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SPECIAL ARTICLE

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Intensive care medicine: finding its way in the "European labyrinth"

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Abstract *Introduction:* The European Union (EU) has created recent directives to facilitate the free movement of medical specialists in its member states. *Methods:* Analysis of two recent surveys performed in European countries. *Results:* Intensive Care Medicine training and accreditation have changed quickly over time. There is no harmonisation among European countries. Young specialists might face several difficulties in the future. *Discussion:* Nations providing a national examination for intensive care medicine and a national register for specialists in intensive care medicine facilitate the free movement of specialists, regardless of European regulations and directives. *Conclusion:* Intensive care medicine is currently not a mother speciality. A long process needs to occur before complete harmonization of training and accreditation and free movement of specialists in Europe will happen.

Keywords Intensive care medicine · Training · Accreditation · European exam of intensive care medicine · European directives

Abbreviations

CoBaTrICE	Competency-Based Training in Intensive Care Medicine in Europe
EBICM	European Board of Intensive Care Medicine
EBICM	European Board of Intensive Care Medicine
EU	European Union
ICM	Intensive care medicine
MJCICM	Multidisciplinary Joint Committee of Intensive Care Medicine
UEMS	Union of European Medical Specialists

Introduction

In comparison to many other medical specialties, intensive care medicine (ICM) is relatively young, with many authors describing the beginnings of the field as the 1952 Copenhagen poliomyelitis epidemic. Despite the requirements for training and education in this field being both extensive and expensive [1], the dimensions and status of the discipline remain poorly understood and defined in several European countries. The variability in the length, quality and type of assessment of a specialist's training is very broad. This has many repercussions with regards to the quality and consistency of training, the feasibility of free movement of trainees and specialists between European countries, and ultimately can have a negative impact on patient safety and on the quality and effectiveness of care.

The first set of European guidelines for a training programme in ICM was published by the European Society of Intensive Care Medicine (ESICM) and the European Society of Paediatric Intensive Care (ESPNIC) in 1996 [2]. Since then, several surveys have shown a lack of harmonization in the standards and metrics for training programmes in this field [1, 3]. This is highly contradictory given the fact that ICM nowadays is one of the most expensive and dynamic disciplines in medicine. The purpose of this manuscript is twofold. Firstly it is to summarise the more recent and important developments in the recognition of ICM as a specialty at both the European and national levels. Secondly and following on from this is to describe the impact that this lack of recognition has on training schemes throughout Europe and the subsequent ability of trained specialists to then move between different countries without hindrance or delay in having their professional qualifications recognized.

Development of ICM at the European level

European legislation

The European Union (EU) lists all professional specialties within annex 5.1.3 of the directive 2005/36 entitled 'the recognition of professional qualifications' [4]. At the moment ICM is not described within this list and is therefore in the eyes of the European law not a recognized medical specialty. Spain and Switzerland are currently regulated by a specific provision and they represent an exception. The UK has created the Faculty of Intensive Care Medicine and will develop an independent training and regulation programme starting from August 2011. Nevertheless, in order to be listed as a specialty within this directive, ICM must be recognized as a primary specialty in one-third of EU member states (MS), a feat that at present is not realized. Although intuitively this seems unfair, we have to understand that the purpose of this directive was to aid the free movement of professional workers across borders within the EU MS. The directive was not drafted to raise the profile of any specific specialty or to further the political aims of its masters. This approach suffers from a number of weaknesses that hinder the development of new specialties. Whereas the rules for being listed as a specialty were relatively loose at the directive's inception, the criteria for changing the list are now much tighter making the introduction of a new filed a challenge.

