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HEALTH SYSTEMS AND POLICY ANALYSIS

POLICY BRIEF

Do lifelong learning and revalidation ensure that physicians are fit to practise?

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This policy brief, written for the WHO European Ministerial Conference on Health Systems, 25–27 June 2008, Tallinn, Estonia, is one of the first in what will be a new series to meet the needs of policy-makers and health system managers.

The aim is to develop key messages to support evidence-informed policy-making, and the editors will continue to strengthen the series by working with authors to improve the consideration given to policy options and implementation.

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Key messages

Policy issue and context

- In some countries, pressure is growing to demonstrate that practising physicians continue to meet acceptable standards. This is driven in part by concerns that the knowledge obtained during basic training may rapidly become out of date. It is also increasingly a way of holding physicians accountable.
- Physicians may be encouraged to engage in lifelong learning to continually update their knowledge and skills. This may involve assessing practice, identifying relevant learning objectives, acquiring skills and knowledge and carrying out assessment.
- A review of selected European countries, Australia, New Zealand and the United States of America reveals diversity in approaches to ensuring physician competence. The outcome of these processes may be recertification or relicensure.
- Revalidation is an all-encompassing term that includes all the methods used to ensure that physicians remain competent and, at its simplest, involves ensuring that a physician remains fit to practise. More complex forms can also involve interventions to deal with physicians who are not fit to practise. Hence, it can also be a method of improving physician performance.

Policy measures

- Continuing medical education and continuing professional development are the most widely used approaches and can be effective in improving clinical practice and health care outcomes. Nevertheless, they do not identify the physicians who perform poorly.
- Recertification can be used to identify the physicians who perform poorly, and evidence from the United States suggests that it is effective in improving clinical outcomes and the quality of care.
- Continually assessing the performance of all physicians in all domains of competence is impractical. Evidence on the different tools for assessing physicians is inconclusive in most cases, especially in terms of patient outcomes. Cost–effectiveness data are also largely absent.
- When government leads revalidation, it can be a control mechanism for the quality and accountability of services. In contexts of professional self-regulation and co-regulation (between professional and statutory bodies), it represents the reformulation of professional autonomy.

Implementation considerations

- Different balances of incentives and penalties are likely to work best in each country. Currently the most severe penalty is revoking the licence to practise.
- Sophisticated information systems are needed to implement and evaluate revalidation.
- Many countries experience difficulty in raising the necessary resources to implement even the most basic policies on physician performance. When the pharmaceutical industry is a major funder of revalidation, the government should consider establishing an independent regulatory body to set the programme's agenda.

Executive summary

In some countries, pressure is growing to demonstrate that practising physicians continue to meet acceptable standards, driven in part by concerns that the knowledge obtained during basic training may rapidly become out of date. This takes various forms, from expectations – in some cases backed by various sanctions – that physicians will engage in continuing medical education and continuing professional development to requiring that they demonstrate that their skills are up to date as a condition of remaining in practice. The latter approach is exemplified by the proposals for a system of revalidation in the United Kingdom.

Lifelong learning is a process involving assessing practice, identifying relevant learning objectives, acquiring skills and knowledge and carrying out assessment. The two main components are the process of keeping up to date through continuing medical education and continuing professional development and then assessing whether this has been successful through various assessment and feedback mechanisms. Continuing medical education and continuing professional development can enhance physicians' knowledge, attitudes and skills, but the quality can vary. Audit and feedback can also improve professional practice within a supportive context. Recertification can be awarded when the required components are successfully completed, and recertification systems can identify the few physicians who seriously underperform (experience is limited to the United States). Revalidation is an encompassing term that includes all methods used to ensure physician competence.

Relevant to their own context and requirements, countries also need to consider which body should be responsible for regulating physicians. There seems to be a consensus that self-regulation is more willingly accepted than government regulation, reducing incentives for opportunistic behaviour and non-compliance. Some commentators argue that overzealous regulation could actually erode rather than increase trust in professionals and public services. Perhaps reflecting increased awareness of these issues, forms of co-regulation or partnership regulation between professional and statutory bodies or payers are increasingly being explored.

In terms of implementing policy, what is required of physicians and whether and how revalidation is enforced vary significantly. These differences reflect the diversity of traditions, such as the concepts of liberal professions, norms on the role of the state, the degree of devolution to regional bodies and the role of payers such as social insurance funds. Nevertheless, it is widely accepted that revalidation should be transparent but non-punitive, with efforts focused on professional development and identifying the very few "bad" physicians who

may pose a risk. The most effective method of enforcing physician assessment is not clear, and different balances of incentives and penalties are likely to work best in each country. The most severe penalty is revoking the licence to practise. A less severe version is the loss of certification, as in the United States, where certification is not a legal requirement to practise medicine. The system of recertification in the United States was introduced only after stepwise evaluation of the assessment methods, suggesting that countries considering introducing such a system should proceed gradually.

