the field of quality management for professionals in health care. Data should be collected and produced at local, regional and national levels in order to underpin assessment and decisions concerning policy and development.

Continual medical education and quality improvement

Until now, most of the formal Continuing Medical Education (CME)* -programmes have been offered as separate entities. Traditional formal CME programmes have emphasised teaching. Inspiring new approaches to continuing medical education focus on active learning. Quality Improvement (QI) activities have also been developed, and are mainly organised as separate activities.

The emerging requirements of health care systems focusing on outcome and cost-efficiency combined with the new learning paradigms, focusing on knowledge, competence and performance, set the scene for integrating the more traditional options for Continuing Medical Education and Continuous Quality Improvement, and put more and more emphasis on Continuing Professional Development Planning.

General Practice should be open to evaluation. Quality assessment and development is essential, irrespective of the employment status of family physicians. Continuing medical education can be an important instrument in Quality Assurance. (WHO, Regional office for Europe, 1998).

Recent large-scale review work demonstrates that didactic CME lectures don't lead to changes in performance. Broadly defined interventions using practice-enabling or reinforcing strategies are needed. These strategies consistently improve physician performance and in some instances, health care outcomes.

Professional development, continuously striving to enhance the competence necessary to meet the needs of patients and societies served, is a legal and ethical obligation. CPD should be based on the learners experiences. Effective CPD starts from perceived needs of the professional. The doctor should be seen as a self-directed learner (Hans A. Holm).

This document shows several ways to link traditional CME with Quality Improvement initiatives. Quality Improvement is a rapidly evolving discipline using specific methods and instruments. There is a big need for education in Quality Improvement. There is also a big need for evaluation of the quality of current CME.

*The terminology used in this document is described in [addendum 1](#).

Basic elements of integration of elements of QI in CPD

Patient and community priorities concerning health care should be central to CPD – activities

QI initiatives can start from health problems detected by the community or individual patients. Quality Improvement methods use patient evaluation programmes. Guidelines can include patient perceptions. Patient empowerment can lead to improvement of care (Box 1).

Box 1

Quali Doc: Learning from patients' experiences

Method: A step-by-step process is used to build up a model encompassing 4 dimensions: (1) patients' experiences with care and cure, (2) staff satisfaction including a self-assessment and burnout signs, (3) clinical outcomes, and (4) financial performance. To underpin continuous improvement oQuali Doc? measures an organisations' current performance with a standardised European EuroPEP instrument against self-perceived performance and against a model which represents a position of 'excellence'.

Results: The first two dimensions have been developed at now. Results are deployed as performance profiles monitored over time in comparison with standardised benchmarks of a reference group of providers that can be chosen accordingly. Standardised outreach visits? to the evaluated practices by trained peers were introduced for feedback of data, allowing weighting of results, setting priorities and implementing change.

The oQuali Doc? methodology enables providers learning and measuring from each patient using the information gleaned to test improvements.

Integration requires a continuous process

Formal CME and QI initiatives share common aims and require full integration in a continuous process rather than a series of sporadic projects. In order to be an effective tool for change, this process should be a routine part of clinical practice, ideally instilling lasting professional pride and drive toward improvement in each participant in the endeavour.

Continuing education should be based on the learners daily work practices

The use of learners experience can be a powerful tool in CPD. Experience can be used in an intuitive way using case discussions, or in a more formal way by using data from medical records e.g. in discussions on prescription behaviour.

The goals are set by the GP or the practice

Planning professional development can start from perceived needs in individual practices; the goals are set by the physician or the practice team setting up a personal or practice professional development plan. All members of the Primary Health Care team should work together. Quality assurance offers various methods to detect, define and analyse these needs.

Refocus CPD on the local professional environment

There is a need to refocus CPD on the local professional environment as the proper main arena for QI and formal CME. QI should be combined with current local CME systems.

In Quality Improvement Initiatives the place for formal CME should be defined and linked

Definitions of QI initiatives should include precise needs for formal CME and vice versa. Quality Initiatives should be organised in close relationship with formal CME programmes. Audit programmes could be used to define the educational needs for a CME programme (Box 2).

