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### Structure, Organization and Practice of Critical Care Medicine in France

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**Drs Bollaert and Martin summarise the restructuring of the intensive care infrastructure and training in France.**

#### Regulatory Organization of Critical Care Medicine in France

For over 30 years, health care establishments have provided themselves with a structural framework of critical care services. It became readily apparent to professionals that although designated under the heading of critical care units, there was an underlying heterogeneity with regard to their purpose, composition, and the quality of service provided. As with other high-risk medical activities, it thus became necessary to regulate critical care activities.

A first attempt in this regulatory restructuring was brought about by the publication of DGS Circular no 280 dated February 7th 1989, which indeed failed to significantly alter the existing landscape of critical care services. Hence there was a need to issue more constraining regulatory measures. Thirteen years later, Ministerial Decrees 2002-465 (5/4/2002) and 2002- 466 (5/4/2002) were published. These decrees allowed to distinguish 1) critical care, intended for patients presenting or at risk of presenting acute multi-organ failure, 2) specialised intensive care, intended at managing patients presenting or susceptible of presenting acute failure of a particular organ under treatment by a given specialty, and 3) intermediate care, aimed at managing patients requiring recurrent and systematic clinical monitoring due to the severity of their condition or applied treatment. These decrees require that all critical care activities be administered in units specifically designed for this purpose, comprised of a minimum of 8 beds and contingent to approval.

The operational standards defined by these decrees can be summarized as follows: exclusive continuous medical care ensured by at least one member of the medical team, regulatory qualification standards for the medical staff, paramedical staff exclusive to the unit comprising of a least 2 nurses for every 5 patients and 1 assistantcare provider for every 4 patients, availability of a physiotherapist, psychologist or psychiatrist and biomedical trained personnel. Finally, minimal architectural as well as medical-technical environment standards are established. On-call duty, an integral component of fulltime care, is obligatory and ensured by a member of the medical team.

A review of regional medical organization guidelines is necessitated by the publication of these new dispositions. It can therefore be surmised that this current phase is one of transition, in which critical care structures which are compliant to the regulatory standards of these decrees now co-exist with other units which are not, either because their true activity is more closely related to intermediate care or specialised intensive care, rather than genuine critical care activity as defined statutorily, or because of insufficient available resources.

#### Structural Framework and Critical Care Practice in France

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According to official headings, approximately 700 to 1000 units are listed in France. This “self-declaratory” definition does not correspond to a certain number of instances in real-life practice. Schematically, we can safely say that all University-affiliated hospitals are equipped with at least one critical care facility, and that a majority of these institutions are equipped with a medical critical care facility and a surgical critical care facility. It is also in these latter hospitals where the majority of paediatric critical care services as well as cardiac and neurosurgical critical care facilities are found. Most of the larger general hospital centres have a medical surgical critical care facility. Critical care units in smaller-sized hospitals are often in fact medical or medical surgical intermediate care units. Some of these practice occasional life-support measures to a relatively limited number of patients. The existence of critical care units in private establishments are subject to the same size-related distribution patterns as depicted for public establishments.

According to a survey conducted in 2003, the average ratio of critical care beds is about 8/100,000 inhabitants with ranges from 5/100,000 to 12/100,000 from one region to another. The average number of beds in Critical care units of University-affiliated hospitals is 16, and for non-teaching hospitals 12.

## **Personnel**

Medical staffing is established at an average 4.3 full-time equivalents per unit, a figure relatively identical for both University-affiliated and non-teaching hospitals. Conversely, University-affiliated hospitals boast on average three times more interns than non-teaching hospitals. Nevertheless, these numbers are fairly lower than the estimated overall national needs established consensually by unions and learned societies: 6-7 full-time equivalents for a 10- to 12-bed unit. These figures take into account recent national restructuring measures, including reduction in workload and establishment of mandatory rest periods.

According to a survey conducted in 2001, French intensivists had an average workload of approximately 70 hours per week, with considerable differences according to professional status (young doctors training in the specialty having the highest workload). Over 50% of physicians are over 45 years of age. Health care activities account for two-thirds of the workload of which 40% represent on-call duty schedules. The remaining onethird is spent on administrative and organizational activities, continuing education and research. In spite of their heavy clinical workload, many French intensivists are very actively involved in activities such as evaluation, audit and improving quality of care.