A critical issue in enforcement is the availability of information. Information systems are needed to evaluate the effects of revalidation. Countries with sophisticated health informatics systems and functioning electronic health records will have an advantage in implementing revalidation.

Policy-makers must consider how to fund lifelong learning. Here the provision of training must be separated from its regulation. Funds for regulation come either from governments or individual professionals (often via their professional bodies). Funds for training can also come from other sources, most often the pharmaceutical industry. As this raises the possibility of the industry driving the content of continuing professional development, governments should consider establishing an independent regulatory body to set the agenda in accordance with the needs of the health system.

Policy brief

Policy issue: lifelong learning and revalidation of physicians

It is increasingly accepted that completing undergraduate medical education is only the first step in a process of lifelong learning for physicians. Many countries are putting in place measures to support and encourage and, in some cases, to require continual updating of skills and knowledge.

Approaches to lifelong learning

At its simplest, lifelong learning involves participation in continuing medical education, designed to keep physicians up to date on clinical developments and medical knowledge. The broader concept of continuing professional development includes continuing medical education along with developing personal, social and managerial skills. More demanding methods incorporate other tools such as peer review, external evaluation and practice inspection. The outcome of these processes may be recertification or relicensure, though this is rarely the case.

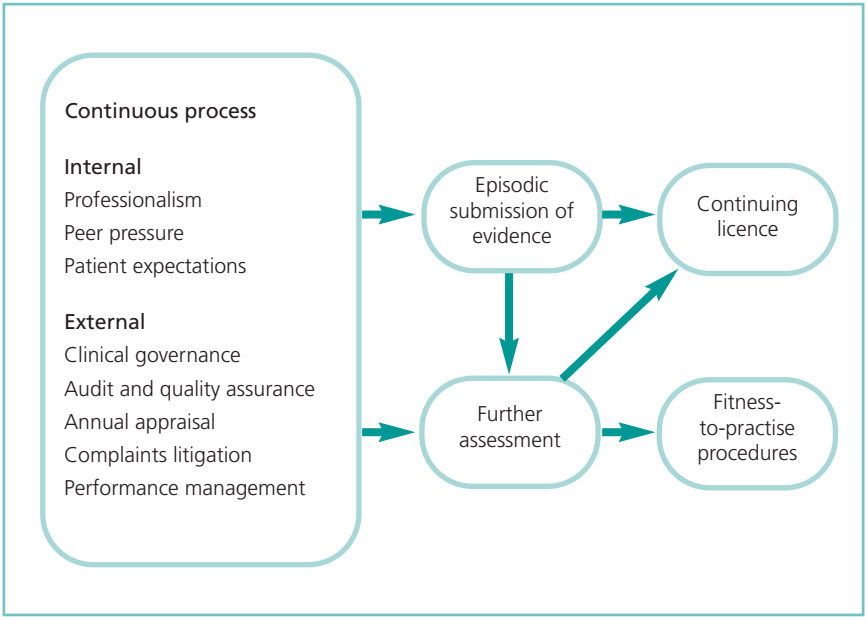
Few countries require that physicians demonstrate explicitly that they remain fit to practise. The General Medical Council in the United Kingdom coined the term "revalidation", defining it as an "evaluation of a medical practitioner's fitness to practise" *(1)*. Although this definition focuses on assessment, it is recognized that the process leading up to this should be formative, encouraging professional development and identifying those unfit to practise. Revalidation is thus one element within a larger system that has three objectives:

- to provide a system of professional accountability;
- to ensure that basic standards of care do not fall below acceptable standards; and
- to promote continuing improvements in the quality of care *(2,3)*.

Figure 1 illustrates this.

This policy brief examines emerging approaches to revalidating physicians in Europe. Following a discussion of the contextual factors influencing the choice of approach, the brief reviews how European countries have developed and implemented policies, highlighting the significant challenges. Examples from other countries such as Australia, New Zealand and the United States of America are also presented. Evidence relating to the different approaches is then reviewed. Finally, some implementation options are discussed.

Fig. 1. The full system of continuous and episodic quality assurance



Source: Pringle *(1)*.

In addition to a detailed literature review, the material for this policy brief came from:

- a questionnaire on the structure, process and regulation of lifelong learning, with responses from Austria, Belgium, France, Germany, the Netherlands, Spain and the United Kingdom; and
- information from the European Union of Medical Specialists, the European Accreditation Council for Continuing Medical Education and the European Academy of Teachers in General Practice, as well as online resources, including Health Systems in Transition country profiles by the European Observatory on Health Systems and Policies.

Policy context

The European ExPeRT (external peer review techniques) project, funded by the European Commission for three years beginning in August 1996, identified four main external peer review models aimed at measuring the quality of service management and delivery: health care accreditation; the International

Organization for Standardization (ISO) 9000 standards (accreditation standards initially designed for industry but since applied to health care in radiology, laboratory systems and quality systems in clinical departments); the European Foundation for Quality Management Excellence Model (a self-assessment framework for applying external review to achieve quality standards); and *visitatie*, which is Dutch for visitation- or peer review-based schemes *(4–6)*.

