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Doctors on the move: international study on national recertification systems

A collective case study

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ABSTRACT

Objectives: With increased cross-border movement, ensuring safe and high-quality healthcare has gained primacy. The purpose of recertification is to ensure quality of care through periodically attesting doctors' professional proficiency in their field. Professional migration and facilitated cross-border recognition of qualifications, however, make us question the fitness of national policies for safeguarding patient care and the international accountability of doctors.

Design and setting: We performed document analyses and conducted semi-structured interviews to identify and describe key characteristics and effective components of 10 different European recertification systems, each representing one case (collective case study). We subsequently compared these systems to explore similarities and differences in terms of assessment criteria used to determine process quality.

Results: Great variety existed between countries in terms and assessment formats used, targeting cognition, competence and performance (Miller's assessment pyramid). Recertification procedures and requirements also varied significantly, ranging from voluntary participation in professional development modules to the mandatory collection of multiple performance data in a competency-based portfolio. Knowledge assessment was fundamental to recertification in most countries. Another difference concerned the stakeholders involved in the recertification process: while some systems exclusively relied on doctors' self-assessment, others involved multiple stakeholders but rarely included patients in assessment of doctors' professional competence. Differences between systems partly reflected different goals and primary purposes of recertification.

Conclusion: Recertification systems differ substantially internationally with regard to the criteria they apply to assess doctors' competence, their aims, requirements, assessment for-

mats, and patient involvement. In the light of professional mobility and associated demands for accountability, we recommend that competence assessment include patients' perspectives, and recertification practices be shared internationally to enhance transparency. This can help facilitate cross-border movement, while guaranteeing high-quality patient care.

Word count: 276

Key words: Recertification; Continuing Professional Development; Performance assessment; Patient safety; Quality assurance; Professional mobility

Strengths and limitations of this study

- Our research provides a comprehensive comparison of ten European recertification systems and their assessment criteria used to ensure quality of care delivered. It highlights how physicians' knowledge and competence are assessed, which stakeholders are involved and how the processes are regulated.
- Our research focuses on European countries only as free cross-border movement of professionals is unique to the European context.
- We cannot exclude that interregional variations were missed because recertification systems were decentralized in some countries and we explored the national level only.
- The diversity and ambiguity in terminology (recertification, revalidation, continuing professional development) underline the challenge of comparing various recertification systems.

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INTRODUCTION

Increased mobility of health professionals can pose potential threats to the quality of care. Suppose, for instance, a high performing, Romanian doctor moves to the Netherlands. There, this person will face a new work environment in a distinct healthcare system with specific quality guidelines and different clinical presentations and patient demands. As this new work setting requires specific knowledge, skills, and values that differ from the Romanian context, you may wonder: Will this doctor still be competent to deliver high-quality care?

While the problem of safeguarding quality of care across borders is omnipresent, it is particularly pertinent in Europe where the free movement of professionals has long historical and legal roots. Although a European Commission directive has facilitated mobility by providing for international recognition of professional qualifications, it fails to guarantee that doctors actually meet the minimum and context-specific quality standards. To safeguard quality of patient care, regulatory bodies around the world have implemented different systems,[1 2] such as recertification systems. Recertification entails lifelong learning and periodic assessment of doctors' competence and performance through various methods.[3] More specifically, it requires a formal procedure of assessing and attesting quality of service provided "in accordance with established requirements or standards."[4] By renewing initial certification, *re*certification aims to address any decline in performance as well as ensure trained doctors' adaptation to advances in knowledge and technology.[5 6] This is particularly important in times of increased publicity over individual failures of medical performance, demands for doctors' accountability, and concerns about patient safety.[7]

Despite its well-intended aim, recertification harbours two inherent problems. First, current national recertification practices fail to ensure quality of care internationally, as they assess doctors' competence and performance in accordance with *national* quality standards.

Differences in standards across countries and the absence of international recertification systems may complicate international quality assurance and quality improvement.[6] This begs the question of whether such discrete practices can respond to repeated calls for international accountability and transparency.[8] Second, although research on assessment of professional competence provided a set of guidelines for assessment criteria to ensure high quality assessment,[9] the question on how to assess doctors' competence has often turned into a political rather than an educational one,[10] potentially impacting on effectiveness of recertification systems.

"Competence" is defined as the ability to integrate knowledge, skills, and attitudes into a certain context to ensure safe patient care.[11 12] This definition suggests to pay balanced attention to multiple competency domains relevant to a doctor, when assessing professional competence.[13] Indeed, many scholars and institutions advocate the assessment of not only medical knowledge and skills, but also competencies, such as communication, collaboration, and clinical judgment.[14 15] Assessment measures must also be robust and focus on the healthcare system's needs and outcomes, implying involvement of key stakeholders, particularly patients when evaluating quality of care.[16-19] It is furthermore acknowledged that, for each of the competencies, outcomes of different assessment methods must be combined to ensure robust decision making about professional competence [20 21]

To conclude, cross-border quality of care will be promoted if countries not only share their recertification practices, but also are willing to critically reflect on quality of assessment processes embedded in recertification procedures.[7 22] In the present study, we attempt taking a first step in this direction by identifying different national recertification approaches. The question of the present study, therefore, was what are the key characteristics of recertification systems for doctors of different countries? More specifically, we aimed at exploring use of assessment criteria in design of recertification procedures. We used a collective case study

design to describe and compare different national systems. We were particularly interested in the assessment criteria used, if any, and how they were applied. Although recertification is sometimes also coined "revalidation," "re-accreditation," and "maintenance of certification" or used interchangeably with "continuing professional development" in other contexts, this article keeps to the former term. The article builds on previous work on certification but primarily focuses on recertification.

METHODS

Study Design and Case Selection

We described and analysed the recertification systems of ten individual European countries. Each country's national recertification system represented a single case. We selected our cases using purposeful sampling to reach maximum heterogeneity in terms of geographical spread across Europe, demographics, health professionals' migration profile, presence of labour market restrictions, and type of healthcare system (Table 1).[23]

Table 1. *Sampling criteria*

Sampling criterion	Specification of criterion
Geographical spread	Include countries of different sizes, demographic make-up, with different cultures, and from a range of geographical locations (Northern, Eastern, Southern, Western, and Central Europe).
Migration profile and position	Include countries that have different levels of health professional migration (inflow and outflow) and rely more or less on foreign doctors; include both "junior" (EU12) and "senior" EU member states (EU15) as indicated by the length of EU membership.

Labour market restrictions	Include countries with (Germany, Ireland, the Netherlands, United Kingdom, and Switzerland) and without initial labour market restrictions (Denmark, Portugal, and Spain)
Different healthcare systems	Include countries with different structures of healthcare services in terms of how they are financed and covered by the insurance system (publicly, privately, or both).

EU2 = countries which joined the EU in 2007: Bulgaria and Romania.
EU10 = countries which joined the EU in 2004: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia.
EU12 = EU2 and EU10 countries: Cyprus, Czech Republic, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
EU15 = countries which were already EU member states in 2003: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the UK.

Based on these criteria, the final study sample included Denmark, Germany, Hungary, Ireland, Poland, Portugal, Spain, Switzerland, the Netherlands, and the United Kingdom (Table 2).

Table 2. *Overview of selected countries and their health insurance systems, their coverage, and the existence of a gatekeeper system* [24-32]

Country	Geographic location	Net migration rate (migrants/1,000 inhabitants)[33]	Reliance on foreign doctors (% of all practicing doctors)[23]	Type of health insurance system	Financing of healthcare
Denmark	North	2.25	6.4% are foreign-trained	Decentralized, offers universal and nearly free access	Taxation
Germany	Central	1.06	5.7% are foreign born	Mix of compulsory public and voluntary private health insurance; highly decentralized	Statutory insurance, taxation, out-of-pocket payments, and private health insurance
Hungary	East	1.34	3.6% are foreign born	National Health Insurance Fund is state- owned and offers complete coverage, partly free of charge	Taxation and social health insurance contributions
Ireland	West	3.31	20.1% are foreign-trained	National Healthcare System, Mix of public and voluntary private health insurance	Taxation and supported by co-payments for specialist's treatment from insurance providers.
Poland	East	-0.47	2.1% are foreign-trained	Decentralized, mandatory health insurance system	National Health Funds
Portugal	South	2.74	11.1% are foreign	Private and public insurance	Taxation, public and private

			born	schemes plus voluntary private insurances	insurance schemes, and direct payment
Spain	South	7.24	12.5% are foreign-trained	National Health Service Private and public insurance schemes	Taxation and payroll contributions
Switzerland	Central	5.43	22.5% are foreign-trained	Obligatory, statutory, decentralized insurance system Federal Office for Social Insurance monitors providers	Compulsory health insurance premiums and out-of-pocket payments
The Netherlands	Central	1.97	6.2% are foreign-trained	Mixed model of compulsory social and voluntary private insurance	Health Insurance, taxation and direct payments
United Kingdom	West	2.56	36.8% are foreign-trained	Mix of public and voluntary private health insurance	National Health Service, taxation, and national insurance contributions

Data collection

We collected data on the respective recertification procedures by performing a document analysis for each case in addition to conducting semi-structured interviews with two or three representatives from each country.

For the document analyses, we retrieved documents describing national recertification procedures for doctors from the websites of national certification organizations. We focused on documents that clarified rationale, form and procedure, as well as requirements and rewards of each recertification program. Data collection took place from April to September, 2016.

To validate and corroborate our interpretation of data from document analysis, we conducted semi-structured interviews with representatives of national regulatory bodies responsible for postgraduate medical education and recertification or the recognition of professional qualifications (e.g., international affairs offices). These interviewees were deans for professional practice, heads of recertification departments, experts on continuing professional development, and official secretaries or legal advisors to national medical education offices, medical or scientific societies, accreditation bodies, medical royal colleges, councils, or chambers.

The first author (CS) conducted all interviews via video or phone, based on an interview protocol adapted from a study on continuing professional development and lifelong learning for health professionals.[34] Questions addressed competency frameworks as well as rules and regulations of recertification, asking about regulatory authorities involved, main objective(s), structure, requirements, and consequences of compliance or non-compliance. Before the interview, we explained the research purposes to participants and asked them to give informed consent.