Box 2 The APO method

Method: The Audit (A) Project (P) Odense (O) methodology combines prospective data collection with peer review group discussion and presentation and discussion of guidelines in CME sessions. Evaluation and registration of changes. The APO method is an integrated quality development method which follows the audit cycle, suitable for elucidating frequently occurring topics encountered by staff in the primary health care sector. An audit according to the APO method includes:

1. Prospective registration on a specially developed chart suitable for collection of data to study own practice.
2. Follow-up activities including analysis of the registration result, identification of quality problems and subsequent training courses with a view to quality improvement.
3. Final registration and evaluation 1-2 years after the first registration in order to see whether the project target has been achieved.

As familiarity with the method increased, it was further developed to enhance the power to implement change. Tailored intensive CME activity has been integrated, and on a further stage APO registrations are combined with other data sources like administrative registers. Patient views will be considered via a questionnaire.

Results: The Project is well consolidated in Denmark and is now a resource centre for quality development and postgraduate training in general practice, and also relevant for other personnel groups in the primary health care sector. APO develops and carries out quality development projects, carries out research in quality development methods, and other research based on audit projects. In addition, APO has been involved in the development and implementation of clinical guidelines. Audit work is widespread in all counties in Denmark through a network of specially trained audit supervisors. Similarly, independent audit projects have been established in all the Nordic countries.

APO has every year carried out an audit on diagnosis and treatment of infections, in several projects been able to demonstrate a significant reduction in the number of antibiotic prescriptions and a significant change in prescribing pattern towards more small-spectrum antibiotics. In addition, APO has carried out audits on allergy, which has resulted in the issue of national guidelines on the topic, audits on musculoskeletal diseases, where quality problems with regard to X-ray diagnostics and the use of NSAID have been demonstrated. In the last couple of years the APO method has been used at the implementation of the clinical guidelines on prevention of ischaemic heart disease of the Danish College of General Practitioners. More than 2/3 of all Danish general practitioners have once or several times participated in an audit project. APO method is developing in the direction of combining self-registration with a multi-faceted intervention strategy designed to provide the best possibilities of change.

How to integrate formal CME and elements of QI?

Education in the philosophy and techniques of Quality improvement

To enhance the process of change, formal CME can be used for education in the philosophy and training of QI techniques. Quality Improvement is a young discipline. Implementing will be facilitated if GPs learn about its philosophy, methods and techniques.

Box 3

Germany: training program for moderators of peer review groups

Method: in two-day courses general practitioners are trained to lead small group work. Techniques of problem finding, communication in groups, conflict settlement are presented. Additionally the participants learn to document and evaluate quality of care with documentation sheets and videotapes. Training materials and a handbook of instruction (in German) have been developed.

Results: crossing the borders of medical speciality, presently about 1,100 physicians in ambulatory care have been trained (and ca. 1,500 other physicians by other providers). Estimated 2,500 quality circles in different medical specialities were established in Germany. Experiences and evaluations show that training of communication skills and techniques of quality improvement is of particular importance for general practitioners to tackle with problems of quality in daily care.

Elements of QI can be used for needs assessment in formal CME

There are different ways to define the needs for CME. One of the key challenges that health professionals face is knowing whether or not their current practice is up to date. Sackett and colleagues (Clinical epidemiology: a basic science for clinical medicine, 1985) refer to this as the key to continued effectiveness as a clinician?. Needs assessment techniques can be subjective (perceived needs) and/or objective (reflective needs). Several tools exist to help combine reflective or subjective needs assessment methods with use of objective methods, such as measures of competence, performance (for example, external audits), patient management problems, and health outcomes. Review or audit of medical records is a useful method of determining the extent to which our current practice is consistent with evidence-based principles.