The ExPeRT project defined visitation as a "standards-based on-site survey conducted by medical professionals in order to assess the quality of professional performance of peers, aimed to improve the quality of patient care". This has been developed most extensively by the medical associations in the Netherlands, but peer review groups have also become an important method of quality improvement in primary care in several other European countries. In the past 10 years, peer review groups (also known as quality circles) have substantially developed in Austria, Belgium, Denmark, Germany, Ireland, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom *(7)*.

The ExPeRT team argued that models of quality assurance can be converged in principle within Europe but that whether convergence is practical depends on the willingness of governments, health service providers, health care quality professionals and organizations to come together and adopt certain policy recommendations *(6)*. This consensus, in turn, requires complementing technical analysis with more thorough policy analysis of the shifting roles and power relations in relation to accountability in European health systems *(5)*.

The potential to implement different quality assurance models varies among countries, reflecting the balance of power between the different stakeholders. For example, in the United Kingdom, most of the public as well as family doctors believe that physicians should be assessed regularly to ensure that their knowledge and skills are up to date *(8)*. Similar views have been reported in the United States, where the public feels that doctors having high success rates for the conditions they treat most often is important and that they must periodically pass a written test of medical knowledge *(9)*. Several factors in the United Kingdom have led to challenging the status quo. In particular, politicians used high-profile enquiries into situations in which the behaviour of physicians had fallen short of expected standards *(10,11)* to strengthen government regulation of professionals *(12)*. Although rare, such cases indicated weaknesses in underlying systems for acting on evidence of unsatisfactory performance at an early stage. In other countries, patients may be less questioning of physician competence, creating less demand for explicit accountability mechanisms.

A further factor contributing to concerns about lifelong learning is increasing evidence of the scale of medical errors *(13–15)*. Although most involve broader

system failures, they have contributed to concerns about physician competence. A Eurobarometer survey *(16)* reveals that almost four in five European Union residents (78%) classify medical errors as a problem in their country. In Italy (97%), Poland (91%) and Lithuania (90%), the great majority of the respondents evaluated the problem as important. In contrast, about half the population in both Denmark and Finland does not consider medical errors an imminent problem *(16)*.

Underpinning these developments is growing recognition of the rapid pace of change in medicine and how the skills and knowledge of physicians can erode over time. A systematic review of the relationship between experience and the quality of care found that 32 out of 62 studies (52%) reported an association between decreasing performance and increasing years in practice for all outcomes assessed. This suggests that older doctors and those who have been practising for many years have less factual knowledge, are less likely to adhere to appropriate standards of care and may also have poorer patient outcomes *(17)*.

A further dimension exerting pressure on countries to develop consistent policies on lifelong learning relates to the right to free movement across national borders by health professionals and patients. Several high-profile cases have placed the movement of patients within the European Union firmly on the political agenda *(18–20)*. Somewhat less attention has been paid to the movement of health professionals *(21)*. Professional mobility is based on the mutual recognition of professional qualifications, which assumes that someone registered to practise in one Member State remains competent to do so in all others. This is consistent with the principle of free movement enshrined in successive European treaties; barriers should, therefore, be no higher than absolutely necessary. This has led to calls for greater coherence internationally on how doctors are trained, registered and continually assessed. There is, however, surprisingly little understanding of how doctors are continually assessed in different Member States, who the regulators are, what methods of regulation are used and how it is implemented.

Lifelong learning in practice

Who regulates lifelong learning in Europe?

Professional medical bodies regulate lifelong learning in many western European countries, sometimes within a legal framework established by governments. In others, insurers may take the lead in requiring physicians contracted with them to fulfil specific requirements. In most cases, a combination of several stakeholders takes responsibility for ensuring that standards are maintained.

In France, three professional bodies are involved: the Conseils Nationaux de Formation Médicale Continue (National Councils for Continuing Medical Education for ambulatory care doctors, self-employed ambulatory care doctors and hospital doctors). However, only the council for self-employed ambulatory care doctors had defined continuing medical education requirements at the time of writing. In addition, the French National Authority for Health, an authority accountable to parliament along with hospital medical committees, promotes medical auditing. Regional councils for continuing medical education are responsible for ensuring that doctors fulfil the requirements, with the regional councils of the French Medical Association able to take appropriate action when this is not the case.

In the United Kingdom, participation in continuing professional development has long been a condition of employment in the National Health Service and, more recently, for continued membership of the Royal Colleges, which play a key role in specialist training and standards. The Department of Health in England has outlined its commitment to introducing a compulsory system of revalidation that will include all physicians in whatever setting they practise *(22)*. Physicians will be required to renew a licence to practise every five years. The Royal Colleges will have a role in supporting physician recertification, and the General Medical Council will be responsible for ensuring quality in the appraisal process for relicensure.