Patient involvement

No patients were involved in this research, given our specific aim.

Data analysis

Data analysis spanned a two-step process. First, we analysed the data from the document analyses and interviews to identify and describe key characteristics of each case. We asked at least one interviewee per country to comment on the accuracy and completeness of the described recertification system. We subsequently re-analysed the data, specifically focusing on the application of criteria for high quality assessment: validity, reliability, educational and catalytic effect.[9 14 35] For that purpose we identified specific strategies used to ensure assessment quality in terms of validity, reliability and educational consequences, for each of the recertification system (Box 1).

Box 1. *Strategies embedded in recertification, affecting assessment quality*

Criterion		Features
What is assessed?	Program of assessment	• Inclusion of competency domain(s) or domain(s) of professional practice (including lifelong learning) • Use of overarching framework (based on needs healthcare system; key domains professional practice) • Assessment and learning aligned with individual needs • Focus on process of care • Focus on patient outcome (including patient satisfaction)
When is it assessed?	Frequency of recertification cycle	• Yearly • Every 2-3 years • Every 4-5 years • Every > 5 years • No time frame
Who assesses?	Stakeholders involved in	• Individual (self-assessment) • Peers

	the assess-ment	• Employer • Patients • Others
How is it assessed?	Assessment methods	• Competence level according to Miller's assessment pyra-mid (cognition versus performance) • Self-assessment • Portfolios • Credit collection through course participation • Examinations (standardised) • Simulations • Clinical audits • Multi-source feedback
	Regulations	• Voluntary vs. mandatory • Legal vs. professional obligation
What are the objec-tives?	Assessment goal	• Quality of care and patient safety • Professional development • Maintenance of doctors' knowledge and skills
	Consequenc-es of non-compliance	• Loss of license • Financial sanctions • Follow-up • Work under supervision • Feedback

These strategies included program of assessment, assessment goals and methods (i.e., authentic and suitable methods), as well as frequency of assessment (i.e., consistent outcomes across measurements and decisions). We also addressed the involvement of different stake-holders including patients, and consequences for learning and development. Self-assessment as tool for lifelong learning and assessment of practice performance were the two major com-ponents of recertification considered.[36] Finally, we compared recertification systems across cases to identify similarities and differences with respect to use of the aforementioned as-

sessment criteria.

RESULTS

In the following paragraphs, we highlight differences and/or similarities across countries in terms of the purpose, focus, frequency, and methods of recertification, and the stakeholders involved in the process. Exact details are provided in Table 3, while Table 4 outlines the bodies (Medical specialties, Ministries of Health or Medical Authorities) responsible for recertification. The final paragraph provides a synopsis of the most striking results.

1. Purpose of recertification

As shown in Table 3, the purpose of recertification constituted a major source of variance. While several countries aimed to improve quality of care and patient safety, a minority (N=2), essentially those countries where recertification was not mandatory, upheld personal development and career advancement as their primary objective (Table 3).

Table 3. *Competence assessment in recertification systems of investigated cases*

Case	Purpose[1]	Focus[2]			Based on competency framework	Frequency		Assessment methods[3]	Who decides on activities to be followed?			Stakeholders involved in the assessment			How is internal quality of assessment assured?
		LLL	PP	Mandatory (yes/no)		After … credits	Every … year(s)		Individual doctor	Employers	Doctor him/herself	Colleagues	Patients	Employers	
Case 1	1, 3	yes	yes	yes	yes	200	5	1.4, 1.5, 1.6, 1.7, 2, 3, 4, 5	yes	no	yes	yes	yes	yes	quality visitations, assessment of group functioning
Case 2	1, 2	yes	yes	yes	N/A	150	3	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2, 3	yes	no	yes	yes	no	no	N/A
Case 3	1, 3	yes	no	yes	N/A	250	5	1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 1.8	yes	no	yes	no	no	no	accreditation of CME providers
Case 4	1, 2, 3	yes	yes	yes	yes	250	5	1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 2, 3, 4, 7	yes	no	yes	yes	yes	yes	independent assessors, information triangulation, audits
Case 5	3	yes	yes	yes	yes	50	1	1.2, 1.3, 1.4, 1.5, 1,6, 2	yes	no	yes	no	no	no	N/A
Case 6	1, 2	no	yes	no, voluntary	no	N/A	1	1, 3, 4	yes	yes	yes	no	no	yes	local management
Case 7	2	yes	no	yes	N/A	250	5	1, 1.1, 1.2, 1.6, 1.7, 1.8, 4, 5, 6	yes	no	yes	no	no	no	more credits for CPD activities with exams
Case 8	3	yes	no	yes	N/A	200	4	1.1, 1.2, 1.4, 1.5, 1.6, 1.7	yes	no	yes	no	no	no	accreditation of CME providers

Case 9	4	yes	yes	no, voluntary	N/A	N/A	5	4	yes	no	no	yes	no	(yes)	N/A
Case 10	4	yes	yes	no, voluntary	yes	N/A	3	1.2, 4	yes	no	yes	yes	no	yes	organization's quality control

[1.] Recertification purpose: 1. Quality of care; 2. Patient safety; 3. Maintenance of doctors' knowledge and skills; 4. Career.
[2.] Focus of recertification: LLL = lifelong learning; PP = Practice performance.
[3.] Assessment methods: 1. CPD; 1.1 specialty-specific CPD course; 1.2 General CPD course (communication skills); 1.3 Individual learning (reading); 1.4 Conference attendance; 1.5 Teaching; 1.6 Research & scientific publications; 1.7 E-learning; 1.8 Time spent as visiting professional; 2. Clinical audit; 3. Appraisal/peer reviews; 4. Portfolio; 5. Minimum hours of patient contact; 6. Mandatory intensive course; 7. Significant events.
Country names are not individually reported due to the perceived sensitivity of the information provided by the interview partner.

Participation in a recertification program was voluntary in three countries only, though all countries imposed a professional or legal obligation to engage in lifelong learning. Consequences of non-compliance were non-existent in voluntary systems; in the mandatory systems (N=7), however, they varied from financial sanctions (N=2) or work under supervision to suspension of the license to practice (N=3), with two countries allowing for license recovery. Finally, one country conferred a lifelong registration upon doctors, obviating the need to impose any sanctions in practice (Table 4).

Table 4. *Regulation of recertification process in the countries under scrutiny*

	Who sets rules for recertification?				Potential consequences of non-compliance[3]
Case number	Medical Specialties	Ministry of Health	Medical Authority[1]	Type of obligation[2]	
Case 1	yes	yes	yes	1	(1), 2
Case 2	yes	no	no	1,2	3, 4
Case 3	no	yes	yes	1,2	1, 3
Case 4	no	no	yes	1,2	1, 2
Case 5	yes	no	yes	1	4, 5
Case 6	/	/	yes	2	4
Case 7	/	yes	yes	1	1
Case 8	/	yes	yes	1	4
Case 9	/	/	/	/	4
Case 10	yes	/	yes	1	4

[1] Medical Authority such as the General Medical Council

[2.] Type of obligation: 1. Legal; 2. Professional

[3.] Potential consequences of non-compliance are: 1. Work supervised or suspension of license; 2. Suspension of license with possibility to restore license; 3. Financial sanctions; 4. No formal consequences / license for lifetime; 5. Follow-up.

2. Focus of the assessment

As regards focus, almost all recertification systems emphasized the lifelong learning of doctors. Likewise, most systems relied on the collection of a minimum number of credits per year, mostly 50 (N=5), where one credit typically represented one hour of learning activity. Although the three voluntary systems did not require credits to be earned for recertification, one did recommend it (case 6). Such practice was often embedded in a continuing professional development framework as part of a voluntary recertification process. In another country, doctors must take a specific course followed by an exam. Generally, they received more credits for courses if these were concluded with an examination (case 7). Of the countries that assessed practice performance, only five did so through audits and appraisals or multi-source feedback. Four countries evaluated doctors' individual and team functioning focusing on communication and collaboration skills.

3. Frequency of recertification

The frequency of recertification and timeframe within which requirements must be fulfilled varied widely: some countries had annual appraisals (N=2), others three-year procedures (N=2), but most of the countries undertook quinquennial assessments (N=5).

4. Assessment methods

To demonstrate their knowledge and engagement in lifelong learning, doctors in most countries must earn credits, for instance by participating in workshops and national or international conferences, doing individual reading, teaching, writing scientific articles, spending time as visiting doctor, and/or e-learning. One country assessed performance on the basis of a dialog between employer and employee who jointly discussed learning needs. Another country counted reflection on significant events, that is, unintended critical events which potentially

harmed the patient, to measure patient outcomes. Yet other countries (N=4) used clinical audits, number of complaints, reviews or appraisals, and peer reviews to measure processes of healthcare delivery. Finally, some countries deployed portfolios (N=6), clinical audits (N=4), and multi-source feedback (N=4) to reflect on individual and team functioning.

5. Stakeholder involvement

In most cases (N=9), doctors decided which learning activities to take based on their self-assessed learning needs. Several countries, however, also based the assessment of performance outcomes and the process of care on feedback from peers (N=5) or patients (N=2), yet only one country demanded involving patients in the assessment regularly.

6. Synopsis

All things considered, what stood out was that most recertification systems relied heavily on doctors' self-assessments, attached little weight to patient outcomes, patient involvement, and the assessment of practice performance, as well as lacked an overarching competency framework. Only four countries seem to match the content of assessment programs with evaluation of professional practice. These findings clearly contrast with the aim to ensure quality of care and patient safety most systems pursued. Evaluation of practice performance seems to be a *sine qua non,* an indispensable condition, for assessment of competence, i.e. what doctors actually do in day-to-day practice. Two countries (case 1 and 4), however, did use a more comprehensive system, covering both self-assessment and practice performance through multi-source feedback, including patients' feedback.