There are two mechanisms within the directive that describe the methodology that MS should adhere to in order to recognize specialty-specific qualifications when an application is made for transfer between two countries. The first is article 21, which is the system of automatic recognition of a primary specialty. This article refers only to those fields described within the annex as a specialty and effectively ensures that no MS can question the training of a specialist so long as both the receiving and transferring countries themselves recognize the specialty. This is the prime purpose of the directive and is the reason for describing the specialties that then have to adhere to this automatic recognition process. Unfortunately, ICM is not one of those medical specialities. The second article, article 10, represents a general system for the recognition of evidence of training. This article is used in order to recognize individual doctors moving between countries with a professional qualification (such as ICM) that is not described in the directive as a specialty. This article describes the processes that should be adhered to for the receiving country to make an assessment of the adequacy of the qualification and how that relates to the country being travelled from. Regrettably, article 10 has not been helpful in making ICM visible as a profession in the new directives. The EU directive 2005/36 will be revised in 2012. A case or data for promoting a major change in the directive thus needs to be made now in order for time to be given for the politicians and lawyers to agree on the potential changes, draft the new legislation, and get the amendments voted on and agreed by the individual MS—a long, bureaucratic, and highly political process.

The Union of European Medical Specialists (UEMS)

The Union of European Medical Specialists (UEMS) was created in 1958 and the specialist sections for each of the main disciplines practised in the MS were created in 1962. The UEMS has the statutory purpose of harmonizing and improving the quality of medical specialist practice in the EU. The specialist sections are composed of groups of experts who represent the national associations of the specialty concerned, and they carry out a considerable amount of work with the idea of coordinating, then harmonizing the training and the criteria for the recognition of medical specialists. The UEMS and its sections act in constant cooperation with the Standing Committee of European Doctors, created in 1959, bringing together the whole of the organized medical profession of the MS. The UEMS is therefore a powerful lobbying group that can influence and change political decision making at the EU level.

In order for ICM to be recognized automatically as a section within the UEMS it needs to be recognized as a specialty in one-third of EU MS and listed as a specialty in the *Official Journal of the European Union*. In order for ICM to have input into the UEMS through the sections, a multidisciplinary joint committee of the nine relevant separate sections was established. These sections are all primary specialties that have been considered to have a

major input and role into undertaking ICM practice. The Multidisciplinary Joint Committee for Intensive Care Medicine (MJCICM) was created with the aim of facilitating the recognition of ICM as a speciality and of coordinating actions and discussions for this purpose. In order to further facilitate the functions and effectiveness of this committee, a board was set up that was dually represented by the MJCICM and the ESICM. This allowed for both the political and scientific leaders to come together to lead and direct the future shape of the specialty. In February 2006, the establishment and operating procedures of the European Board of Intensive Care Medicine (EBICM) were formally approved by the MJCICM. The ESICM has nine members on the board: its president, past-president, president-elect, secretary, chair of the division for professional development, the chair of the scientific affairs, as well as three other members. These nine ESICM members equally counterbalance the nine representatives of the MJCICM who represent the sections. The chair and the honorary secretary are elected from those 18 members for a mandate of 3 years. Since its creation, the board has been working to harmonize training and to get ICM recognized within the EU structures.

The EBICM proposed a road map for change in the recognition of the specialty in 2008. This road map described ICM as a 'particular competence'—a terminology designed to allow the competency-based assessment and description of the activities of an intensivist. The council of the UEMS endorsed this road map in April 2008 as did the council of the ESICM in the same year. It has *not* yet been able to influence change at the political EU level. This document is, however, an important step towards the harmonization of our discipline; nevertheless, unfortunately it has neither changed the content of the directive nor the inclusion of ICM in the list of specialities.

Development of ICM at the national level

The development and the description of the many training programmes in ICM across the EU have been perfectly described by the Competency-Based Training in Intensive Care Medicine in Europe (CoBaTrICE) project [1, 3]. The project has been promoted by the ESICM and supported by the EU through the Leonardo da Vinci programme. This team published two surveys, the first in 2006 and then an update in 2009 [1, 3]. Comparing the first survey with the second it is striking that 50% of training programmes have changed within this short 4-year period [1, 3]. This is highly positive, indicating the dynamism of a new discipline, but at the same time it could be argued that there is a negative component, namely the fact that specialists had a very different training over a short period of time even within the same country! The second survey also showed an increase in the number of formal examinations taken at the end of training, including the European Diploma of Intensive Care Medicine (EDIC)—organised under the responsibility of ESICM being partially (e.g. Portugal) or completely taken as equivalent (e.g. Switzerland, the Netherlands) for the National Exam—and a wider use of competency-based assessments in the curriculum of specialists (see Fig. 1, [3]). European countries are towards harmonization and are adopting a formal examination to certify the end of the ICM training. The CoBaTrICE project described the marked heterogeneity in training structures present across Europe (see Fig. 1), including four separate models of training that are currently adopted (see "Appendix 1"). These include the primary specialty model in Spain (Switzerland and soon for the UK), multidisciplinary supra-specialty, multiple specialty sub-specialty and single specialty sub-specialty.

