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### Graded Levels of Intensive Care in Spain



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This manuscript describes the rationale for the development of intermediate care units in Spain and the main characteristics of this development.

As in neighbouring countries in Europe and also in North America, the healthcare system in Spain has to face rising costs associated with technological innovation, population ageing and increasing patient expectations. These factors favour a series of organisational changes, moving to more patient-centred care models. This is especially relevant where critical care is concerned.

The cost associated with caring for patients in the intensive care unit (ICU) is very high. At the same time, ICUs, born when the management of illness in hospitals had been divided into specialty areas, endanger the continuity of care by imposing an important gap between the care provided in specialty areas and the general ward. These factors have resulted in a crisis in the availability of intensive care beds. Providing graded levels of care to critically ill patients was proposed as one strategy to deal with these problems.

In this context, about ten to fifteen years ago, intermediate care units began to develop in our country. In a recent survey in Catalonia, intermediate care beds comprised 25% of total adult critical care beds. Patients admitted to intermediate care units are those who do not require intensive care but need more care than is provided in the general ward – mainly frequent monitoring of vital signs and/or nursing interventions. These units try to increase accessibility to the scarce intensive care beds for patients requiring active treatment and provide an alternate

destination for patients after ICU discharge (reducing readmission and post-ICU mortality). Moreover, intermediate care units attempt to be a cost-effective alternative to ICU admission. Certainly, patients in intermediate care units require a lower nurse-to-patient ratio and may require fewer investigations and interventions when compared to patients in ICUs.

To date, however, there is not enough evidence to affirm that these units are a cost-effective alternative to the traditional organisation, with only ICU and general ward beds. This analysis is troublesome, because there are a variety of models of intermediate care units currently in use, with different policies for admissions and discharge and, also, different nurse-to-patient ratios. There are units that specifically monitor and support patients with single organ failure, such as those attending patients with acute myocardial infarction. Other units act as “step-up” or “step-down” units, between the level of care delivered on a general ward and ICU. Moreover, there are several structural and organisational approaches to forming an intermediate care unit. These range from freestanding intermediate care units, independent of a main ICU, to intermediate care units adjacent to an ICU, sharing the same physical layout and resources. Each one of these models has its own drawbacks and advantages. The approach in a particular centre is determined by the specific health problem to solve, the number and abilities of the personnel available, other resources (including space available) and even historical factors.

The intermediate care unit in our hospital dates from 1997, and it is a ten-bed unit adjacent to the ICU. It was formed by fusing two formerly independent areas. The nurse-to-patient ratio in this intermediate care unit is 1:5 versus 1:2-3 in the ICU. Patients are mainly surgical, trauma and coronary patients. Moreover, this unit receives about one-third of ICU patients before the definitive discharge. The same team of nurses and doctors takes care of patients in both the ICU and the intermediate care unit, avoiding unnecessary transfers of patients between medical teams. The intermediate care unit's occupancy rate is above 90%, and the mean length of stay remains less than 72 hours.

Although the multiple structural and organisational models for intermediate care units may seem somewhat chaotic, we maintain that it reveals hospitals' efforts to respond to the aforementioned challenges imposed by our society, improving quality of care at the lowest cost. The need to respond quickly to these challenges may preclude awaiting further evidence about cost-effectiveness of the different approaches before taking decisions about the necessary changes. In fact, in moving toward models of care that focus on the level of care that individual patients need rather than physical structures, some organisations could jump directly to a range of practices that share the same aim of having medical services graded and flexible, moving up and down the continuum of illness. These could include critical care education and training for general ward staff and direct support at the bedside for varying periods. Modern trends in information technology may have soon a profound impact, expediting these changes.

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