QI has developed methods for analysing recorded performance

Data collection tends to be the most time-consuming part of the QI process, but it is essential. To evaluate how well we are doing, it's usually good to compare our own results with somebody else's data. Some methods of evaluating results are shown in the EQUIP handbook on Tools and methods for QI in General Practice?. One example: Quality circles in primary care (experiences from Germany and Switzerland): Some of the data sources used are case reports, data analysis from charts, practice computers or documentation sheets, as well as video documentation. Other examples are: practice visiting and practice audit (UK, Netherlands, Sweden, Belgium), patient feedback or patient satisfaction (EUROPEP).

QI has developed methods to use evidence based guidelines in formal CME activities

The development of our work by QI is easier when based on solid clinical evidence. To develop a valid and reliable guideline is hard work. Developing, distributing and implementing useful guidelines should be a major challenge for family doctors and their organisations. Guidelines can also provide excellent material for clinical training as well as for CME. There are many experiences from the Netherlands about implementation of the Dutch Guidelines combined with CME-packages linked to the topic of the guidelines. The National CME tutor network in Ireland provides training of key persons to supervise small educational groups performing various QI methods (Box 4).

Data and guidelines give direction to the process of planning actions for improvement.

Box 4

CME-groups with an emphasis on quality improvement (Ireland)

Method: CME in small groups involved in peer review, guideline implementation and audit. Groups are led by CME Tutors. These Tutors are local GPs who have been trained as group leaders and educators. Tutors are paid the equivalent of two sessions per week to allow them protected time for their activities.

Results: There are 120 small groups distributed throughout the country with an average of 10 members meeting at a local venue on a monthly basis. CME groups are promoted by the ICGP and at local level by individual CME tutors. The ICGP has produced a manual on small group facilitation and organisation. CME tutors attend three residential educational workshops per year to maintain and improve their skills. 90% of Irish General Practitioners are members of the ICGP, and 60% attend CME small groups on a regular basis. Improvement in skills and knowledge e.g. treatment protocols agreed. Supportive environment conducive to mutual support. Inter-referral between GPs encouraged e.g. Minor Surgery, Family Planning. CME tutors have an official ICGP visit every three years to evaluate all aspects of their work. A qualitative study addressing the issue »Does small group CME make a difference«? has just been completed. Preliminary results suggest that participants have made changes in their clinical practice as a result of CME.

QI has developed reinforcing strategies enhancing the effects of formal CME activities

Since formal CME activities such as lectures, conferences and educational materials appear to have little impact on practice, better use could be made of other approaches such as practice-based work in small-groups which incorporates the use of patient-specific reminders to health professionals. Dissemination of systematic reviews and evidence-based guidelines could be integrated into the system of CME. Where practices are actively involved in audit, it seems logical to address gaps in practice by linking education programmes to clinical audit. An example of a programme, which has made such links, is the Australian QA and CME Programme (PITERMAN 1995); learning is evaluated by repeating the audit to see whether actual performance has changed.

Box 5

Clinical audit-linking continuing medical education (CME) and practice assessment (PA)

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Method: The Quality Assurance (QA) Program of the Royal Australian College Of General Practitioners has required doctors to engage in practice assessment (PA) activities. Clinical audit is one of these activities and has been used as an assessment tool in the Graduate Diploma in Family Medicine at Monash University, in impact evaluation of educational programs as well as a means of pooling morbidity data for research purposes and peer review.

Results: Doctors participating in these audit activities have almost invariably described them as a valuable reflective educational exercise with changes in clinical practice occurring after the audit in a number of instances.

QI and barriers to implementation

Potential barriers to effective practice can be structural (e.g. financial disincentives, limitation of time), organisational (e.g. health care environment: health policies which promote ineffective or unproven activities), individual (e.g. knowledge, attitude, skills), influence of opinion leaders or peer groups (e.g. local standards are not in line with desired practice), patient factors (e.g. demands for care, perceptions/cultural beliefs about appropriate care). The focus of the Cochrane Effective Practice and Organisation of Care Group (EPOC, www.abdn.ac.uk/hsru/epoc/) is on reviews of interventions designed to improve professional practice and the delivery of effective health services, including various forms of CME, QI, informatics and financial, organisational and regulatory interventions that can affect the ability of health care professionals to deliver services more effectively or efficiently.