Examples of problems with the current state of affairs

Looking at the table summarizing data collected during the CoBaTrICE survey performed in 2008 [3] it is easy to make some assumptions (see Fig. 1). For example, if a specialist fully trained in ICM in Italy wants to move to the UK to practise in the same specialty, according to the data in the table, Italy currently does not have a competency-based training for ICM [3, 5], whereas the UK does. The Italian certification is currently linked to training in anaesthesia and there is not a formal specific exam for ICM, but a joint series of examinations. The accreditation process in the UK is dual; therefore each specialist has a certificate in the primary speciality (for instance anaesthesia) and in addition a certificate for ICM. This means that Italian doctor needs to show the accomplishment of training similar to the accepting country without a specific certification. Moreover the UK has a separate register for anaesthesia, internal medicine, surgery and ICM and a new faculty since the beginning of 2011. It is easy to see how an Italian specialist may face a number of difficulties in order to be recognized as an intensivist in the UK. It is unclear as to which elements will guarantee the equivalence of the training. Moreover, specialists moving to work to the UK cannot be a fellow of the new Faculty of Intensive Care Medicine unless they have not trained in the UK or passed the exams of the Royal College of Anaesthetist.

Let us use another example. ICM training in Spain is as a primary speciality. Sixty per cent of the curriculum obtained at the end of the training in Spain refers to medical knowledge or clinical practice, whereas in England it considers the capacity of working as a team, getting recognition from patients and colleagues, ability to communicate and management skills. Spanish doctors

Table 1 Summary of Survey Data

	Trainer Represents NTO Locally	External Visiting Programme	Written ICM Standards	Critical Care Units Volume Beds	Criterion Admissions	Speciality Supra Speciality	Status of ICM Multi-sub Speciality	Single-sub Speciality	Primary Speciality	Certification Specialist Training	Formal Processes Trainer Contract	Mandatory Exam	Nationally Uses EDIC	EDIC Pass Required	Formally Adopted CoBaTrICE
Austria	N	Y	Y	8			Y			Dual	N	Y	N		
Belgium	Y	Y	Y	12		Y				Dual	N	Y	N		
Bulgaria	Y	Y	Y	6			Y			Joint	Y	Y	Y	Y	
Croatia	N	N	Y	8		Y				Alone	N	Y	Y	N	Y
Cyprus	N	N	Y	6		Y				Dual	N	Y	N		Y
Czech Rep.	N	N	Y		500	Y				Alone; Joint	N	Y	N		Planned
Denmark	Y	N	N					Y		Base	N	Y	Y	Y	Planned
Estonia	Y	N	N	6				Y		Joint	N	Y	N		
Finland	N	N	N			Y				Dual	N	Y	Y	N	
France	Y	Y	Y	8		Y		Y		Alone	N	IR	N		Y
Germany	N	N	Y			Y	Y			Dual	N	Y	N		
Greece	N	N	N			Y				Dual	N	Y	N		Planned
Hungary	Y	Y	N			Y		Y		Joint	Y	Y	N		
Ireland	N	Y	Y			Y				Base	N	Y	Y	Y	Consider
Israel	N	Y	Y	4		Y				Dual	N	Y	N		Y
Italy	Y	Y	N				Y			Joint	N	Y	N		
Latvia	Y	Y	N	10	600			Y		Joint	Y	Y	N		
Netherlands	Y	Y	Y	12	1500	Y				Dual	Y	Y	Y	N	Y
Norway	N	Y	N					Y		Joint	N	Y	Y	Y	Y
Poland	Y	N	Y	6				Y		Joint	N	Y	N		
Portugal	Y	Y	Y	8	200	Y				Dual	N	Y	N		Y
Slovakia	N	N	Y	4				Y		Joint	N	Y	Y	Y	
Slovenia	N	N	Y	8	400	Y				Dual	Y	Y	N		
Spain	Y	N	Y	10					Y	Alone	N	N	N		
Sweden	Y	N	N					Y		Joint	N	Y	Y	Y	
Switzerland	Y	Y	Y	6		Y			Y	Alone ; Dual	N	Y	Y	N	
Turkey	N	Y	N				Y			Base	N	N	N		
UK	Y	Y	Y	8		Y				Dual	Y	Opt	N		
Totals	**15**	**15**	**18**			**16**	**5**	**9**	**2**		**6**	**24**	**10**	**6**	**7**