Three other countries deserve mention for their apparent distinctness from the rest. One country, though not formally requiring continuing professional development, assessed practice performance based on an annual dialog between doctor and employer. This left little

room for individual doctors to self-assess their performance and independently decide on activities to be taken, which was the case in all other countries where the individual doctor was responsible for high-quality patient care. The remaining two recertification systems stood out as being career-focused: they did not require doctors to engage in lifelong learning and professional development for purposes of patient safety and quality patient care, but rather encouraged the use of a portfolio to enhance chances of promotion.

DISCUSSION

The purpose of this study was to investigate how recertification is organized across different countries. We found substantial differences in recertification requirements and procedures. Moreover, these requirements in many respects seemed to conflict with aims to ensure quality of care and patient safety.

First, we observed that only a few systems included feedback from patients in the assessment. Involving patients to prefigure patient outcomes and quality seems inevitable for accountability and transparency purposes.[37] Although many patients are needed to obtain reliable evaluations, their involvement in recertification procedures can help respond to public calls for doctors' accountability.[9] Wright et al recommend including data from 34 patient questionnaires and 15 colleague questionnaires to obtain reliable performance evaluation for appraisal purposes.[38] Despite the fact that the literature reports peers to give accurate, credible, and valid assessments of performance, peer feedback was absent in most systems.[9 14 39] Use of multi-source feedback to assess practice performance, requires high quality and credible feedback to induce reflection on practice.[40] Multi-source feedback, including patients' feedback, can be especially effective when the feedback received contrasts with individual perceptions and is facilitated by a mentor or coach.[41] A mentor can help to deal with the emotional aspects of the multi-source feedback and to structure individual reflection and follow-up.[42] Use of multisource feedback and mentoring systems could thus help countries transition-

ing from a system based on self-assessments to "directed" self-assessments as suggested by Sargeant et al.[43]

Second, most systems relied on self-assessments and lifelong learning activities doctors selected themselves without attending to external assessment of practice performance. More specifically, by relying on credit accumulation systems that allowed doctors to choose their learning activities,[44] it was entirely at the doctors' discretion to judge their performance and learning needs. There's strong evidence however, that several individual and social factors obscure the validity of self-assessments such as age and experience.[44 45] Additionally, self-assessments tend to mirror self-confidence and self-efficacy which are not necessarily good measures of doctors' competence.[44] This evidence provides ample ground to question both the effectiveness of recertification systems that rely on doctors' self-assessments and the autonomy granted to clinicians.[16 46] Hence, assessments of competence will become more meaningful when they involve multiple assessors, including patients.

Another deviation from the purpose of recertification constituted the assessment methods used. Whereas activities such as reading written materials, and attending conferences or presentations have been shown to deepen specific knowledge, there is no evidence that such didactic and passive learning interventions alone improve performance and patient outcomes.[47-49] A causal link between educational activities and improved patient health status yet remains to be established.[50] This casts doubt on the impact of the recertification systems in our study on doctors' performance. Consequently, our findings reinforce concerns about the validity of recertification procedures and emphasize the need to combine various assessment methods, likely resulting in greater accountability as previously been proven.[51] As stated by Forsetlund and colleagues (2009), a combination of multiple media, multiple instructional techniques and multiple exposures can help to induce change in performance towards improved patient outcomes.[52]

Since medical specialists invest substantial time and money in their professional development, the feasibility, applicability, and acceptability of recertification are topics worth exploring in the context of quality assurance. We therefore invite future studies into stakeholders' perceptions of recertification and their effectiveness and impact,[53] and also to bring into focus the content and formal aspects of learning activities which, by facilitating its design and implementation, may improve recertification. To shed light on the full picture, we would furthermore welcome studies investigating the feasibility and acceptability of involving patients in evaluating physicians' competency.

Limitations

Since recertification systems were decentralized in some countries and we explored the national level only, we cannot exclude that interregional variations were missed. Moreover, although the interviewees ideally represented at least two different national organizations, interviews were mostly limited to two or three respondents per country. A final and possibly the most complex and intervening limitation constituted the diversity in terminology and language. This may have affected the translation of national concepts into English during the interviews and of written descriptions, potentially causing loss of detail during the analyses. These language differences and ambiguity in terms underline the challenge of comparing various recertification systems.

Practical implications for professional mobility

Defining universal criteria for assessing professional competence will be no easy feat, especially not when considering the differences between national recertification approaches, rising cross-border mobility. Since each system is customized to a specific context, culture, and healthcare system, a universal recertification system may neither be desirable nor achievable, as doctors are required to adapt to the unique features of their work setting and health care system. For transparency purposes, however, medical societies could share their competency

assessment procedures and quality standards, turning a political matter into an educational (and quality assurance) matter.[7] Moreover, national bodies can incorporate performance evaluation, involve multiple stakeholders including patients, and use other assessments besides clinicians' self-assessments in their re-certification procedures to enhance liability.[54]

Achieving an overarching quality assurance system being an unrealistic goal, we need to have a shared understanding of what are minimum standards for a doctor[46] thereby creating a base for international comparison while allowing for local adaptations. Such standards of training content and certification directives could meet the challenges posed by the free, cross-border movement of professionals, improving patient safety, and enhancing accountability and transparency.

Conclusion

Recertification can help assess and improve knowledge, skills, professional performance, and, ultimately, patient outcomes. Yet, systems vary widely across countries in terms of being compulsory or not, requirements, patient involvement, and consequences of compliance or non-compliance. A shift toward a broader program of assessment focused on competence assessment and lifelong learning might create a more valid, credible, and reliable basis for recertification, meeting growing demands for accountability and transparency.

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Transparency declaration: Carolin Sehlbach affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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Doctors on the move: a European case study on the key characteristics of national recertification systems

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Doctors on the move: a European case study on the key characteristics of national recertification systems

ABSTRACT

Objectives: With increased cross-border movement, ensuring safe and high-quality healthcare has gained primacy. The purpose of recertification is to ensure quality of care through periodically attesting doctors' professional proficiency in their field. Professional migration and facilitated cross-border recognition of qualifications, however, make us question the fitness of national policies for safeguarding patient care and the international accountability of doctors.

Design and setting: We performed document analyses and conducted 19 semi-structured interviews to identify and describe key characteristics and effective components of 10 different European recertification systems, each representing one case (collective case study). We subsequently compared these systems to explore similarities and differences in terms of assessment criteria used to determine process quality.

Results: Great variety existed between countries in terms and assessment formats used, targeting cognition, competence and performance (Miller's assessment pyramid). Recertification procedures and requirements also varied significantly, ranging from voluntary participation in professional development modules to the mandatory collection of multiple performance data in a competency-based portfolio. Knowledge assessment was fundamental to recertification in most countries. Another difference concerned the stakeholders involved in the recertification process: while some systems exclusively relied on doctors' self-assessment, others involved multiple stakeholders but rarely included patients in assessment of doctors' professional competence. Differences between systems partly reflected different goals and primary purposes of recertification.

Conclusion: Recertification systems differ substantially internationally with regard to the

criteria they apply to assess doctors' competence, their aims, requirements, assessment formats, and patient involvement. In the light of professional mobility and associated demands for accountability, we recommend that competence assessment include patients' perspectives, and recertification practices be shared internationally to enhance transparency. This can help facilitate cross-border movement, while guaranteeing high-quality patient care.

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Key words: Recertification; Continuing Professional Development; Performance assessment; Patient safety; Quality assurance; Professional mobility

Strengths and limitations of this study

- Our research provides a comprehensive comparison of ten European recertification systems and their assessment criteria used to ensure quality of care delivered. It highlights how physicians' knowledge and competence are assessed, which stakeholders are involved and how the processes are regulated.
- Our research focuses on European countries only as free cross-border movement of professionals is unique to the European context.
- We cannot exclude that interregional variations were missed because recertification systems were decentralized in some countries and we explored the national level only.
- The diversity and ambiguity in terminology (recertification, revalidation, continuing professional development) underline the challenge of comparing various recertification systems.

Doctors on the move: a European case study on the key characteristics of national recertification systems

INTRODUCTION

Increased mobility of health professionals can pose potential threats to the quality of care. Suppose, for instance, a high performing, Romanian doctor moves to the Netherlands. There, this person will face a new work environment in a distinct healthcare system with specific quality guidelines, and different morbidity patterns, and patient demands. As this new work setting requires specific knowledge, skills, and values that differ from the Romanian context and culture, you may wonder: Will this doctor still be competent to deliver high-quality care?

While the problem of safeguarding quality of care across borders is omnipresent, it is particularly pertinent in Europe where the free movement of professionals has long historical and legal roots. Although a European Commission directive has facilitated mobility by providing for international recognition of professional qualifications, it fails to guarantee that doctors actually meet the minimum and context-specific quality standards. To safeguard quality of patient care, regulatory bodies around the world have implemented different systems,[1 2] such as recertification systems. Recertification entails lifelong learning and periodic assessment of doctors' competence and performance through various methods.[3] It describes the process designed to promote and demonstrate continuous professional competence.[4] More specifically, it requires a formal procedure of assessing and attesting quality of service provided "in accordance with established requirements or standards."[5] By renewing initial certification, *re*certification aims to address any decline in performance as well as ensure trained doctors' adaptation to advances in knowledge and technology.[6 7] This is particularly important in times of increased publicity over individual failures of medical performance, demands for doctors' accountability, and concerns about patient safety.[8]

Despite its well-intended aim, recertification harbours two inherent problems. First, current national recertification practices fail to ensure quality of care internationally, as they assess doctors' competence and performance in accordance with *national* quality standards. Differences in standards across countries and the absence of international recertification systems may complicate international quality assurance and quality improvement.[7] This begs the question of whether such discrete practices can respond to repeated calls for international accountability and transparency.[4] Second, although research on assessment of professional competence provided a set of guidelines for assessment criteria to ensure high quality assessment,[9] the question on how to assess doctors' competence has often turned into a political rather than an educational one,[10] potentially impacting on effectiveness of recertification systems.