In Belgium, the Minister of Public Health grants physicians their licence to practise. Receipt of this licence only grants the right to use the title of general practitioner or specialist. Physicians must further apply to the National Institute for Health and Disability Insurance if their patients are to be reimbursed for treatment, with the option of seeking further accreditation that will allow them to earn higher fees.

The groups and schemes responsible for regulating physicians among countries reflect differing contextual factors. Table 1 provides a detailed comparison of revalidation approaches in selected countries in the WHO European Region. Professional self-regulation predominates, sometimes entirely independent of government and other times subject to government oversight or involvement. Consensus seems to be widespread that self-regulation is more willingly accepted, reducing the incentive for opportunistic behaviour and non-compliance.

Table 1. Revalidation of the medical profession in selected countries in the WHO European Region

Country	Time frame (years)	Types of revalidation		Compulsory	Penalty or reward	Lead regulator	Other authorities
		Continuing medical education and continuing professional development	Peer review				
Austria	3	Yes	Yes	Yes	Legal requirement	Austrian Medical Chamber (PB)	Federal Ministry of Health and Women (G); Austrian Academy of Physicians (PB)
Belgium	3	Yes	Yes	No	Financial incentive (increased salary by about 4%)	Minister of Public Health (G); National Institute for Health and Disability Insurance (IF)	N/A
Bulgaria	3	Yes	No	No	No	Ministry of Health (G)	N/A
Croatia	6	Yes	No	Yes	Failure to comply requires examination to continue to practise	Croatian Medical Chamber (IA)	Institute of Licensure and Relicensure; specialist societies (PB); Croatian Medical Association (PB); universities; hospitals
Cyprus	3	Yes	No	Yes	No	Cyprus Medical Association (PB)	National scientific societies

Czech Republic	5	Yes	No	Yes	No sanctions for first six years (2004–10)	Medical Chamber (IA)	N/A
Denmark	N/A	Yes	Yes	No	No	Danish Medical Association (PB)	National scientific societies
Finland	1	Yes	Yes	No	No	National Evaluation Council for Continuing Medical Education	Finnish Medical Association (PB)
France	5	Yes	Yes[a]	Yes	Lawsuits by the regional councils of the French Medical Association (not monitored)	National Councils for Continuing Medical Education (PB)	Regional councils for continuing medical education (PB); regional councils of the French Medical Association (PB); French National Authority for Health (IA)
Germany	5	Yes	No	Yes (general practitioners and specialists contracted by social health insurance funds)	Non-compliance results in reduced reimbursement; then after two years, accreditation is withdrawn	Regional chambers of physicians (PB)	State ministries of health or social affairs (G); regional associations of social health insurance fund physicians (PB); Federal Association of Social Health Insurance Fund Physicians (PB)
Greece	5	Yes	No	Yes (for National Health Service doctors)	No	Committee of Education and Training of the Central National Health Council	Panhellenic Medical Association; medical societies; medical schools; National Health Service hospitals

a Evaluation of Professional Practices

Table 1. Revalidation of the medical profession in selected countries in the WHO European Region (continued)

Country	Time frame (years)	Types of revalidation		Compulsory	Penalty or reward	Lead regulator	Other authorities
		Continuing medical education and continuing professional development	Peer review				
Hungary	5	Yes	Yes	Yes	Failure to comply requires a special examination before a commission	Medical Chamber	Committee for Quality Control of Continuing Medical Education
Ireland	5	Yes	Yes	Yes	To be decided	Medical Council (G)	Royal Colleges (PB); Irish Health Services Accreditation Board (IA)
Italy	3	Yes	No	Yes	No	Continuing Medical Education Commission of the Ministry of Health (G)	Italian Medical Association (PB)
Luxembourg	N/A	Yes	No	No	No	National Medical Association (PB)	National specialized societies (PB); hospital departments; National Society for Medical Sciences

Netherlands	5	Yes	Yes *(visitatie)*	Yes (specialists)	Removed from medical registry	Central College of Specialists (PB)	Central Information Unit on Health Care Professions (G)
Norway	5	Yes	No	Yes (for general practitioners)	Financial incentive for recertification	Norwegian Medical Association (PB)	Ministry of Health (G)
Portugal	N/A	Yes	No	No	No	Portuguese Medical Association (PB)	N/A
Romania	5	Yes	No	Yes	Revoking of the right to practise medicine	Romanian College of Physicians (IA)	Scientific societies; professional organizations (PB)
Slovakia	5	Yes	No	Yes	No	Slovak Accreditation Council (IA)	Slovak Medical Chamber; Slovak Medical Association (PB); universities; scientific societies
Slovenia	7	Yes	Yes	Yes (about 2.5% of doctors per year)	Failure to comply results in re-examination	Medical Chamber of Slovenia (PB)	Ministry of Health (G); Slovene Medical Society

Table 1. Revalidation of the medical profession in selected countries in the WHO European Region (continued)