Legend = Y= yes, N=No, Opt = optional. IR = Inter Regional
Alone = ICM certification awarded as a primary spedality; Dual = ICM and base speciality certificate awarded; Joint = ICM and base speciality certificate is integrally linked; Base= base speciality certificate only is awarded

Fig. 1 The summary of the results of the second CoBaTrICE survey

might not send/receive written referrals or receive personal letters from patients or colleagues. In fact, in many countries of southern Europe those written referrals or letters are quite uncommon and are not seen as important in most accreditation programs. The evidence of participation in managerial roles includes the minutes of meetings, which in the UK are countless, whereas in many other country are virtually non-existent. Collecting paperwork is onerous, as specialists have to provide evidence of every single rotation during the training period plus evidence of clinical practice. What should the Spanish specialist do then? These facts are concerning, mainly because this situation does not guarantee whether a specialist trained in a country with a joint accreditation can be recognized as an intensivist in European countries with a dual or a primary accreditation process! How could a specialist face this problem without the help of higher authorities? Moreover, might the increasing importance and popularity of the EDIC exam be a secondary effect due to the lack of specific accreditation in some European countries (Fig. 2)? In general it is unusual for an exam in an unrecognized speciality to grow so quickly in Europe. Is the use of the exam an alternative way to harmonize the training in ICM?

The good news is that if a specialist from the Netherlands wants to move to the UK no obstacles are visible apart from the need to know the accepting country's language and the fact that he/she should invoke the use of article 10 instead of article 21 of the current European

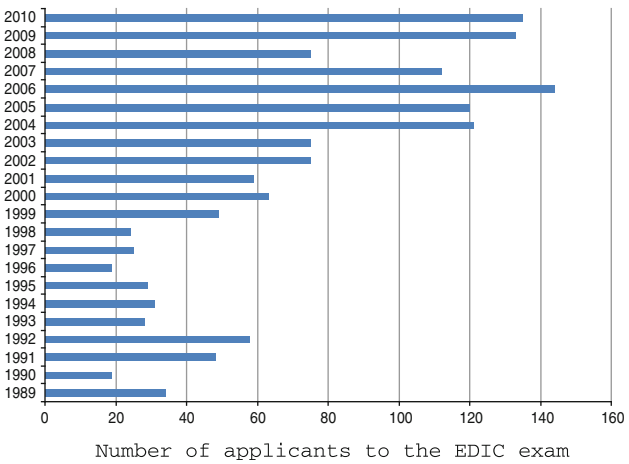

Fig. 2 Increase in the number of applicants to the EDIC exam from 1989 to 2010

directive. The reason for that is that both these countries have a similar training system, a formal examination to certify the training in ICM and a specialists' register.

We should not forget that ICM is a fast-moving area and that the last CoBaTrICE survey data is dated from 2008. On 31 January 2011 a new Faculty of ICM was created in the UK and delivered to the General Medical Council (GMC) a primary speciality training programme for ICM, which will probably run from 2012 in parallel with the dual certification process. This means that in the

near future the UK will more easily be able to accept Spanish intensivists as other countries already do (e.g. Portugal). They will still need to invoke the general system of recognition but this will be more easy due the similarities within the training systems and accreditation processes.