"Competence" is defined as the ability to integrate knowledge, skills, and attitudes into a certain context to ensure safe patient care.[11 12] This definition suggests to pay balanced attention to multiple competency domains relevant to a doctor, when assessing professional competence.[13] Indeed, many scholars and institutions advocate the assessment of not only medical knowledge and skills, but also competencies, such as communication, collaboration, and clinical judgment, as well as cultural competence or critical consciousness.[14-16] Assessment measures must also be robust and focus on the healthcare system's needs and outcomes, implying involvement of key stakeholders, particularly patients when evaluating quality of care.[17-20] It is furthermore acknowledged that, for each of the competencies, outcomes of different assessment methods must be combined to ensure robust decision making about professional competence [21 22]

To conclude, cross-border quality of care will be promoted if countries not only share their recertification practices, but also are willing to critically reflect on quality of assessment pro-

cesses embedded in recertification procedures.[8 23] In the present study, we attempt taking a first step in this direction by identifying different national recertification approaches. The question of the present study, therefore, was what are the key characteristics of recertification systems for doctors of different countries? More specifically, we aimed at exploring use of assessment criteria in design of recertification procedures. We used a collective case study design to describe and compare different national systems. We were particularly interested in the assessment criteria used, if any, and how they were applied. Although recertification is sometimes also coined "revalidation," "re-accreditation," and "maintenance of certification" or used interchangeably with "continuing professional development" in other contexts, this article keeps to the former term. The article builds on previous work on certification but primarily focuses on recertification.

METHODS

Study Design and Case Selection

We described and analysed the recertification systems of ten individual European countries. Each country's national recertification system represented a single case. We selected our cases using purposeful sampling to reach maximum heterogeneity in terms of geographical spread across Europe, demographics, health professionals' migration profile, and type of healthcare system (Table 1).[24]

Table 1. *Sampling criteria*

Sampling criterion	Specification of criterion
Geographical spread	Include countries of different sizes, demographic make-up, with different cultures, and from a range of geographical locations (Northern, Eastern, Southern, Western, and Central Europe).

Migration profile and position	Include countries that have different levels of health professional migration (inflow and outflow) and rely more or less on foreign doctors; include both "junior" (EU12) and "senior" EU member states (EU15) as indicated by the length of EU membership.
Different healthcare systems	Include countries with different structures of healthcare services in terms of how they are financed and covered by the insurance system (publicly, privately, or both).

EU2 = countries which joined the EU in 2007: Bulgaria and Romania.
EU10 = countries which joined the EU in 2004: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia.
EU12 = EU2 and EU10 countries: Cyprus, Czech Republic, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
EU15 = countries which were already EU member states in 2003: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the UK.

Based on these criteria, the final study sample included Denmark, Germany, Hungary, Ireland, Poland, Portugal, Spain, Switzerland, the Netherlands, and the United Kingdom (Table 2).

Table 2. *Overview of selected countries and their health insurance systems, their coverage, and the existence of a gatekeeper system* [25-33]

Country	Geographic location	Net migration rate (migrants/1,000 inhabitants)[34]	% of foreign-trained doctors, latest available year [24 35 36]	Type of health insurance system	Financing of healthcare
Denmark	North	2.25	5.27%	Decentralized, offers universal and nearly free access	Taxation
Germany	Central	1.06	10.26%	Mix of compulsory public and voluntary private health insurance; highly decentralized	Statutory insurance, taxation, out-of-pocket payments, and private health insurance
Hungary	East	1.34	7.79%	National Health Insurance Fund is state- owned and offers complete coverage, partly free of charge	Taxation and social health insurance contributions
Ireland	West	3.31	41.6%	National Healthcare System, Mix of public and voluntary private health insurance	Taxation and supported by co-payments for specialist's treatment from insurance providers.
Poland	East	-0.47	1.8%	Decentralized, mandatory health insurance system	National Health Funds
Portugal	South	2.74	7.74%	Private and public insurance schemes plus voluntary private	Taxation, public and private insurance schemes, and direct

				insurances	payment
Spain	South	7.24	9.4%	National Health Service Private and public insurance schemes	Taxation and payroll contributions
Switzerland	Central	5.43	27.05%	Obligatory, statutory, decentralized insurance system Federal Office for Social Insurance monitors providers	Compulsory health insurance premiums and out-of-pocket payments
The Netherlands	Central	1.97	2.13%	Mixed model of compulsory social and voluntary private insurance	Health Insurance, taxation and direct payments
United Kingdom	West	2.56	28.07%	Mix of public and voluntary private health insurance	National Health Service, taxation, and national insurance contributions

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Data collection

We collected data on the respective recertification procedures by performing a document analysis for each case in addition to conducting semi-structured interviews with two or three representatives from each country.

For the document analyses, we retrieved documents describing national recertification procedures for doctors from the websites of national certification organizations, and translated them into English if needed. The documents included national recertification schemes and regulations, rules and reports of medical education and training, user guidelines, laws and grey literature articles. We focused on documents that clarified rationale, form and procedure, as well as requirements and rewards of each recertification program.

To validate and corroborate our interpretation of data from document analysis, we conducted one to three semi-structured interviews with representatives of each national regulatory body responsible for postgraduate medical education and recertification or the recognition of professional qualifications (e.g., international affairs offices) (N=19). These interviewees were directors of professional development and practice, heads of recertification departments, experts on continuing professional development, and official secretaries or legal advisors to national medical education offices, medical or scientific societies, accreditation bodies, medical royal colleges, councils, or chambers (Table 3).

Table 3. *Number and profile of respondents per country*

Country investigated	Number of interviews	Profile of respondents
Netherlands	1	
Switzerland	2	
Germany	3	
United Kingdom	2	
Ireland	2	
Denmark	2	

Hungary	1
Poland	2
Portugal	2
Spain	2

The first author (CS) conducted all interviews via video or phone, based on an interview protocol adapted from a study on continuing professional development and lifelong learning for health professionals.[37] The interview protocol was piloted in the Netherlands. Questions addressed competency frameworks as well as rules and regulations of recertification, asking about regulatory authorities involved, main objective(s), structure, requirements, and consequences of compliance or non-compliance. Before the interview, we explained the research purposes to participants and asked them to give informed consent. Interviews were audiotaped and lasted 50-90 minutes, during which notes were taken. Notes were subsequently presented to interviewees to approve or to add information.

Data collection took place from April to September, 2016.

Patient involvement

No patients were involved in this research, given our specific aim.

Data analysis

Data analysis spanned a two-step process. First, we analysed the data from the document analyses and interviews to identify and describe key characteristics of each case. We asked at least one interviewee per country to comment on the accuracy and completeness of the described recertification system. We subsequently re-analysed the data, specifically focusing on the application of criteria for high quality assessment: validity, reliability, educational and catalytic effect.[9 14 38] For that purpose we identified specific strategies used to ensure assessment quality in terms of validity, reliability and educational consequences, for each of the re-

certification system (Box 1).

Box 1. *Strategies embedded in recertification, affecting assessment quality*

Criterion		Features
What is assessed?	Program of assessment	• Inclusion of competency domain(s) or domain(s) of professional practice (including lifelong learning) • Use of overarching framework (based on needs healthcare system; key domains professional practice) • Assessment and learning aligned with individual needs • Focus on process of care • Focus on patient outcome (including patient satisfaction)
When is it assessed?	Frequency of recertification cycle	• Yearly • Every 2-3 years • Every 4-5 years • Every > 5 years • No time frame
Who assesses?	Stakeholders involved in the assessment	• Individual (self-assessment) • Peers • Employer • Patients • Others
How is it assessed?	Assessment methods	• Competence level according to Miller's assessment pyramid (cognition versus performance) • Self-assessment • Portfolios • Credit collection through course participation • Examinations (standardised) • Simulations • Clinical audits • Multi-source feedback
	Regulations	• Voluntary vs. mandatory

What are the objectives?	Assessment goal	• Legal vs. professional obligation • Quality of care and patient safety • Professional development • Maintenance of doctors' knowledge and skills
	Consequences of non-compliance	• Loss of license • Financial sanctions • Follow-up • Work under supervision • Feedback

These strategies included program of assessment, assessment goals and methods (i.e., authentic and suitable methods which aim at measuring day-to-day performance and professional competence), as well as frequency of assessment (i.e., consistent outcomes across measurements and decisions). We also addressed the involvement of different stakeholders including patients, and consequences for learning and development. Self-assessment as tool for lifelong learning and assessment of practice performance were the two major components of recertification considered.[39] Finally, we compared recertification systems across cases to identify similarities and differences with respect to use of the aforementioned assessment criteria.

RESULTS

In the following paragraphs, we highlight differences and/or similarities across countries in terms of the purpose, focus, frequency, and methods of recertification, and the stakeholders involved in the process. Exact details are provided in Table 4, while Table 5 outlines the bodies (Medical specialties, Ministries of Health or Medical Authorities) responsible for recertification. The final paragraph provides a synopsis of the most striking results.

All systems uncovered applied to all registered practicing doctors, irrelevant of whether they were trained nationally or internationally, as they are automatically enrolled in the national

scheme upon registration.

1. Purpose of recertification

As shown in Table 4, the purpose of recertification constituted a major source of variance. While several countries aimed to improve quality of care and patient safety, a minority (N=2), essentially those countries where recertification was not mandatory, upheld personal development and career advancement as their primary objective (Table 4).

