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## ICU Volume 11 - Issue 2 - Summer 2011 - Interview

### Intensive Care Medicine in Spain

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In Spain, the first units for critically ill patients, which appeared during the 1970s, were managed by anaesthetists, internists and, to a lesser extent, by cardiologists and pneumologists. The need for continuous and specific care of these critically ill patients represented the basis and origin of the specialty known as Intensive Care Medicine. The training of medical specialists (Resident Physicians [Médicos Internos y Residentes, MIR]) was legally regulated in 1978; Intensive Care Medicine was one of the recognised medical specialties. The legal framework only considered primary specialties, and there were no options for supra- or sub-specialties. The official MIR training programme (5 years), clearly defined two periods: An initial period comprising basic medical specialties, and a specific training period in Intensive Care Medicine (ICM). In 1979, the first MIR generation started its specialised training in Intensive Care Medicine – receiving the official title in 1984.

#### Background

In 1973, 31% of physicians working in Spanish services of intensive care medicine were specialists in internal medicine, 25% in cardiology, 16% in anaesthesiology and 9% in different areas, mainly respiratory diseases and surgery. The remaining 19% of professionals had started their work directly in the services of intensive care medicine without having passed through any other specialty.

The Spanish Society of Intensive Care Medicine and Coronary Units (Sociedad Española de Medicina Intensiva y Unidades Coronarias) was founded in 1974, five years after the creation of the first intensive care unit in Spain. Thereafter, the name of the society was changed by the Spanish Society of Intensive and Critical Care Medicine and Coronary Units (Sociedad Española de Medicina Intensiva Crítica y Unidades Coronarias, SEMI- CYUC), being the name by which it is still known today. Of Note: The first issue of Medicina Intensiva, the official journal of SEMICYUC, appeared in 1976. The National Cardiopulmonary Resuscitation Plan (Plan Nacional de Resucitación Cardio- Pulmonar), which was created in 1985 in the setting of the SEMICYUC.

#### Current Situation

The Spanish model of ICM has been positive for a number of reasons. From the healthcare perspective, the polyvalent model has been shown to be efficient, as recognised by the majority of healthcare managers because in daily practice a single specialist is able to carry out multiple tasks, extending beyond the limits of the services of intensive care medicine. As an example, intensivists play an important role in the national organ donation and transplantation programme, since in most hospitals the transplant programme co-ordinator is an intensivist physician.

The efficiency of the polyvalent model in the second-level hospitals has allowed intensivists to assume specific responsibilities, such as permanent pacemaker implantation or secondary risk transportation. Mention should also be made of the extension of intensivist activities to the field of emergencies, implemented in the Autonomous Community of Andalucía and also in isolated hospital centres in the rest of the country, with very positive results.

#### Programmes of Quality and Safety

In 2005, the scientific society published a set of quality indicators for key processes in the care of critically ill patients. A total of 120 quality indicators covering all areas and aspects of ICM were established. Twenty of these indicators were considered important enough to recommend their monitoring in all ICUs, with the other indicators depending on the case-mix of each individual ICU. The dimensions monitored with greatest frequency are safety and effectiveness. A prospective, observational, cohort study was carried out at 80 centres over a 3-month period. Compliance with five essential indicators in all patients meeting the criteria established in the quality indicators manual was monitored. Although in many hospitals the degree of compliance was high, there is still room for improvement in most of the indicators monitored. Recently, a map of 27 indicators to measure the quality of care given to patients with acute coronary syndrome attended in the pre- and hospital areas was published.

At the present time, the SEMICYUC is participating in the safety task force led by the European Society of Intensive Care Medicine (ESCIM) in the development a set of quality and safety indicators.

The SEMICYUC sponsored by the Quality Office of the Ministry of Health and Social Policy, undertook the "The Safety and Risk in Critical Patients" (SYREC) study to assess the incidence of adverse events and non-harm events, classify them, and evaluate their impact and the extent to which these events can be avoided. The probability of suffering at least one safety-related event for the only fact of being admitted to an ICU is 62%. On the day of study, 1.22 events were reported for each patient admitted to the ICU. The rate of events in our study was 5.89 per

100 patients and hour. The SYREC study showed a high individual risk for events in critically ill patients. Most events were related to medication, equipment and devices, nursing care, accidental withdrawal of catheters and other devices, or artificial airways and mechanical ventilation. Although in many cases, events did not result in harm to the patient, a significant percentage caused harm and a few were even related to the patient's death. Most events, however, were considered avoidable.

The SYREC Project has also developed a national training plan about safety and risk of the critical patient. This training programme aims to improve the safety culture in all ICUs and to facilitate training in this area for many professionals involved in the care of severely ill patients. Another important aspect of the project is the implementation of a voluntary and anonymous reporting system to identify adverse events and no-harm events.

### **Structures and Workforce**

At the present time, around 257 services of ICM are included in the census, with a total of about 3500 beds and a mean of 12–18 beds per service (range 8–40). University-affiliated hospitals account for the largest number of intensive care beds. A total of 240,000 patients are annually attended, and the mortality rate is approximately 11%. University-affiliated hospitals accounted for the largest number of ICU beds. The majority (90%) of the services of intensive care medicine belong to the public healthcare system. The type of patients attended in these services is polyvalent, including medical, surgical, trauma and coronary patients. Only in large cities such as Madrid and Barcelona are the coronary units independent of the services of ICM. In some Autonomous Communities such as Andalucía, Emergency Departments are directly dependent upon the services of ICM.

A minority of Spanish critical care beds are dependent upon the services of Anaesthesiology. Although most the services of ICM in Spain are directed by specialists in intensive care medicine, approximately 6% of the critical care beds, the great majority of them devoted to post-surgical care, are run under the responsibility of specialists in Anaesthesiology.

In most hospitals, medical staff of the services of ICM is hierarchically structured into different professional categories: Head of service, chief of unit and attending physician. The number and professional category of the staff members vary according to the number of beds in the service and to the hospital ownership. The nursing personnel, which may or may not have specific training in critical care medicine, is an important part of the staff of the services of intensive care medicine. Nursing staff usually includes one nurse for every 2–3 intensive beds, with a distribution of three daily shifts. The nursing personnel are directed by a supervisor who in turn is dependent upon nursing management, and sometimes upon the head of the service of intensive care medicine. Furthermore, all services of ICM have additional personnel, such as administrative personnel, clinical assistants and specialised technicians.

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