The majority of physicians practicing medical critical care are certified in “critical care” by the Order of Physicians, whereas physicians practicing surgical critical care are qualified specialists or skilled in “anaesthesia and critical care” or in “anaesthesiology and surgical critical care”. In medical-surgical units, their distribution is usually evenly mixed. A certain number of physicians who are not certified in one of these qualifications also practice critical care, often on a transitory basis.

The number of paramedical personnel is considered to be insufficient in the majority of hospitals i.e. in two out of three critical care units, with regard to the standards issued by the decree. Considering the reduction in workload and the foreseeable number of critical care units in France, it is likely that the regulatory standardization of this sector will only be partially achieved by the legislative deadline of April 2007.

## **Training of Critical Care Physicians**

### **Overview**

Current training of critical care physicians in France falls under two distinct, but not mutually exclusive, modalities of certification: the “Diplôme d’Études Spécialisées Complémentaires (DESC)” in Medical Critical Care and the “Diplôme d’Études Spécialisées (DES)” in Anaesthesia-Critical Care, with both programs only accessible until now to interns selected through competition. However, from this year the program is also accessible to 6th-year medical graduate students, who have successfully completed national standard examinations, whereby their ranking allows them to choose a residency position in either Medical Specialities, Anaesthesia Critical Care or Surgery categories.

### **Desc in Medical Critical Care**

A Ministerial order of June 20th 2002 (JO n° 173 of 26th July 2002 pages 12804-12805) upgrading the former so-called “type 1” DESC program to a “type II” DESC program now enables the classification of Medical Critical Care into the category of specialized fields. This important development represents another step towards supra-specialization. Access to the DESC in Medical Critical Care is contingent on the successful completion of a DES degree. All of the DES certifications in medical specialities, the DES program in Anaesthesia Critical Care and the DES program in General Surgery allow aspiring candidates to apply to the DESC Medical Critical Care program. Successful completion of the DESC program requires the validation of six semesters.

In 2002-2003, from applicants for DESC in Medical Critical Care, 42.8% had previously completed a DES in Anaesthesia-Critical Care, 15.6% Pulmonology, 12.8% Cardiology, 10.4% Internal Medicine, 7.2 % Nephrology, 5.6% Paediatrics; the representation of other medical specialities was anecdotal.

### **Des in Anaesthesia - Critical Care**

Concurrent to the transformation of the DESC in Medical Critical Care program from type I to type II, the DES in Anaesthesiology-Surgical Critical Care became the DES in Anaesthesiology-Critical Care and was increased to 5 years training (JO n° 173 of 26th July 2002 pages 12804-12805).

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This new framework allowed the further consolidation of critical care training. It is currently too early to evaluate with certainty the overall effect of increasing the DES program to 5 years on overall enrolment levels by interns in Anaesthesia and Critical Care going into the DESC in the Medical Critical Care program.

### **Continuing Education**

Continuing education capabilities in critical care are sizeable and of excellent quality in France, stemming from learned societies (Société de Réanimation de Langue Française, Société Française d'Anesthésie Réanimation), Colleges and Universities. While participation of critical care physicians appears to be fairly assiduous, there are presently no available statistics as to the average time spent on this activity.

### **Perspectives**

The regulatory standards defined by the two "Critical Care" decrees will be enforceable by April 2007. If the spirit of the provisions provided therein is respected, the number of critical care units in France will be reduced significantly. This will favour a greater number of intermediate care units and, to a lesser extent, specialized intensive care units. These changes are consistent with a general framework of hospital restructuring, likely aimed at concentrating health care services towards care units that are adequately distributed geographically, equipped with extensive resources and capable of ensuring a high level of sustained activity. Maintaining an "adjoining" intermediate care unit, acting as a possible, but not exclusive, portal to and from critical care units should fill the existing void between the more conventional hospital sectors unsuited for managing precariously ill patients, whose condition is susceptible to rapid deterioration. Such intermediate care units should be compliantly staffed with medical and paramedical personnel and must develop close working relationships with other departments.

Other factors, not as directly concerned with quality of care, further attest to the inevitable nature of this restructuring process. They include the evolving medical status of public hospitals, the demographics of the specialty and lastly the introduction of activity-based fees. The first two are intricately connected insofar as the reduction of workload and institution of mandatory rest breaks should alleviate, in the short term, some of the strains of the specialty less and less accepted by the younger generations.

Finally, the institution of an "activity-based fee" system which is currently replacing the global government subsidization system will most likely have an important role in ultimately determining the size and even the existence of critical care units.

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