Country	Time frame (years)	Types of revalidation		Compulsory	Penalty or reward	Lead regulator	Other authorities
		Continuing medical education and continuing professional development	Peer review				
Spain	N/A	Yes (9 of 17 regions)	No	No	Varies between regional commissions	Spanish Medical Association (PB)	Ministry of Health and Education (G); medical colleges (PB); Commission of Continuing Education of Health Professionals; Accreditation Council for Continuing Medical Education
Sweden	N/A	Yes	No	No	No	Institute for Professional Development of Physicians in Sweden (IA)	Swedish Medical Association (PB); Swedish Society of Medicine; Federation of Swedish County Councils (G)
Switzerland	N/A	Yes	No	Yes (specialists)	Loss of membership in the Swiss Medical Association	Scientific societies and the Swiss Medical Association (PB)	N/A

Turkey	1	Yes	No	No	No	Accreditation Council of the Turkish Medical Association (PB)	N/A
United Kingdom	5	Yes	Yes (360° feed-back exercise)	Pending: general practitioners and specialists	Failure results in practice supervision	Department of Health (G)	General Medical Council (PB); Royal Colleges (general practitioners and specialists) (PB)

Note: Table 1 includes the type of regulator or authority if known:
G: government;
IA: independent authority;
IF: insurance fund;
N/A: not applicable;
PB: professional body.

Source: results from country questionnaires (Austria, Belgium, France, Germany, the Netherlands, Spain and the United Kingdom) and the web sites of the European Union of Medical Specialists and European Medical Network (rest of the countries).

The role of medical regulatory bodies

Regulatory authorities in Europe have taken various steps to validate the knowledge and skills of physicians. The following section presents selected examples.

Since 2005, physicians in the Netherlands have had to undertake continuing medical education and undergo a visit by peers every five years. Revalidation is a condition for being on the medical register. The visits (*visitatie*), by a team of three other doctors, including one recently visited and one about to be visited, involve a comprehensive assessment of practice with ongoing discussions on monitoring adherence to clinical guidelines and patient input.

Physicians in Germany receive their licence to practise from regional ministries and are regulated through their regional chambers (professional associations). Several accreditation mechanisms have been introduced at the federal level since the 2004 Social Health Insurance Modernization Act was adopted. Germany's revalidation scheme requires physicians to fulfil continuing medical education requirements every five years (250 credit points of approximately 45 minutes each). Physicians contracted with the social health insurance funds and working in ambulatory care are not subject to detailed regulations on the topics that must be covered by continuing medical education. In contrast, specialists working in hospital have to show that 70% of their vocational training has been on topics concerning their specialty. Radiologists are subject to an additional recertification procedure if they read mammograms. These programmes are voluntary for purely private physicians. In the event of non-compliance, the regional associations of social health insurance physicians can reduce reimbursement rates after one year by 10% and after two years by 25%. If the continuing medical education certificate is not achieved within two years after the due date, accreditation may be withdrawn. All regions except for Baden-Württemberg have implemented a computer-based registration system for continuing medical education. At the end of June 2009, the continuing medical education system will be reviewed for the first time. Participation in continuing medical education is expected to be combined with quality assurance systems, thus promoting a broader system of continuing professional development.

In the United Kingdom, the General Medical Council is responsible for assessing physicians' fitness to practise and is developing a system of revalidation in association with government and professional bodies. The Chief Medical Officer for England initiated a public consultation in July 2006 on ways forward, proposing that revalidation be broken down into:

1. relicensure to permit practice as a medical practitioner; and
2. recertification to practise as a general practitioner or specialist *(23)*.

Relicensure would take place every five years, based on a revised model of appraisal used in the National Health Service but applied to all doctors wherever they work and incorporating the General Medical Council's generic and specialty standards and the views of patients and colleagues (360° feedback exercise). Physicians would be recertified according to procedures developed by each Royal College. Physicians who fail in either process would spend a period of time in supervised practice. The Department of Health endorsed this two-stage approach in February 2007 *(20)*. Evidence to support recertification can come from various sources (depending on specialty), including clinical auditing, knowledge tests, patient feedback, employer appraisal, continuing professional development or observation of practice *(24)*. The General Medical Council will be charged with ensuring the quality of the process.

Participation in continuing medical education is common in some countries. The continuing medical education programme for licensed medical doctors in Austria, Diplom-Fortbildungs-Programm, was approved in December 2001 and awards a certificate over a three-year cycle. Physicians must acquire 150 continuing medical education credits, 120 of which have to be acquired through specialty-related certified continuing medical education programmes, with a minimum of 40 points in the physician's particular specialty. Continuing medical education points can also be accumulated for undergoing peer review. Since 2001, a new medical law has made participation in continuing medical education and continuing professional development mandatory, with legal responsibility residing with the Austrian Medical Chamber. The actual implementation of the programme rests with the Austrian Academy of Physicians, its educational arm. The Chamber believes that continuing medical education should be independent, be internationally competitive, meet high scientific standards and be free from economic interests *(25)*.