Considering this data, the question might be do we need the law to change or should we change the way we function? Given the experience and the data we have, thanks to the network created by CoBaTrICE, do we still need a change in the law to facilitate the free movement of specialists in Europe? It is clear that we need multiple local (national) actions to drive international (European) change. The ESICM has made an enormous effort to try to improve training education and accreditation in ICM. The EBICM is following an agreed road map with the UEMS in order to identify ICM as a supra-speciality and/or as a particular competence. Nevertheless, the EU does not look likely to change the directive on professional recognition of qualifications in 2012 to include ICM in the list of primary medical specialities.

ICM in the future

Increasing numbers of European countries now accept that the ICM accreditation process needs to comprise a recognized period of training (either on its own as a primary specialty or in tandem with another primary specialty as either a supra-specialty or multiple sub-specialty routes) combined with a formal assessment process (a final examination, independent from the certification in the primary speciality). The concern is what will happen to those countries that do not have a formal examination or a register for specialists in ICM? How could a fully qualified specialist in a country without a formal exam in ICM and without a formal register for specialists demonstrate his/her qualification in other countries with a specific set of competencies and a register? The question is should we wait for the legislation to tell us whether we are a speciality or can we act as a strong group of professionals and set our needs and our standards? Changes at the European level slow and alter what happens to ICM nationally. Change should occur (and is occurring) in the other direction that is, at national level first, which will then have an impact internationally. As a matter of fact where we can make a difference at European level is by national training organisations working together to harmonize training and assessment. Again, this is best done step by step. We should invest effort in getting EDIC developed as the international exam—as the Netherlands and Switzerland have done. It is highly probable that the current economic crisis, which is forcing many professionals to emigrate to improve their opportunities at the same time that governments try to minimise the costs by increasing the effectiveness of the practices, will stress further the current system of recognition of qualification among European countries.

The CoBaTrICE project is a unique task and the data from this project has given us very important inferences on what is currently happening. We now know that there are differences both between countries and within the same country over very short periods of time. It is easy at this stage to understand ways to harmonize the discipline. Therefore, we propose that the basic competencies, the curriculum and the syllabus suggested by CoBaTrICE should be the basis for a national curriculum in ICM for all European countries. This should be the minimum denominator criteria for the training and accreditation of ICM in Europe. The content and the evaluation of each competence will need obviously to be reassessed and updated over time, as the art and science of ICM changes. The setting of a formal exam is, at this moment, the easiest way to certify the national training (knowledge skills). The EDIC is increasingly used and recognized across Europe. As a result of the economies of scale, this can easily provide, and constitute the best alternative for countries without the skills and the resources to develop periodic examinations of a high standard. The specialist register by the national board is a key element because registration by national training institutions will facilitate the free movement of specialists countries.

In conclusion, the EBICM and ESICM are working very hard to set the case for ICM to be recognized in the next European directive in 2012. Nevertheless, we need to ask the question do we need the law to change to advance our speciality or can we change the law by changing the reality that the law should reflect? What should be the trigger for harmonization? We think that are many answers to these questions. Certainly, the concerted work of all the physicians that practise in our field of medicine is crucial, and that effort must be understood and coordinated [5, 6]. ESICM's task should be at this time, like Ariadne helping Theseus to escape the Minotaur, to find our way through the labyrinthian European legislation. We must provide intensivists with the ball of yarn to find their way through the labyrinth and kill the monster if they have the strength and the will to do so. But without any doubt, one of the triggers for this process should come from national societies and training bodies [6]. At this time, ICM faster and more at the national level than at the European level.

The key might be changing ICM from the base up instead of sitting looking at the news that comes from Brussels!

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Appendix 1

Models of access to ICM training (not mutually exclusive):

1. Multidisciplinary 'supra-speciality': access from several primary specialities to a common national core curriculum for ICM 16 (57%)
2. Multiple sub-speciality: each speciality with its own ICM core curriculum 5 (18%)
3. Single base speciality: controls all access to ICM 9 (32%)
4. Primary speciality: access to ICM training directly after undergraduate training 2 (7%)

There are several countries in which multiple modes of access co-exist.

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