Table 4. *Competence assessment in recertification systems of investigated cases*

Case	Purpose[1]	Focus[2]			Based on competency framework	Frequency		Assessment methods[3]	Who decides on activities to be followed?		Stakeholders involved in the assessment				How is internal quality of assessment assured?
		LLL	PP	Mandatory (yes/no)		After … credits	Every … year(s)		Individual doctor	Employers	Doctor him/herself	Colleagues	Patients	Employers	
Netherlands	1, 3	+	+	+	+	200	5	1.4-1.7; 2; 3; 4; 5	+	-	+	+	+	+	quality visitations, assessment of group functioning
Switzerland	1, 2	+	+	+	N/A	150	3	1.1-1.7; 2; 3	+	-	+	+	-	-	N/A
Germany	1, 3	+	-	+	N/A	250	5	1.1-1.4; 1.6-1.8	+	-	+	-	-	-	accreditation of CME providers
United Kingdom	1, 2, 3	+	+	+	+	~250	5	1.1-1.4; 1.6; 1.7; 2; 3; 4; 7	+	-	+	+	+	+	independent assessors, information triangulation, audits
Ireland	3	+	+	+	+	50	1	1.2-1.6; 2	+	-	+	-	-	-	N/A
Denmark	1, 2	-	+	-	-	N/A	1	1; 3; 4	+	+	+	-	-	+	local management
Hungary	2	+	-	+	N/A	250	5	1.1; 1.2; 1.6-1.8; 4; 5; 6	+	-	+	-	-	-	more credits for CPD activities with exams

Poland	3	+	-	+	N/A	200	4	1.1; 1.2; 1.4-1.7	+	-	+	-	-	-	accreditation of CME providers
Portugal	4	+	+	-	N/A	N/A	5	4	+	-	-	+	-	(+)	N/A
Spain	4	+	+	-	+	N/A	3	1.2; 4	+	-	+	+	-	+	organization's quality control

[1.] Recertification purpose: 1. Quality of care; 2. Patient safety; 3. Maintenance of doctors' knowledge and skills; 4. Career.

[2.] Focus of recertification: LLL = lifelong learning; PP = Practice performance.

[3.] Assessment methods:

1. CPD: [1.1 specialty-specific CPD course; 1.2 General CPD course (communication skills); 1.3 Individual learning (reading); 1.4 Conference attendance; 1.5 Teaching; 1.6 Research & scientific publications; 1.7 E-learning; 1.8 Time spent as visiting professional]
2. Clinical audit;
3. Appraisal/peer reviews;
4. Portfolio;
5. Minimum hours of patient contact;
6. Mandatory intensive course;
7. Significant events.

yes = + , no = -

Participation in a recertification program was voluntary in three countries only, Denmark, Spain and Portugal, though all countries imposed a professional or legal obligation to engage in lifelong learning. Consequences of non-compliance were non-existent in voluntary systems; in the mandatory systems (N=7), however, they varied from financial sanctions (Switzerland and Germany) or work under supervision to suspension of the license to practice (Germany, the UK, Hungary and partly the Netherlands), with two countries allowing for license recovery. Finally, one country conferred a lifelong registration upon doctors, obviating the need to impose any sanctions in practice (Table 5).

Table 5. *Regulation of recertification process in the countries under scrutiny*

Case	Who sets rules for recertification?				Potential consequences of non-compliance[3]
	Medical Specialties	Ministry of Health	Medical Authority[1]	Type of obligation[2]	
Netherlands	yes	yes	yes	1	(1), 2
Switzerland	yes	no	no	1,2	3, 4
Germany	no	yes	yes	1,2	1, 3
United Kingdom	no	no	yes	1,2	1, 2
Ireland	yes	no	yes	1	4, 5
Denmark	/	/	yes	2	4
Hungary	/	yes	yes	1	1
Poland	/	yes	yes	1	4
Portugal	/	/	/	/	4
Spain	yes	/	yes	1	4

[1] Medical Authority such as the General Medical Council

[2.] Type of obligation: 1. Legal; 2. Professional

[3.] Potential consequences of non-compliance are: 1. Work supervised or suspension of license; 2. Suspension of license with possibility to restore license; 3. Financial sanctions; 4. No formal consequences / license for lifetime; 5. Follow-up.

Information obtained from interviews confirmed information from documents with the exception of handling of con-compliance: compared to the rules laid down in official documents, interviewees reported a more lenient handling of con-compliance in practice.

2. Focus of the assessment

As regards focus, almost all recertification systems emphasized the lifelong learning of doctors. Likewise, most systems relied on the collection of a minimum number of credits per year, mostly 50 (N=5), where one credit typically represented one hour of learning activity. Although the three voluntary systems did not require credits to be earned for recertification, one did recommend it (Denmark). Such practice was often embedded in a continuing professional development framework as part of a voluntary recertification process. In Hungary doctors must take a specific course followed by an exam. Generally, they received more credits for courses if these were concluded with an examination. Of the countries that assessed practice performance, only five did so through audits and appraisals or multi-source feedback. Four countries evaluated doctors' individual and team functioning focusing on communication and collaboration skills.

3. Frequency of recertification

The frequency of recertification and timeframe within which requirements must be fulfilled varied widely: some countries had annual appraisals (N=2), others three-year procedures (N=2), but most of the countries undertook quinquennial assessments (N=5).

4. Assessment methods

To demonstrate their knowledge and engagement in lifelong learning, doctors in most coun-

tries must earn credits, for instance by participating in workshops and national or international conferences, doing individual reading, teaching, writing scientific articles, spending time as visiting doctor, and/or e-learning. Denmark assessed performance on the basis of a dialog between employer and employee who jointly discussed learning needs. The United Kingdom counted reflection on significant events, that is, unintended critical events which potentially harmed the patient, to measure patient outcomes. Yet other countries (N=4) used clinical audits, number of complaints, reviews or appraisals, and peer reviews to measure processes of healthcare delivery. Finally, some countries deployed portfolios (N=6), clinical audits (N=4), and multi-source feedback (N=4) to reflect on individual and team functioning.

5. Stakeholder involvement

In most cases (N=9), doctors decided which learning activities to take based on their self-assessed learning needs. Several countries, however, also based the assessment of performance outcomes and the process of care on feedback from peers (N=5) or patients (N=2), yet only one country (The UK) demanded involving patients in the assessment regularly.

6. Synopsis

All things considered, what stood out was that most recertification systems relied heavily on doctors' self-assessments, attached little weight to patient outcomes, patient involvement, and the assessment of practice performance, as well as lacked an overarching competency framework. Only four countries seem to match the content of assessment programs with evaluation of professional practice. These findings clearly contrast with the aim to ensure quality of care and patient safety most systems pursued. Evaluation of practice performance seems to be a *sine qua non,* an indispensable condition, for assessment of competence, i.e. what doctors actually do in day-to-day practice. Two countries (the Netherlands and the UK), however, did

use a more comprehensive system, covering both self-assessment and practice performance through multi-source feedback, including patients' feedback.

Three other countries deserve mention for their apparent distinctness from the rest. Denmark, though not formally requiring continuing professional development, assessed practice performance based on an annual dialog between doctor and employer. This left little room for individual doctors to self-assess their performance and independently decide on activities to be taken, which was the case in all other countries where the individual doctor was responsible for high-quality patient care. The systems in Spain and Portugal stood out as being career-focused: they did not require doctors to engage in lifelong learning and professional development for purposes of patient safety and quality patient care, but rather encouraged the use of a portfolio to enhance chances of promotion.

DISCUSSION

The purpose of this study was to investigate how recertification is organized across different countries. We found substantial differences in recertification requirements and procedures. Moreover, these requirements in many respects seemed to conflict with aims to ensure quality of care and patient safety.

First, we observed that only a few systems included feedback from patients in the assessment. Involving patients in assessing quality of healthcare and doctor performance seems inevitable for accountability and transparency purposes.[40] Although many patients are needed to obtain reliable evaluations, their involvement in recertification procedures can help respond to public calls for doctors' accountability.[9] Wright et al recommend including data from 34 patient questionnaires and 15 colleague questionnaires to obtain reliable performance evaluation for appraisal purposes.[41] Despite the fact that the literature reports peers to give accurate, credible, and valid assessments of performance, peer feedback was absent in most systems investigated but is for example employed in some Canadian provinces.[9 14 42 43] Use of multi-

source feedback to assess practice performance, requires high quality and credible feedback to induce reflection on practice.[44] Multi-source feedback, including patients' feedback, can be especially effective when the feedback received contrasts with individual perceptions and is facilitated by a mentor or coach.[45] A mentor can help to deal with the emotional aspects of the multi-source feedback and to structure individual reflection and follow-up.[46] Use of multi-source feedback and mentoring systems could thus help countries transitioning from a system based on self-assessments to "directed" self-assessments as suggested by Sargeant et al.[47]

Second, most systems relied on self-assessments and lifelong learning activities doctors selected themselves without attending to external assessment of practice performance. More specifically, by relying on credit accumulation systems that allowed doctors to choose their learning activities,[48] it was entirely at the doctors' discretion to judge their performance and learning needs. There's strong evidence however, that several individual and social factors obscure the validity of self-assessments such as age and experience.[48 49] Additionally, self-assessments tend to mirror self-confidence and self-efficacy which are not necessarily good measures of doctors' competence.[48] This evidence provides ample ground to question both the effectiveness of recertification systems that rely on doctors' self-assessments and the autonomy granted to clinicians.[17 50] Hence, assessments of competence will become more meaningful when they involve multiple assessors, including patients.

Another deviation from the purpose of recertification constituted the assessment methods used. Whereas activities such as reading written materials, and attending conferences or presentations have been shown to deepen specific knowledge, there is no evidence that such didactic and passive learning interventions alone improve performance and patient outcomes.[51-53] A causal link between educational activities and improved patient health status yet remains to be established.[54] This casts doubt on the impact of the recertification systems in our study on doctors' performance. Consequently, our findings reinforce concerns about the

validity of recertification procedures and emphasize the need to combine various assessment methods, likely resulting in greater accountability as previously been proven.[55] As stated by Forsetlund and colleagues (2009), a combination of multiple media, multiple instructional techniques and multiple exposures can help to induce change in performance towards improved patient outcomes.[56]

Other non-European countries have experienced similar challenges in implementing adequate assessment methods for recertification purposes.[4 43 57 58] Also Australia and North America investigate new methods to evaluate competence and practice performance, cautiously moving away from self-assessment.[4 43 58]

Since medical specialists invest substantial time and money in their professional development, the feasibility, applicability, and acceptability of recertification are topics worth exploring in the context of quality assurance. We therefore invite future studies into stakeholders' perceptions of recertification and their effectiveness and impact,[59] and also to bring into focus the content and formal aspects of learning activities which, by facilitating its design and implementation, may improve recertification. To shed light on the full picture, we would furthermore welcome studies investigating the feasibility and acceptability of involving patients in evaluating physicians' competency.

