



## EDITORIAL

### Intensive medicine in Europe: A need

### Medicina Intensiva en Europa. Una necesidad

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Received 9 December 2010; accepted 11 December 2010

## Introduction

In Europe there are presently no doubts regarding the professionalization of critical care, and it is clear that healthcare quality and the guarantee of citizen care must be based on specialized activities with specific medical professional competences in critical or intensive care medicine.<sup>1</sup> All these considerations are contained in a doctrinal body designed to address a well defined, concrete and genuine epidemiological need, based on incidence and prevalence rates for the corresponding reference population, including the recent "healthcare crises" such as for example influenza A, and their recent impact in China<sup>2</sup> - though the availability of resources varies greatly within the European Union (EU). At present, the message and discourse are how to homogenize and accredit training in critical and/or intensive care medicine, and work on this issue has been carried out for some time.<sup>3</sup> There is no doubt that this supranational initiative aims to manage many of the political-

healthcare, teaching and professional structures, as well as the circumstances, resources and national constraints that were in effect prior to the entry of the individual countries in the EU.

In this sense, it is advisable to reflect and take a number of considerations (some of them of a historical nature) into account, regarding specialization in critical and/or intensive care medicine within the conception of the EU, our specialty and the past and future reality of Europe.

## Training in Europe and its North American reference

When contemplating Europe / EU, we must remember that it is a relatively recent entity, with scant homogeneity and encompassing very distinct educational, economical and sociosanitary levels – all set within a western society in which attempts are being made to develop progressive common political norms. This characteristic, which likewise applies to the normalization of professionals in general and of their training strategies (e.g., the Bologna plan or process), also has an impact upon medical specialization. In this context, it would be a strategic mistake to compare the situation in Europe with our natural and "logical" reference

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in social, economical and sanitary issues, the United States. In effect, on the other side of the Atlantic the “medical specialties” have long been developed in a much more homogeneous and structured manner, in part as a result of the well known practical conceptions that prevail in the United States. It must be remembered that in 1962 Peter Safar founded the first Intensive Care Unit (ICU), in Baltimore, and that in the early 1970s the technological advances and improved knowledge of the physiopathology of critical patients, together with the healthcare needs in this field, favored “specialization” which at that time was developed from primary specialties. This was complemented by the known fellowships system, adopting a multidisciplinary and flexible approach involving “there and back” pathways in professional life, adaptable to the existing healthcare needs and to the existing work offers in each moment. This was how Critical Care Medicine (CCM) became structured<sup>4</sup> from Pediatrics, Surgery, Anesthesia, Internal Medicine and Pneumology –confirming a multidisciplinary supra-specialty with official Board certification in CCM, based on evaluative tests validating professionals as Fellows of the American College of Critical Care Medicine (ACCM). The solidity of this discipline is unquestionable, as illustrated by a very potent scientific society that monopolizes publications, norms, protocols and scientific recommendations of enormous prestige which serve as a reference to healthcare. In Europe, this same scenario was organized with the structures, resources and healthcare and sociosanitary teaching models in force in each individual country –giving rise at the time to the respective training systems in critical and/ or intensive care medicine. This does not mean that the discipline does not exist as a medical specialty, or that one or other primary specialty monopolizes intensive care in Europe.<sup>5</sup> At present, in Europe several models coexist with the purpose of securing specialization in critical and/ or intensive care medicine (data from the recent survey of the ESCM Council): a) a two-year sub-specialization period after 5 years of training in Anesthesiology, summing a total of 7 years - this model predominating in Scandinavia and Germany; and b) multidisciplinary sub-specialization from 3-4 years of training in Anesthesia, Internal Medicine, Surgery, Pediatrics or some of their specialties –a model curiously adopted by most of the countries in Eastern Europe that have entered the EU, or by other countries such as France, the Netherlands, Belgium, Greece or Switzerland. Of the major European countries, official definition of the model only remains to be established in the United Kingdom. This is not to say that there is no Intensive Care (IC) in the United Kingdom (where such specialized care of course exists, with professionals of great prestige) or no individualized hospital models. Rather, the plan is to secure a more homogeneous and global structure, with safety and healthcare quality guarantees focusing not only on the specialty as such but also on the definition of a College of ICM.<sup>6</sup>