QI offers methods to evaluate the outcome of formal CME programmes

There are many investigations concerning effectiveness of CME courses. Davis et al (1995) concluded that short (1 day or less) CME events usually bring about little change. Wensing et al. (1998) Review of research on implementing guidelines and innovations in general practice confirms the effectiveness of multi-faceted interventions. Davis et al. (1994) conclude their review of the effectiveness of CME interventions by emphasizing the intensity and complexity of interventions with positive outcomes and the multi-faceted nature of the change process.

Evaluation procedures not only have to check the process of CPD but also the outcome on practice level. Performance indicators are now constructed in a reliable way, which can be used to measure the process and outcome of clinical care.

Box 5

Quality indicators for general practice

Method: the team of Martin Marshall, Stephen Campbell, Janny Hacker and Martin Roland developed a well reliable set of indicators for all the major clinical areas. They use a step-by-step procedure reviewing literature, appraisal by expert panels in a two-round data analysis.

Results: Quality indicators are defined in 19 major clinical areas. The indicators allow comparisons between practices over time or against gold standards. They facilitate an objective evaluation of a quality improvement initiative.

How to implement CPD?

1. Financial incentives

Financial incentives must be available for both formal CME and QI initiatives. A better planned and managed system of CPD means visualising what resources are needed.

2. Accreditation procedures

Accreditation procedures must integrate both formal CME and QI initiatives. CME courses must be attended and specific goals in QI attained. Therefore CPD time should be used for both QI and formal CME.

A flexible system of accreditation is needed, covering re-certification (competency evaluation) and both practice and doctors accreditation (performance evaluation). The system should be designed to account for the diversity of adult learning and knowledge and acknowledge the doctor as a self-directed learner.

The system of accreditation has to be supportive, transparent and checked with the national authorities, the professional organisations and the scientific organisations. Transparency will encourage public trust. CPD should be constantly evaluated, prioritised and guided at a national level on efficiency, potentiality, acceptability, etc.

Any point system using credits has to include the broad range of CPD interventions. Thus the organisers of formal CME/CPD become less obsessed with the control aspect and more focussed on real learning needs and how these can be met.

The legal consequences of various systems of mandatory re-certification for all specialists need clarification before introducing new systems.

3. Formal CME and QI Initiatives organisers must work together

Colleges, universities, local authorities etc. involved in the organisation of formal CME meetings and those who organise QI must combine their efforts in organising effective interventions. The organisation of effective integrated interventions on this level has to be stimulated by knowledge and stepped planning. The establishment of a clinical task force with numerous areas of competence to produce theoretical, practical and situational knowledge is one way of achieving this.

Doctors themselves have to take the lead, using methodological guidance provided by experts.

Box 6

Peer group learning based on performance data improves practice

Carlsen T, Bratland SZ, Claudi T, Cooper J, Telje J, Waaler HM

Method: Between 1995 and 1998 the Norwegian Medical Association carried out a project to develop and to assess a quality improvement tool for use in general practice (SATS). This method combines self-directed learning, documentation of practice and peer group support. SATS defined performance indicators for registration of practice by means of the computerised patient record. Groups of 4-10 general practitioners used their own consultation data as a basis for learning cycles.

The participants saw the possibility to compare their own practice with that of others as a

good origin for learning. The group discussions gave support and constructive criticism, which are both important to the learning benefit. The participants discussed what were actually doing with patients, not what they assumed that they did. The strength of the method seems to be that it is linked to own data, that it is woven into the clinical everyday work, that it is discussed with colleagues and that the use is relatively simple. The participants provide the data themselves, independent of external support. This gives flexibility. The method presupposes full openness about data inside the group, but gives protection against the observation from outside. It is seen as crucial that the participants »own« their data and that they remain confident that the aim is professional development, not external control.