Limitations

Since recertification systems were decentralized in some countries and we explored the national level only, we cannot exclude that interregional variations were missed. Moreover, although the interviewees ideally represented at least two different national organizations, interviews were mostly limited to two or three respondents per country. A final and possibly the most complex and intervening limitation constituted the diversity in terminology and language. This may have affected the translation of national concepts into English during the interviews and of written descriptions, potentially causing loss of detail during the analyses.

These language differences and ambiguity in terms underline the challenge of comparing various recertification systems.

Practical implications for professional mobility

Defining universal criteria for assessing professional competence will be no easy feat, especially not when considering the differences between national recertification approaches, rising cross-border mobility. Since each system is customized to a specific context, culture, and healthcare system, a universal recertification system may neither be desirable nor achievable, as doctors are required to consciously reflect on the local culture, and adapt to the unique features of their work setting and health care system.[16] To our knowledge, currently there is no requirement or overarching effort in striving towards harmonising recertification processes across countries within the European Union. Its member states have agreed that each individual country will remain responsible for national health care affairs, without European regulations interfering. Moving towards a standardised system would however require an EU-wide regulation, which is currently interrupted by those strong nationally regulatory powers. For transparency purposes, however, national bodies and medical societies could share their competency assessment procedures and quality standards, turning a political matter into an educational (and quality assurance) matter.[8] Moreover, national bodies can incorporate performance evaluation, involve multiple stakeholders including patients, and use other assessments besides clinicians' self-assessments in their re-certification procedures to enhance liability.[60] Considering the increasing internationalisation of healthcare, doctors' cultural competency should also be incorporated into recertification programmes.

Achieving an overarching quality assurance system being an unrealistic goal, we need to have a shared understanding of what are minimum standards for a doctor[50] thereby creating a base for international comparison while allowing for local adaptations. This however asks for an increased collaboration between countries and understanding of differences inherent to

each system and culture. Such standards of training content and certification directives could meet the challenges posed by the free, cross-border movement of professionals, improving patient safety, and enhancing accountability and transparency.

Conclusion

Recertification can help assess and improve knowledge, skills, professional performance, and, ultimately, patient outcomes. Yet, systems vary widely across countries in terms of being compulsory or not, requirements, patient involvement, and consequences of compliance or non-compliance. A shift toward a broader program of assessment focused on competence assessment and lifelong learning might create a more valid, credible, and reliable basis for recertification, meeting growing demands for accountability and transparency.

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COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the inter view or focus group?	
Duration	21	What was the duration of the inter views or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

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Doctors on the move: a European case study on the key characteristics of national recertification systems

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Doctors on the move: a European case study on the key characteristics of national recertification systems

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ABSTRACT

Objectives: With increased cross-border movement, ensuring safe and high-quality healthcare has gained primacy. The purpose of recertification is to ensure quality of care through periodically attesting doctors' professional proficiency in their field. Professional migration and facilitated cross-border recognition of qualifications, however, make us question the fitness of national policies for safeguarding patient care and the international accountability of doctors.

Design and setting: We performed document analyses and conducted 19 semi-structured interviews to identify and describe key characteristics and effective components of 10 different European recertification systems, each representing one case (collective case study). We subsequently compared these systems to explore similarities and differences in terms of assessment criteria used to determine process quality.

Results: Great variety existed between countries in terms and assessment formats used, targeting cognition, competence and performance (Miller's assessment pyramid). Recertification procedures and requirements also varied significantly, ranging from voluntary participation in professional development modules to the mandatory collection of multiple performance data in a competency-based portfolio. Knowledge assessment was fundamental to recertification in most countries. Another difference concerned the stakeholders involved in the recertification process: while some systems exclusively relied on doctors' self-assessment, others involved multiple stakeholders but rarely included patients in assessment of doctors' professional competence. Differences between systems partly reflected different goals and primary purposes of recertification.

Conclusion: Recertification systems differ substantially internationally with regard to the criteria they apply to assess doctors' competence, their aims, requirements, assessment formats, and patient involvement. In the light of professional mobility and associated demands for accountability, we recommend that competence assessment include patients' perspectives, and recertification practices be shared internationally to enhance transparency. This can help facilitate cross-border movement, while guaranteeing high-quality patient care.

Word count: 277

Key words: Recertification; Continuing Professional Development; Performance assessment; Patient safety; Quality assurance; Professional mobility

Strengths and limitations of this study

- Our research provides a comprehensive comparison of ten European recertification systems and their assessment criteria used to ensure quality of care delivered. It highlights how physicians' knowledge and competence are assessed, which stakeholders are involved and how the processes are regulated.
- Our research focuses on European countries only as free cross-border movement of professionals is unique to the European context.
- We cannot exclude that interregional variations were missed because recertification systems were decentralized in some countries and we explored the national level only.
- The diversity and ambiguity in terminology (recertification, revalidation, continuing professional development) underline the challenge of comparing various recertification systems.

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INTRODUCTION

Increased mobility of health professionals can pose potential threats to the quality of care. Suppose, for instance, a high performing, Romanian doctor moves to the Netherlands. There, this person will face a new work environment in a distinct healthcare system with specific quality guidelines, and different morbidity patterns, and patient demands. As this new work setting requires specific knowledge, skills, and values that differ from the Romanian context and culture, you may wonder: Will this doctor still be competent to deliver high-quality care?

While the problem of safeguarding quality of care across borders is omnipresent, it is particularly pertinent in Europe where the free movement of professionals has long historical and legal roots. Although a European Commission directive has facilitated mobility by providing for international recognition of professional qualifications, it fails to guarantee that doctors actually meet the minimum and context-specific quality standards. To safeguard quality of patient care, regulatory bodies around the world have implemented different systems,[1 2] such as recertification systems. Recertification entails lifelong learning and periodic assessment of doctors' competence and performance through various methods.[3] It describes the process designed to promote and demonstrate continuous professional competence.[4] More specifically, it requires a formal procedure of assessing and attesting quality of service provided "in accordance with established requirements or standards."[5] By renewing initial certification, *re*certification aims to address any decline in performance as well as ensure trained doctors' adaptation to advances in knowledge and technology.[6 7] This is particularly important in times of increased publicity over individual failures of medical performance, demands for doctors' accountability, and concerns about patient safety.[8]

Despite its well-intended aim, recertification harbours two inherent problems. First, current national recertification practices fail to ensure quality of care internationally, as they assess doctors' competence and performance in accordance with *national* quality standards. Differences in standards across countries and the absence of international recertification systems may complicate international quality assurance and quality improvement.[7] This begs the question of whether such discrete practices can respond to repeated calls for international accountability and transparency.[4] Second, although research on assessment of professional competence provided a set of guidelines for assessment criteria to ensure high quality assessment,[9] the question on how to assess doctors' competence has often turned into a political rather than an educational one,[10] potentially impacting on effectiveness of recertification systems.

"Competence" is defined as the ability to integrate knowledge, skills, and attitudes into a certain context to ensure safe patient care.[11 12] This definition suggests to pay balanced attention to multiple competency domains relevant to a doctor, when assessing professional competence.[13] Indeed, many scholars and institutions advocate the assessment of not only medical knowledge and skills, but also competencies, such as communication, collaboration, and clinical judgment, as well as cultural competence or critical consciousness.[14-16] Assessment measures must also be robust and focus on the healthcare system's needs and outcomes, implying involvement of key stakeholders, particularly patients when evaluating quality of care.[17-20] It is furthermore acknowledged that, for each of the competencies, outcomes of different assessment methods must be combined to ensure robust decision making about professional competence [21 22]

To conclude, cross-border quality of care will be promoted if countries not only share their recertification practices, but also are willing to critically reflect on quality of assessment

processes embedded in recertification procedures.[8 23] In the present study, we attempt taking a first step in this direction by identifying different national recertification approaches. The question of the present study, therefore, was what are the key characteristics of recertification systems for doctors of different countries? More specifically, we aimed at exploring use of assessment criteria in design of recertification procedures. We used a collective case study design to describe and compare different national systems. We were particularly interested in the assessment criteria used, if any, and how they were applied. Although recertification is sometimes also coined "revalidation," "re-accreditation," and "maintenance of certification" or used interchangeably with "continuing professional development" in other contexts, this article keeps to the former term. The article builds on previous work on certification but primarily focuses on recertification.

METHODS

Study Design and Case Selection

We described and analysed the recertification systems of ten individual European countries. Each country's national recertification system represented a single case. We selected our cases using purposeful sampling to reach maximum heterogeneity in terms of geographical spread across Europe, demographics, health professionals' migration profile, and type of healthcare system (Table 1).[24]

Table 1. *Sampling criteria*

Sampling criterion	Specification of criterion
Geographical spread	Include countries of different sizes, demographic make-up, with different cultures, and from a range of geographical locations (Northern, Eastern, Southern, Western, and Central Europe).

Migration profile and position	Include countries that have different levels of health professional migration (inflow and outflow) and rely more or less on foreign doctors; include both "junior" (EU12) and "senior" EU member states (EU15) as indicated by the length of EU membership.
Different healthcare systems	Include countries with different structures of healthcare services in terms of how they are financed and covered by the insurance system (publicly, privately, or both).

EU2 = countries which joined the EU in 2007: Bulgaria and Romania.
EU10 = countries which joined the EU in 2004: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia.
EU12 = EU2 and EU10 countries: Cyprus, Czech Republic, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
EU15 = countries which were already EU member states in 2003: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the UK.

Based on these criteria, the final study sample included Denmark, Germany, Hungary, Ireland, Poland, Portugal, Spain, Switzerland[1], the Netherlands, and the United Kingdom (Table 2).

[1] Although Switzerland is not a member of the European Union, it is part of the European Economic Area and characterised by a high migration rate, and high reliance on foreign trained doctors, which makes it relevant for our study.