In Belgium, general practitioners and specialists are legally obliged to comply with certain standards and have financial incentives to pursue further accreditation. The Minister of Public Health grants licences to practise, and general practitioners must fulfil specific criteria including: maintaining patient files; participating in the local on-call service; ensuring continuity of care; undertaking at least 500 consultations each year; and regularly developing and maintaining knowledge, skills and medical performance. Accreditation can serve as proof of this last criterion. Alternatively, the doctor must provide evidence of 20 hours of continuing medical education per year, recognized by the Licensing Committee of General Practitioners. Specialists must preserve and develop their competence through practical and scientific activities throughout their career.

The National Institute for Health and Disability Insurance in Belgium grants accreditation if the physician meets additional requirements, including

participating in continuing medical education and peer review. Although accreditation is not required, it enables physicians to charge higher reimbursable fees to patients, boosting a physician's annual salary by about 4% *(26)*. Accreditation lasts for three years. To renew accreditation, specialists and general practitioners must obtain 200 continuing medical education credits and participate in at least two peer reviews per year. Hospital physicians are required to participate in the peer review process, regardless of whether they seek accreditation.

France has introduced a system with components that resemble revalidation, with the specific intention of containing costs caused by inefficient variation in the provision of care. Continuing medical education and medical auditing (known as the evaluation of professional practices) were introduced independently in 2004. Both are intended to be compulsory, and participation should be assessed every five years. The General Inspector of Social Affairs has criticized them, however, as neither system is monitored. Moreover, some challenges have been identified, including:

- a lack of information on the clinical practices of doctors;
- the cost and maintained funding of continuing medical education activities;
- conflicts of interest in the management of the system; and
- weaknesses in the conceptual foundation and the management of the system *(27)*.

Further, because the legal status of institutions responsible for regulating continuing medical education and the requirements for the evaluation of professional practices are not the same, evaluation of professional practices has been difficult to implement and enforcement has been delayed. As the introduction of compulsory continuing medical education in 1996 did not lead to an increase in physician participation, many doubt whether physicians' behaviour will change unless there are enforcement mechanisms.

In Spain, continuing medical education is reported as fragmented, but interest is growing in developing certification and recertification schemes in the regions, which are responsible for providing health care. National legislation has identified the need for both certification and recertification, and the medical colleges have established voluntary continuing medical education systems. The Spanish Commission of Continuing Education of Health Professionals initiated a nationwide continuing education system in 1998, based on Catalonia's experience with a "comprehensive continuing medical education accreditation system for doctors" *(28)*. As of 2005, however, only 9 of 17 regional commissions had implemented it.

As this summary demonstrates, what is required of physicians and whether and how it is enforced vary significantly. This reflects the diversity of traditions, such as the concepts of liberal professions, norms on the role of the state, the degree of devolution to regional bodies and the role of payers, such as social insurance funds.

Examples of lifelong learning from outside Europe

The United States has one of the most comprehensive approaches to lifelong learning: the specialty board certification system. This was originally a voluntary system, increasing pressure on physicians to seek certification, and later, recertification, and has resulted in 87% of physicians in the United States being certified in 2006 *(29)*. One reason was the growing consumer movement in health care. Second, managed care plans began to prefer board-certified physicians for their networks. The third reason came in 2002, when all 24 boards under the American Board of Medical Specialties agreed on comparable standards for board certification, including recertification requirements and a new component requiring evaluation of performance in practice known as maintenance of certification.

All specialties require four components to maintain the certification process:

1. an active and unrestricted licence in the state where the physician is practising;
2. self-evaluation of knowledge, to increase and strengthen the standards for continuing medical education, including the ability to demonstrate significant learning;
3. a secure, closed-book examination of knowledge; and
4. assessment of performance in practice.

Family physicians, general internists and general paediatricians are considered specialists under the American Board of Medical Specialties. Currently, renewal of certificates is required within six- to ten-year cycles, depending on the specialty *(29)*. A medical licence is a legal requirement to practise medicine in the United States, but specialty board certification is not. It has been suggested that one of the major benefits of this system is the independence of the national assessment bodies from direct professional advocacy *(30)*.

In New Zealand, participation in a recognized programme has become mandatory to maintain vocational (specialist) registration. The New Zealand Medical Practitioners Act (1995) states that unsatisfactory completion of recertification or competence programmes may result in a doctor's registration or practising certificate being subject to conditions or a doctor's vocational

registration being suspended, in which case the doctor will be deemed to hold general registration and therefore will be required to work under supervision *(26)*. Since 2001, each doctor in independent practice is expected to spend at least 50 hours per year on recertification activities, including external audit, peer review of cases, analysis of outcomes and reflective practice. This allows them to obtain an annual practising certificate from the Medical Council of New Zealand. Failure to meet certain standards results in removal from the Council's register. Medical colleges are responsible for setting the standards in recertification *(1)*.