Results: The practice evaluations indicate significant improvement in clinical work. The confrontation with own-recorded practice in a supportive peer environment is found to be a major force for change. The participants reported satisfaction with the method, and expressed an interest in trying out new topics. However, the project demonstrated the need for simplification of terminology, further development of group process methods and computer software. There is furthermore a need for strong local support of peer review groups.

4. The organisation of peer review groups should be promoted

The organisation of peer review groups should be promoted as a useful structure as long as it is organised as a secure and open environment for adult learning. Small- group work offers the opportunity for interactive education in a trusting environment. Establishing a peer review network would facilitate these actions. A tutor-training program enhances the facilities of the individual groups.

5. Start with simple and effective procedures

Clinical incident analysis, audit on prescription patterns of antibiotics, care for the diabetic patient and evaluation of organisational aspects of practice care are usually good starting points.

Box 7

Diabetic care and quality assurance: project in Israel

Margalit Goldfracht

6. Education

Skills for integrated effective interventions should be acquired in undergraduate teaching and during vocational training. A positive attitude towards lifelong learning, evidence- based practicing, and the undergraduate and vocational training curriculum should encourage cost-effective outcome orientation.

7. Research

Establishing national research centres for CPD, working together in an international network, should support research on effective CPD.

EPOC: the Cochrane Effective Practice and Organisation of Care Group

The results and outcomes of CPD should be recorded and analysed.

Conditions for starting integrated CPD interventions

1. Pre-course needs should be assessed

QI provides methods for pre-course needs assessment. Needs perceived by patients or other partners eg patients can be detected. Clinical audit can reveal areas needing attention. Evaluation of physician performance (according to stated indicators) can be the starting point for detecting areas requiring improvement.

2. Start from a need in the practice

Personal engagement can be encouraged by allowing individuals to choose their own outcome topics. However patient, society and health care needs should also be addressed.

CME topics should focus on specific, well defined, problem-based topics, where improvement is possible and readily applicable in practice. CME topics should be suitable for Q work.

Formal CME programmes should not only consist of credit collection to fulfil the demands set by authorities etc, but be based on assessment of needs.

3. Personal development plans and portfolio learning helps the individual professional to plan CPD

A personal development plan is based on the results of an appraisal meeting (interview), which discovers the areas most suitable to further professional development. The process covers the personal needs of the doctor and the needs of the service. The Personal Development Plan (PDP) must be a comprehensive document that records the outcome of the appraisal. The PDP describes the proposed CPD activities, how the need was identified, how CPD will be reinforced or disseminated and how effectiveness will be shown.

A learning portfolio is a comprehensive record of learning events, along with evidence of outcomes. It may contain logbooks, research of practice, research proposals, clinical data, »jottings« (ideas, thoughts, insights, challenges) and a reflective commentary in which the individual identifies what has been learned.

The portfolio provides a way of assessing professional development.

4. Include practice enabling and reinforcing strategies in formal CME programmes

Figures about performance data on the subject of CME and reinforcing strategies may have considerable impact on implementation of guidelines. Well-structured feedback techniques may improve the quality of certain clinical procedures (cervical smears, laboratory requests).

Box 8

Effect of routine individual feedback, over nine years general practitioners requests for tests

Methods: The Diagnostic Coordinating Centre Maastricht has provided feedback continuously since 1985, resulting in a more rational use of tests and fewer requests. They report the effects of nine years of feedback. They also investigated its effects on requests for tests that were not advised but had a recommended alternative.

Written feedback is given twice a year, with comments on inappropriate requests and suggestions for more rational testing. Rationality can be assessed because forms contain clinical data on patients.

Results: Annual data were analysed for each test and each doctor from 1983 to 1993. The effects of feedback are assessed by comparing trends in the number of requests for 44 common tests in our region and a control region.

From 1984 to 1993 the mean annual decrease in the number of requests in the Maastricht region was 3.5%, leading to a total decrease of 29% from 1984 values in 1993. A transient increase occurred in 1989. Requests for individual tests decreased by up to 98%. The number of requests for the 44 common tests decreased by 45% between 1984 and 1993 (mean annual decrease 6%) in the Maastricht region, but it increased continuously in the control region (mean annual increase 3.2%) ($P < 0.001$, Mann-Whitney U test). If the trend in the Maastricht region had been the same as that in the control region the number of requests in 1993 would have been about double.