Table 2. *Overview of selected countries and their health insurance systems, their coverage, and the existence of a gatekeeper system* [25-33]

Country	Geographic location	Net migration rate (migrants/1,000 inhabitants)[34]	% of foreign-trained doctors, latest available year [24 35 36]	Type of health insurance system	Financing of healthcare
Denmark	North	2.25	5.27%	Decentralized, offers universal and nearly free access	Taxation
Germany	Central	1.06	10.26%	Mix of compulsory public and voluntary private health insurance; highly decentralized	Statutory insurance, taxation, out-of-pocket payments, and private health insurance
Hungary	East	1.34	7.79%	National Health Insurance Fund is state- owned and offers complete coverage, partly free of charge	Taxation and social health insurance contributions
Ireland	West	3.31	41.6%	National Healthcare System, Mix of public and voluntary private health insurance	Taxation and supported by co-payments for specialist's treatment from insurance providers.
Poland	East	-0.47	1.8%	Decentralized, mandatory health insurance system	National Health Funds

Portugal	South	2.74	7.74%	National Health Service Private and public insurance schemes plus voluntary private insurances	Taxation, public and private insurance schemes, and direct payment
Spain	South	7.24	9.4%	National Health Service Private and public insurance schemes	Taxation and payroll contributions
Switzerland	Central	5.43	27.05%	Obligatory, statutory, decentralized insurance system Federal Office for Social Insurance monitors providers	Compulsory health insurance premiums and out-of-pocket payments
The Netherlands	Central	1.97	2.13%	Mixed model of compulsory social and voluntary private insurance	Health Insurance, taxation and direct payments
United Kingdom	West	2.56	28.07%	Mix of public and voluntary private health insurance	National Health Service, taxation, and national insurance contributions

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Data collection

We collected data on the respective recertification procedures by performing a document analysis for each case in addition to conducting semi-structured interviews with two or three representatives from each country.

For the document analyses, we retrieved documents describing national recertification procedures for doctors from the websites of national certification organizations, and translated them into English if needed. The documents included national recertification schemes and regulations, rules and reports of medical education and training, user guidelines, laws and grey literature articles. We focused on documents that clarified rationale, form and procedure, as well as requirements and rewards of each recertification program.

To validate and corroborate our interpretation of data from document analysis, we conducted one to three semi-structured interviews with representatives of each national regulatory body responsible for postgraduate medical education and recertification or the recognition of professional qualifications (e.g., international affairs offices) (N=19). These interviewees were directors of professional development and practice, heads of recertification departments, experts on continuing professional development, and official secretaries or legal advisors to national medical education offices, medical or scientific societies, accreditation bodies, medical royal colleges, councils, or chambers (Table 3).

Table 3. *Number and profile of respondents per country*

Country investigated	Number of interviews
Netherlands	1
Switzerland	2
Germany	3
United Kingdom	2
Ireland	2
Denmark	2
Hungary	1

Poland	2
Portugal	2
Spain	2

The first author (CS) conducted all interviews via video or phone, based on an interview protocol adapted from a study on continuing professional development and lifelong learning for health professionals.[37] The interview protocol was piloted in the Netherlands. Questions addressed competency frameworks as well as rules and regulations of recertification, asking about regulatory authorities involved, main objective(s), structure, requirements, and consequences of compliance or non-compliance. Before the interview, we explained the research purposes to participants and asked them to give informed consent. Interviews were audio-taped and lasted 50-90 minutes, during which notes were taken. Notes were subsequently presented to interviewees to approve or to add information.

Data collection took place from April to September, 2016.

Patient involvement

No patients were involved in this research, given our specific aim.

Data analysis

Data analysis spanned a two-step process. First, we analysed the data from the document analyses and interviews to identify and describe key characteristics of each case. We asked at least one interviewee per country to comment on the accuracy and completeness of the described recertification system. We subsequently re-analysed the data, specifically focusing on the application of criteria for high quality assessment: validity, reliability, educational and catalytic effect.[9 14 38] For that purpose we identified specific strategies used to ensure assessment quality in terms of validity, reliability and educational consequences, for each of the re-certification system (Box 1).

Box 1. *Strategies embedded in recertification, affecting assessment quality*

Criterion		Features
What is assessed?	Program of assessment	• Inclusion of competency domain(s) or domain(s) of professional practice (including lifelong learning) • Use of overarching framework (based on needs healthcare system; key domains professional practice) • Assessment and learning aligned with individual needs • Focus on process of care • Focus on patient outcome (including patient satisfaction)
When is it assessed?	Frequency of recertification cycle	• Yearly • Every 2-3 years • Every 4-5 years • Every > 5 years • No time frame
Who assesses?	Stakeholders involved in the assessment	• Individual (self-assessment) • Peers • Employer • Patients • Others
How is it assessed?	Assessment methods	• Competence level according to Miller's assessment pyramid (cognition versus performance) • Self-assessment • Portfolios • Credit collection through course participation • Examinations (standardised) • Simulations • Clinical audits • Multi-source feedback
	Regulations	• Voluntary vs. mandatory • Legal vs. professional obligation
What are the	Assessment goal	• Quality of care and patient safety • Professional development

objectives?		• Maintenance of doctors' knowledge and skills
	Consequences of non-compliance	• Loss of license
		• Financial sanctions
		• Follow-up
		• Work under supervision
		• Feedback

These strategies included program of assessment, assessment goals and methods (i.e., authentic and suitable methods which aim at measuring day-to-day performance and professional competence), as well as frequency of assessment (i.e., consistent outcomes across measurements and decisions). We also addressed the involvement of different stakeholders including patients, and consequences for learning and development. Self-assessment as tool for lifelong learning and assessment of practice performance were the two major components of recertification considered.[39] Finally, we compared recertification systems across cases to identify similarities and differences with respect to use of the aforementioned assessment criteria.

RESULTS

In the following paragraphs, we highlight differences and/or similarities across countries in terms of the purpose, focus, frequency, and methods of recertification, and the stakeholders involved in the process. Exact details are provided in Table 4, while Table 5 outlines the bodies (Medical specialties, Ministries of Health or Medical Authorities) responsible for recertification. The final paragraph provides a synopsis of the most striking results.

All systems uncovered applied to all registered practicing doctors, irrelevant of whether they were trained nationally or internationally, as they are automatically enrolled in the national scheme upon registration.

1. Purpose of recertification

As shown in Table 4, the purpose of recertification constituted a major source of variance. While several countries aimed to improve quality of care and patient safety, a minority (N=2), essentially those countries where recertification was not mandatory, upheld personal development and career advancement as their primary objective (Table 4).

234 **Table 4.** *Competence assessment in recertification systems of investigated cases*

Case	Purpose[1]	Focus[2]			Based on competency framework	Frequency		Assessment methods[3]	Who decides on activities to be followed?		Stakeholders involved in the assessment				How is internal quality of assessment assured?
		LLL	PP	Mandatory (yes/no)		After … credits	Every … year(s)		Individual doctor	Employers	Doctor him/herself	Colleagues	Patients	Employers	
Netherlands	1, 3	+	+	+	+	200	5	1.4-1.7; 2; 3; 4; 5	+	-	+	+	+	+	quality visitations, assessment of group functioning
Switzerland	1, 2	+	+	+	N/A	150	3	1.1-1.7; 2; 3	+	-	+	+	-	-	N/A
Germany	1, 3	+	-	+	N/A	250	5	1.1-1.4; 1.6-1.8	+	-	+	-	-	-	accreditation of CME providers
United Kingdom	1, 2, 3	+	+	+	+	~250	5	1.1-1.4; 1.6; 1.7; 2; 3; 4; 7	+	-	+	+	+	+	independent assessors, information triangulation, audits
Ireland	3	+	+	+	+	50	1	1.2-1.6; 2	+	-	+	-	-	-	N/A
Denmark	1, 2	-	+	-	-	N/A	1	1; 3; 4	+	+	+	-	-	+	local management
Hungary	2	+	-	+	N/A	250	5	1.1; 1.2; 1.6-1.8; 4; 5; 6	+	-	+	-	-	-	more credits for CPD activities with exams

Poland	3	+	-	+	N/A	200	4	1.1; 1.2; 1.4-1.7	+	-	+	-	-	-	accreditation of CME providers
Portugal	4	+	+	-	N/A	N/A	5	4	+	-	-	+	-	(+)	N/A
Spain	4	+	+	-	+	N/A	3	1.2; 4	+	-	+	+	-	+	organization's quality control

[1.] Recertification purpose: 1. Quality of care; 2. Patient safety; 3. Maintenance of doctors' knowledge and skills; 4. Career.

[2.] Focus of recertification: LLL = lifelong learning; PP = Practice performance.

[3.] Assessment methods:

1. CPD: [1.1 specialty-specific CPD course; 1.2 General CPD course (communication skills); 1.3 Individual learning (reading); 1.4 Conference attendance; 1.5 Teaching; 1.6 Research & scientific publications; 1.7 E-learning; 1.8 Time spent as visiting professional]
2. Clinical audit;
3. Appraisal/peer reviews;
4. Portfolio;
5. Minimum hours of patient contact;
6. Mandatory intensive course;
7. Significant events.

yes = + , no = -

Participation in a recertification program was voluntary in three countries only, Denmark, Spain and Portugal, though all countries imposed a professional or legal obligation to engage in lifelong learning. Consequences of non-compliance were non-existent in voluntary systems; in the mandatory systems (N=7), however, they varied from financial sanctions (Switzerland and Germany) or work under supervision to suspension of the license to practice (Germany, the UK, Hungary and partly the Netherlands), with two countries allowing for license recovery. Finally, one country conferred a lifelong registration upon doctors, obviating the need to impose any sanctions in practice (Table 5).