### Training in Spain

In Spain, regulations on medical specialization were updated in the 1970s, opting for the primary specialty model in all cases, structured upon the State Resident Training Program (*Médicos Internos Residentes*, MIR). This was the case for

both Intensive Care Medicine, created in 1978, and for the rest of the medical specialties such as Clinical Oncology, Chest surgery, Neurology or Internal Medicine. Focusing on Intensive Care Medicine, and 30 years after the creation of this specialty, the existence of a top-level state public hospital system (without which the above mentioned 5-year State Resident Training Program would not have been possible), has resulted in quality specialized care that proves homogeneous for the different Spanish Autonomous Communities, with hospitals of great prestige. In effect, our system boasts excellent specialists distributed throughout the public hospitals network, and has moreover also exported reputed professionals to other European and American countries. The Spanish model has features of its own that make it very attractive and define it as a reference for Europe, including severe coronary and cardiological patient care, or the Spanish organ donor and transplant model and its results based on a network of transplant coordinators –most of which are specialists in Intensive Care Medicine.<sup>7</sup>

### What is happening in the rest of the world?

Although it comes almost 40 years later, the solution adopted in China is analogous to that adopted in North America –with particularities inherent to China. The epidemiological magnitude of critical care in that country, aggravated by the recent healthcare crises (severe acute respiratory syndrome (SARS) in 2003, *Streptococcus suis* in 2005, influenza A and the earthquake in Wenchuan in 2008), in 2009 caused the uniform political structure that governs some 1500 million inhabitants in a country with rapid socioeconomic growth to officially recognize the need for specialization in Intensive Care Medicine.<sup>8</sup> The training solution adopted has been the most adequate for the current circumstances; access can be mixed, either as a primary specialty in Intensive Care Medicine, or as a multidisciplinary supra-specialty based on prior training in Anesthesia, General Surgery, or Emergency Care. At present, the challenges are the quality of training and its accreditation. In the late 1970s and early 1980s, Australia New Zealand initially adopted the British model for obvious reference reasons, with strong links to Anesthesiology at the time. However, in the last 15 years specialization in Intensive Care Medicine in these two countries has shifted towards the North American model, i.e., a multidisciplinary fellowship-based system which through healthcare organizations and scientific societies (ANZICS) has given rise to the development of strong medical specialization.<sup>9</sup>

### Where are we going in Europe and how to do it?

Having recognized the need and after defining the required competences, our next steps should comprise the following:

—Training homogenization in all countries of the European Union, based on a compatible and objective system, allowing the free circulation of professionals.

- The current training strategy in Europe undoubtedly tends towards a truncal model; this well structured and controlled system can concrete and organize critical care in the European setting, with the necessary safety and healthcare quality guarantees, while respecting the social characteristics and resources of each individual country.<sup>10</sup>
- The future European training strategies must be observant of the systems with tradition that have operated with good quality for years, whether multidisciplinary or of a primary specialization nature. In this context, the Spanish, Swiss, Australian and recently also the Chinese model may and should be an option to be taken into account.

## References

1. Moreno RP, Rhodes A. Intensive care medicine: a specialty coming to LIFE. *Lancet*. 2010;376:1275-6.
2. Gomersall CD. Critical care in the developing World, a challenge for us all. *Crit Care*. 2010;14:131.
3. CoBaTrICE\_Collaboration. The educational environment for training in intensive care medicine: structures, processes, outcomes and challenges in the European region. *Intensive Care Med*. 2009;35:1575-83.
4. Available from: [www.sccm.org/Membership/ACCM\\_Fellowship/Pages/Fellows.aspx](http://www.sccm.org/Membership/ACCM_Fellowship/Pages/Fellows.aspx).
5. Barrett H, Bion JF. An international survey of training in adult intensive care medicine. *Intensive Care Med*. 2005;31:553-61.
6. Adhikari NK, Fowler RA, Bhagwanjee S, Rubenfeld GD. Critical care and the global burden of critical illness in adults. *Lancet*. 2010;376:1339-46.
7. Roca J, Pérez JM, Colmenero M, Muñoz H, Alarcón L, Vázquez G. Competencias profesionales para la atención al paciente crítico. Más allá de las especialidades. *Med Intensiva*. 2007;31:473-84.
8. Du B, Xi X, Chen D, Peng J. Clinical review: critical care medicine in mainland China. *Crit Care*. 2010;14:206-9.
9. Judson JA, Fisher MM. Critical Care in Australia and New Zealand. *Crit Care Clin*. 2006;33:407-23.
10. Bion JF, Barrett H. Development of core competencies for an international training programme in intensive care medicine. *Intensive Care Med*. 2006;32:1371-83.