Conclusion

A doctor's desire to be more competent in delivery of health care is the most important motivating factor for continuous learning and change. It is a prerequisite for achieving any improvements. Every doctor has a personal responsibility to participate in continuing professional development programmes, consisting of both formal CME and QI procedures.

Continuing Professional Development requires a planned integration of formal CME and QI initiatives. This will set the conditions to facilitate improvement in the process of day-to-day medical care.

This policy document shows the conditions and characteristics for such integration.

Addendum 1

Terminology

(FORMAL) CME = formal educational interventions: conferences, rounds, symposia and individualised training and teaching sessions. Knowledge is transferred by educational activities.

CME (definition AMA): any and all ways by which physicians learn and change in practice?

QI = Initiatives for Quality Improvement, where registration and evaluation of performance data are essential. QI essentially consist of three steps of the quality cycle: planning, evaluation of practice performance and action. Documentation (data collection), a pending issue in the recertification debate, is a central part of the QI process.

Quality development = a continuous process of planned activities based on performance review and setting of explicit targets for good clinical practice with the aim of improving the actual quality of patient care.

Integrated activity = an initiative where formal CME and QI activities are integrated in a planned coherent intervention.

Continuing professional development = a process of lifelong learning in practice. CPDs endpoint should be quality of care. CPD must help improve quality of care, demonstrate its effectiveness and become a properly managed activity by both the physician and the profession.

Method

The document is the result of a consensus procedure using semi structured expert interviews, literature reports and focus group discussions in the EQuIP and EURACT meetings from November 1998 to 2001.

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Addendum 2

Consequences for Basic Medical Education (BME) and Vocational training (VT)

Changes towards a more CPD- oriented policy will require basic changes in BME and VT, not only for the subject of General Practice, but also for other subjects. At the moment, there is a tendency to teach QI and EBM only in the time reserved for General Practice, whereas most of the topics mentioned below could belong to other disciplines in BME as well. All the elements have to be learned as early as possible, but some of the topics are particularly suitable for vocational training.

1. Preparation for life-long learning

- Basic principles of learning and studying; different learning styles and strategies, how do I learn best? What kind of learning strategies should I use in different situations? Self-knowledge is needed, and it has to be started during BME.
- Skills for continuously updating knowledge; how to do a literature search, how to use databases, how to read critically (critical appraisal, EBM), what kind of search-elements to use, how to make an overview of main results.
- Skills for identifying learning needs, how to assess learning needs, not only from an individual point of view but also taking patients and health care needs into account. Encouragement of positive attitudes towards QI during BME.
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2. Skills for team-learning and multidisciplinary learning;

- To be able to work as a team member in task-orientated groups.
- Communication skills and leadership skills.

3. Basics of Quality Assurance (QA)

- What is quality, what is the place of QA in daily practice, terminology; basic philosophy of QA: the Plan Do Check Act cycle or quality cycle.
- Basic Procedures: peer review, practice visits, clinical internal or external audit, patient evaluation; feedback procedures etc.
- Quality indicators: definition, characteristics.
- Procedures and techniques to define and outline a quality problem.
- Value of guidelines, how to implement guidelines.
- Skills to assess one's own work: clinical incident analysis; structured case discussion; chart audit: clinical audit; video assessment of communication skills etc...
- Skills to analyse and interpret figures
- Skills to plan actions for improvement and to evaluate them
- QA management skills: change management, time management, leadership, annual report and planning QA. working as a team.

4. Working with a *learning agenda* (discover your own needs, evaluate your learning progress, record it in an individual portfolio).

Literature

Literature search

Method

- Medline selection 1996-2000, key words: Education, -Medical, -Continuing AND Quality of Health Care; only review articles were selected.
- Cochrane Library search (12/11/99)

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