Table 5. *Regulation of recertification process in the countries under scrutiny*

Case	Who sets rules for recertification?				Potential consequences of non-compliance[3]
	Medical Specialties	Ministry of Health	Medical Authority[1]	Type of obligation[2]	
Netherlands	yes	yes	yes	1	(1), 2
Switzerland	yes	no	no	1,2	3, 4
Germany	no	yes	yes	1,2	1, 3
United Kingdom	no	no	yes	1,2	1, 2
Ireland	yes	no	yes	1	4, 5
Denmark	/	/	yes	2	4
Hungary	/	yes	yes	1	1
Poland	/	yes	yes	1	4
Portugal	/	/	/	/	4
Spain	yes	/	yes	1	4

[1] Medical Authority such as the General Medical Council

[2.] Type of obligation: 1. Legal; 2. Professional

[3.] Potential consequences of non-compliance are: 1. Work supervised or suspension of license; 2. Suspension of license with possibility to restore license; 3. Financial sanctions; 4. No formal consequences / license for lifetime; 5. Follow-up.

Information obtained from interviews confirmed information from documents with the exception of handling of con-compliance: compared to the rules laid down in official documents, interviewees reported a more lenient handling of con-compliance in practice.

2. Focus of the assessment

As regards focus, almost all recertification systems emphasized the lifelong learning of doctors. Likewise, most systems relied on the collection of a minimum number of credits per year, mostly 50 (N=5), where one credit typically represented one hour of learning activity. Although the three voluntary systems did not require credits to be earned for recertification, one did recommend it (Denmark). Such practice was often embedded in a continuing professional development framework as part of a voluntary recertification process. In Hungary doctors must take a specific course followed by an exam. Generally, they received more credits for courses if these were concluded with an examination. Of the countries that assessed practice performance, only five did so through audits and appraisals or multi-source feedback. Four countries evaluated doctors' individual and team functioning focusing on communication and collaboration skills.

3. Frequency of recertification

The frequency of recertification and timeframe within which requirements must be fulfilled varied widely: some countries had annual appraisals (N=2), others three-year procedures (N=2), but most of the countries undertook quinquennial assessments (N=5).

4. Assessment methods

To demonstrate their knowledge and engagement in lifelong learning, doctors in most

countries must earn credits, for instance by participating in workshops and national or international conferences, doing individual reading, teaching, writing scientific articles, spending time as visiting doctor, and/or e-learning. Denmark assessed performance on the basis of a dialog between employer and employee who jointly discussed learning needs. The United Kingdom counted reflection on significant events, that is, unintended critical events which potentially harmed the patient, to measure patient outcomes. Yet other countries (N=4) used clinical audits, number of complaints, reviews or appraisals, and peer reviews to measure processes of healthcare delivery. Finally, some countries deployed portfolios (N=6), clinical audits (N=4), and multi-source feedback (N=4) to reflect on individual and team functioning.

5. Stakeholder involvement

In most cases (N=9), doctors decided which learning activities to take based on their self-assessed learning needs. Several countries, however, also based the assessment of performance outcomes and the process of care on feedback from peers (N=5) or patients (N=2), yet only one country (The UK) demanded involving patients in the assessment regularly.

6. Synopsis

All things considered, what stood out was that most recertification systems relied heavily on doctors' self-assessments, attached little weight to patient outcomes, patient involvement, and the assessment of practice performance, as well as lacked an overarching competency framework. Only four countries seem to match the content of assessment programs with evaluation of professional practice. These findings clearly contrast with the aim to ensure quality of care and patient safety most systems pursued. Evaluation of practice performance seems to be a *sine qua non,* an indispensable condition, for assessment of competence, i.e.

what doctors actually do in day-to-day practice. Two countries (the Netherlands and the UK), however, did use a more comprehensive system, covering both self-assessment and practice performance through multi-source feedback, including patients' feedback.

Three other countries deserve mention for their apparent distinctness from the rest. Denmark, though not formally requiring continuing professional development, assessed practice performance based on an annual dialog between doctor and employer. This left little room for individual doctors to self-assess their performance and independently decide on activities to be taken, which was the case in all other countries where the individual doctor was responsible for high-quality patient care. The systems in Spain and Portugal stood out as being career-focused: they did not require doctors to engage in lifelong learning and professional development for purposes of patient safety and quality patient care, but rather encouraged the use of a portfolio to enhance chances of promotion.

DISCUSSION

The purpose of this study was to investigate how recertification is organized across different countries. We found substantial differences in recertification requirements and procedures. Moreover, these requirements in many respects seemed to conflict with aims to ensure quality of care and patient safety.

First, we observed that only a few systems included feedback from patients in the assessment. Involving patients in assessing quality of healthcare and doctor performance seems inevitable for accountability and transparency purposes.[40] Although many patients are needed to obtain reliable evaluations, their involvement in recertification procedures can help respond to public calls for doctors' accountability.[9] Wright et al recommend including data from 34 patient questionnaires and 15 colleague questionnaires to obtain reliable performance evaluation for appraisal purposes.[41] Despite the fact that the literature reports peers to give accurate, credible, and valid assessments of performance, peer feedback was absent in most

systems investigated but is for example employed in some Canadian provinces.[9 14 42 43] Use of multi-source feedback to assess practice performance, requires high quality and credible feedback to induce reflection on practice.[44] Multi-source feedback, including patients' feedback, can be especially effective when the feedback received contrasts with individual perceptions and is facilitated by a mentor or coach.[45] A mentor can help to deal with the emotional aspects of the multi-source feedback and to structure individual reflection and follow-up.[46] Use of multisource feedback and mentoring systems could thus help countries transitioning from a system based on self-assessments to "directed" self-assessments as suggested by Sargeant et al.[47]

Second, most systems relied on self-assessments and lifelong learning activities doctors selected themselves without attending to external assessment of practice performance. More specifically, by relying on credit accumulation systems that allowed doctors to choose their learning activities,[48] it was entirely at the doctors' discretion to judge their performance and learning needs. There's strong evidence however, that several individual and social factors obscure the validity of self-assessments such as age and experience.[48 49] Additionally, self-assessments tend to mirror self-confidence and self-efficacy which are not necessarily good measures of doctors' competence.[48] This evidence provides ample ground to question both the effectiveness of recertification systems that rely on doctors' self-assessments and the autonomy granted to clinicians.[17 50] Hence, assessments of competence will become more meaningful when they involve multiple assessors, including patients.

Another deviation from the purpose of recertification constituted the assessment methods used. Whereas activities such as reading written materials, and attending conferences or presentations have been shown to deepen specific knowledge, there is no evidence that such didactic and passive learning interventions alone improve performance and patient outcomes.[51-53] A causal link between educational activities and improved patient health status

yet remains to be established.[54] This casts doubt on the impact of the recertification systems in our study on doctors' performance. Consequently, our findings reinforce concerns about the validity of recertification procedures and emphasize the need to combine various assessment methods, likely resulting in greater accountability as previously been proven.[55] As stated by Forsetlund and colleagues (2009), a combination of multiple media, multiple instructional techniques and multiple exposures can help to induce change in performance towards improved patient outcomes.[56]

Other non-European countries have experienced similar challenges in implementing adequate assessment methods for recertification purposes.[4 43 57 58] Also Australia, the USA and Canada investigate new methods to evaluate competence and practice performance, cautiously moving away from self-assessment.[4 43 58]

Since medical specialists invest substantial time and money in their professional development, the feasibility, applicability, and acceptability of recertification are topics worth exploring in the context of quality assurance. We therefore invite future studies into stakeholders' perceptions of recertification and their effectiveness and impact,[59] and also to bring into focus the content and formal aspects of learning activities which, by facilitating its design and implementation, may improve recertification. To shed light on the full picture, we would furthermore welcome studies investigating the feasibility and acceptability of involving patients in evaluating physicians' competency.

Limitations

Since recertification systems were decentralized in some countries and we explored the national level only, we cannot exclude that interregional variations were missed. Moreover, although the interviewees ideally represented at least two different national organizations, interviews were mostly limited to two or three respondents per country. A final and possibly the most complex and intervening limitation constituted the diversity in terminology and

language. This may have affected the translation of national concepts into English during the interviews and of written descriptions, potentially causing loss of detail during the analyses. These language differences and ambiguity in terms underline the challenge of comparing various recertification systems.

Practical implications for professional mobility

Defining universal criteria for assessing professional competence will be no easy feat, especially not when considering the differences between national recertification approaches, rising cross-border mobility. Since each system is customized to a specific context, culture, and healthcare system, a universal recertification system may neither be desirable nor achievable, as doctors are required to consciously reflect on the local culture, and adapt to the unique features of their work setting and health care system.[16] To our knowledge, currently there is no requirement or overarching effort in striving towards harmonising recertification processes across countries within the European Union. Its member states have agreed that each individual country will remain responsible for national health care affairs, without European regulations interfering. Moving towards a standardised system would however require an EU-wide regulation, which is currently interrupted by those strong nationally regulatory powers. For transparency purposes, however, national bodies and medical societies could share their competency assessment procedures and quality standards, turning a political matter into an educational (and quality assurance) matter.[8] Moreover, national bodies can incorporate performance evaluation, involve multiple stakeholders including patients, and use other assessments besides clinicians' self-assessments in their re-certification procedures to enhance liability.[60] Considering the increasing internationalisation of healthcare, doctors' cultural competency should also be incorporated into recertification programmes.

Achieving an overarching quality assurance system being an unrealistic goal, we need to have a shared understanding of what are minimum standards for a doctor[50] thereby creating

a base for international comparison while allowing for local adaptations. This however asks for an increased collaboration between countries and understanding of differences inherent to each system and culture. Such standards of training content and certification directives could meet the challenges posed by the free, cross-border movement of professionals, improving patient safety, and enhancing accountability and transparency.

Conclusion

Recertification can help assess and improve knowledge, skills, professional performance, and, ultimately, patient outcomes. Yet, systems vary widely across countries in terms of being compulsory or not, requirements, patient involvement, and consequences of compliance or non-compliance. A shift toward a broader program of assessment focused on competence assessment and lifelong learning might create a more valid, credible, and reliable basis for recertification, meeting growing demands for accountability and transparency.

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Transparency declaration: Carolin Sehlbach affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the inter view or focus group?	
Duration	21	What was the duration of the inter views or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

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