Australia's national government has strongly emphasized the quality and safety of health care since the early 1990s by establishing the Australian Council for Safety and Quality in Health Care. Australia's health care system is decentralized, and medical boards license doctors to practise and deal with complaints and poor performance at the state level, although a doctor licensed in one state can practise in others *(23)*. In New South Wales, all doctors have been required to demonstrate their continuing fitness to practise annually since 2000. They do this by submitting wide-ranging self-declared information, including: current qualifications and experience; health status; criminal charges and convictions; disciplinary actions; and "professionalism". "Professionalism" may include self-certification of continuing medical education or participation in a professional standards programme operated by one of the national specialty medical colleges. There is currently no direct link, however, between compliance with the annual return and continuing state registration (recertification) *(23)*.

Potential policy approaches to enhance lifelong learning

What models are available?

Although methods are still evolving in most of Europe and there is no obviously superior approach, there might be considerable unrealized scope to learn from the experience of countries with more developed systems of ensuring lifelong learning. A study of the experiences of Canada, New Zealand and the United Kingdom *(31)* divided models for assessing continuing competence into two broad categories: the learning model and the assessment model, with the latter subdivided into four further types. The following section summarizes the models and notes their current application in Europe (according to Table 1).

Learning model

Programmes under this model usually reward attendance at formal continuing medical education activities, self-assessment of learning needs, patient feedback, academic activities and audits. Most are based on continual quality

improvement. This model seeks to improve clinical competence but does not identify physicians who perform poorly. All countries in Table 1 employ the learning model, some in combination with other models.

Assessment model

The assessment of the practising physician model emphasizes performance as well as competence and thus corresponds more closely to the idea of revalidation. Assessment tools have been adapted from those used in undergraduate and vocational education for the specific purpose of assessing the performance of practising physicians. These include, for example, interviews, case-based oral examinations, record reviews, peer ratings, patient satisfaction questionnaires and observing patient encounters. The study *(31)* distinguished four separate types of assessment, each with its own difficulty.

Responsive assessment: this entails assessing the performance of practising physicians only on receipt of a complaint or report of a problem. It cannot therefore identify all those who are performing poorly. No country mentioned in Table 1 relies exclusively on this model.

Periodic assessment for all: this entails a routine full assessment of all domains of competence for all physicians. This could include assessing patient outcomes, evaluating medical knowledge and judgement (reviewing credentials) and the judgements of peers and patients. This represents a very ambitious if not unfeasible approach, and no country mentioned in Table 1 implements this fully.

Screening assessment for all: this is evaluated against a set of specific criteria and aims to identify broader incompetence by focusing on certain indicators of quality. Peer ratings, self-assessment questionnaires and patient questionnaires can be used for screening tests. However, no single simple screening test has been discovered that will reliably, validly and practically indicate poor performance. This model has been adopted in Austria, France, Hungary, Ireland, the Netherlands, Slovenia and the United Kingdom.

Screening a high-risk group: this involves identifying a high-risk group for intensive scrutiny. One approach is to use a database to identify outliers in a set of indicators, such as prescribing or referral patterns. Another is to identify a certain group of doctors who have been shown to have a higher risk of providing lower-quality care, such as older doctors *(17)*. No country mentioned in Table 1 appears to officially use this approach. This type of targeting runs the risk of contravening privacy and human rights laws and may not therefore work in practice.

A major difficulty with ensuring fitness to practise is the lack of evidence on screening methods for physician assessment. In particular, reviews of evidence

on the effectiveness of audit and feedback *(32)*, self-assessment *(33)*, multi-source feedback *(34,35)* and patient-reported outcome measures *(36)* found that, although they can be effective in improving professional practice and quality of care processes, little is known about whether they improve patient health outcomes and whether they are cost-effective. The evidence on continuing medical education and continuing professional development *(37–40)* and recertification *(3,41–48)* suggests that these methods can improve patient health outcomes, but again reliable cost–effectiveness data are largely absent.

Regulation and enforcement arrangements

The results of the study of Canada, New Zealand and the United Kingdom *(31)* and an international review (including Australia, Canada, Finland, the Netherlands, New Zealand and the United States) of the regulation of physicians commissioned by the Chief Medical Officer for England *(23)* suggest that self-regulation predominates in European and other international approaches to ensuring fitness to practise. Nevertheless, the Anglo-American model of "pure" self-regulation seems to have shifted and become professionally led regulation, with forms of co-regulation, or partnership regulation with statutory bodies or payers, becoming more common. This is seen as enabling greater transparency and stronger accountability to external authorities. In some countries there have been moves to separate the bodies undertaking licensing from those hearing complaints, also reflecting concerns about protectionism. It has been argued that separating assessment bodies from other national bodies with advocacy roles is a major advantage for certifying bodies in North America *(30)*.

Linked to this is the question of responsibility for enforcing assessment methods. It is widely accepted that this should be transparent but non-punitive, to respect the rights of both patients and physicians, with efforts focused on professional development and identifying the few "bad" physicians *(49)*. For example, Belgium encourages, rather than mandates, accreditation by rewarding physicians who participate with the potential to earn higher wages. In France, however, despite a legal obligation, many physicians do not participate in continuing medical education, most likely because of a combination of lack of incentives (neither reward nor punishment) for compliance combined with an absence of monitoring. Thus, how a policy to enhance quality is enforced seems to contribute significantly to its effectiveness.

An important dimension of the health system that varies considerably across countries and has major effects on the regulation of professional practice is the availability of information. Well-functioning information systems are needed for many forms of auditing, linked to valid patient outcome measures. Countries

with sophisticated health informatics systems and functioning electronic health records will have an advantage.

Conclusions and implementation considerations

The climate favours some form of continuing assessment of fitness to practise in several countries in the WHO European Region. Immediate concerns with physician performance resulting from highly publicized cases of physician malpractice have developed in the broader context of the increasing focus on assuring the quality of health care services in general. This broader concern is related to the increasing emphasis on the accountability of providers to the state in an era of health-sector reform. Policy-makers need to consider several issues related to the specific characteristics of assessing fitness to practise.

The best practices are likely to vary, depending on the country context, but some broad principles can be distinguished. In terms of the goals of revalidation, most countries recognize the importance of continually improving physician performance and have therefore introduced continuing medical education or continuing professional development. There is, however, no consensus across the European Region on the need for assessment and evaluation and no single practical test that can accurately identify physicians who perform poorly and need more thorough assessment. It is also not clear that any system would, for example, have been able to prevent the emergence of criminal practices by physicians such as Harold Shipman in the United Kingdom. This is especially important given the enormous cost of some systems, making it important to avoid the diversion of large numbers of physicians into monitoring activities at a time when many countries are facing physician shortages and to avoid possible unintended consequences, such as barriers to innovation. Nevertheless, in countries undergoing health-sector reforms, typically reflected in the separation of purchaser and provider and the increased managerial role of the government, pressure to develop enhanced quality control mechanisms will probably be increasing.

Which actor within the health system is best suited to take responsibility for assessing physicians' performance is also unclear, although there seems to be consensus that self-regulation is more willingly accepted than government regulation, reducing incentives for opportunistic behaviour and non-compliance. Some commentators have argued that overzealous regulation could actually erode rather than increase trust in professionals and public services by reinforcing a culture of suspicion *(50)*. Perhaps reflecting increased awareness of these issues, forms of co-regulation or partnership regulation between professional and statutory bodies or payers are becoming more common.

At the same time, self-regulation raises concerns about protectionism. Conversely, it is also important that, when physicians are competing, self-regulation does not become a vehicle for personal animosity. These considerations are especially important in some of the countries in the eastern part of the WHO European Region, where there are many examples of controls on the medical profession being abused during the communist era. A potential solution to these issues is separating assessment bodies from other national bodies with advocacy roles, as is the case for certifying bodies in North America.

The most effective method of enforcing physician assessment is also not clear, and different balances of incentives and penalties are likely to work best in each country. The most severe penalty currently used is revoking the licence to practise. A less severe version is losing certification, as in the United States, where certification is not legally required to practise medicine. One factor crucial to the effectiveness of the United States system of recertification is that it was introduced only after stepwise evaluation and validation of the assessment methods over a long period of time, suggesting that countries considering introducing such a system should proceed gradually.

As with enforcement, another critical issue in implementation is the availability of information. Information systems, health informatics systems and functioning electronic health records are needed to implement and evaluate the impact of revalidation.

Finally, policy-makers must consider how to fund lifelong learning. Many countries have experienced great difficulties with raising the necessary resources to implement even the most basic physician performance policies, such as continuing professional development. A solution to this has been to look to the private sector, specifically the pharmaceutical industry, to support such activities. A potential problem here is that the pharmaceutical industry is then able to drive the content of the continuing professional development sessions. In countries where the pharmaceutical industry is a major funder of continuing professional development and other physician performance improvement and assessment programmes, the government should consider establishing an independent regulatory body to set the agenda in accordance with the needs of the health system.

This review of policies in European countries reveals considerable variation in practice. To some extent this is expected, since there are many potential methods of assessing the performance of physicians. Nevertheless, perhaps the most worrying aspect of the review conducted for this policy brief has been the difficulty in obtaining even the most basic information on how systems work. The scarcity of data and information as well as diversity in practices suggest an

unmet need for a forum on the regulation of the medical profession in which countries would be required to report on practices, evidence and challenges, with the aim of eventually drawing up European recommendations. The WHO Regional Office for Europe could consider establishing such a forum in which stakeholders (such as health ministries, higher education ministries and professional associations) can get together to review the current practices across Europe and seek consensus on how best to gradually build an evidence base and institute standards. At the European Commission level, progress has been limited. At a 2006 meeting, the High Level Group on Health Services and Medical Care concluded that "there is no clear consensus reached on which concrete actions to develop in order to take forward issues such as continuing professional development"; consequently, a new directive on health professionals is not on the agenda at present *(51)*.

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