

Departmentalization: Report of an experiment

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The explosion of various specialties has been dictated and justified by the introduction of new tools and technical capabilities that Lewis Thomas called halfway technologies¹. In recent decades, specialties have evolved according to a horizontal model centered on the organ or system in question, leading to a shift away from the original disciplines from which they derived, a certain isolation, or simply a closed relationship with similar specialties: the cardiologist dialogues with the cardiac surgeon, the nephrologist with the urologist or the transplant surgeon, etc.

While it is true that the subspecialties have made remarkable advances in diagnosis and treatment in several fields, it is also true that without the coordinating intervention of internal medicine with the new trends of analytical assessment and rationalization of medical acts, analysis of decision making, and cost-efficiency calculations^{2,3}, the ability to put this progress into practice, in an effective, integrated way, with maximum profitability, could be compromised.

More recently, with the better understanding of cellular and molecular bases of numerous pathologies, we have seen the existence of multiple links connecting the pathogenesis of diseases in different organs, which once again brings the subspecialties and the tools closer, such as in the case of molecular genetics, which we will all share.

As this new biology advances, permeating the practice of medicine, the future internist might, for example, be more capable of preventing or treating atherosclerosis at an early stage, replacing the efforts of various subspecialists who treat the consequences of this same atherosclerosis in the target organs, the same specialists who, meanwhile, developed new

technologies to solve new problems that someone identified in the department of medicine. This flow of needs, and the good use of capacities, can only be managed through integration in a single department. As Braunwald states, internal medicine is like a large river, in that as more information emerges on new pathologies, new branches of the river appear, but if we look ahead to the horizon, some of these branches will return to the river bed before the river reaches its estuary⁴.

Much has been said in recent years about the implementation of departments in our Hospital Services, and there is a widespread consensus surrounding this type of organization, as a goal to be achieved. However, in practice, progress has been small and slow. Contributing to this, besides inertia, is a certain conservatism that exists in Hospitals, which will always create difficulties to the theoretical dilution of the frontiers of the traditional Hospital Services. Thus, it is hardly surprising that among us, experiments are scarce, tentative, and consequently, little publicized.

The new Hospitals, where such barriers do not exist, have an innovative and important role in this organizational field.

From our perspective - that of internist and subspecialist in one discipline of internal medicine - the concept of a Medicine Department, in which all the specialties are integrated, has numerous pedagogical, professional and logistical benefits that we will analyze.

In the medium-sized hospital (400 to 700 beds) that is currently prevalent in our hospital system, we no longer see the autonomous and independent megaservices of subspecialties that exist in some of the older institutions of the city, which always have a tendency - almost morbid, but understandable given the scenario marked by a lack of multidisciplinary - to equip themselves for self-sufficiency.

These services, usually comprised of 20 to 30 ward beds, independently managed and with a large number of physicians ranked in hierarchy, can be easily isolated from the common dynamic of the hospital, losing one of the most attractive and pedagogical as-

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pects of the medical practice of these subspecialties – consultation with other services.

In the new Hospitals, these same services have, in some specialties, two to four specialists to every five to twelve beds, on average, so they must be fully integrated with other services that increase their area of intervention, in order to survive in terms of casuistics, postgraduate training capacity, ward emergency cover, etc.

On the other hand, for the hospital and its medicine department, the structure that aggregates all those specialties, despite its reasonable size, in our case, of 110 beds, loses much its capacity to manage and generate profit from its occupation if it is dispersed in small services of autonomous hospitalizations of 5 to 12 beds.

In our Medicine Department, ten specialties co-exist harmoniously: Internal Medicine, Cardiology, Gastroenterology, Nephrology, Pneumology, Infectology, Endocrinology, Hematology, Dermatology and Medical Oncology.

This department also includes a block where gastroenterology, pneumology and cardiology techniques

are carried out, as well as a hemodialysis unit, continuous ambulatory peritoneal dialysis (CAPD) unit, and endocrinology examinations room.

In the admittance area, there is a short-term admittance unit, used by all specialties and intended for patients whose stay at Hospital is expected to be no longer than 24h, and the medical oncology unit, which consists of the admittance and outpatient wards, designed to treat oncology patients that exist in the area of reference of the Garcia Orta Hospital.

In our system, every subspecialty has a pre-established average number of beds, located in a sector of the ward, but we maintain total flexibility in the number and location of beds occupied by patients with all types of pathology, in response to the increased pressure for hospitalization beds that occurs with seasonal variations in all specialties.

The importance of this flexibility and the management of beds as a whole is better understood when we quantify the profitability of the service. For this, we need to consider not only the average stay and occupancy rate, but also the so-called availability rate, which measures the average number of free beds

kept free for admission of patients, a fundamental parameter when the emergency service is permanently overburdened.

This availability rate depends on the number of beds a service has and the daily average census of the service, which is obtained by multiplying the number of monthly hospitalizations by the average stay, and dividing the result by thirty days. Using this formula, it is easy to conclude that the occupation rate and availability rate, which we would like to simultaneously maximize, are inversely interdependent: the lower the first is, the higher the second, and vice-versa, and the higher the number of beds managed in common, the higher the possible availability rate for a given occupation rate, which is always very high in our case.

Subspecialties still have their own and autonomous physical space for the practice of specific techniques: the hemodialysis unit and the CAPD room in nephrology, the coronary unit and the hemodynamic room in cardiology, the endoscopy unit in gastroenterology, the respiratory physiology and bronchology unit in pneumology, the oncological unit, etc. But the admission area is common to all, now with more rigid borders, reflecting the pathologies of the patients it serves.

The risks of such a system would include the possibility of losing track of a patient, for example, a patient with digestive hemorrhage who was admitted as an emergency case to a bed far away from the usual gastroenterology sector, thereby putting him in a kind of no man's land. This problem would be solved by attributing, to the interns of the general and complementary internship in internal medicine the responsibility for fixed beds, which would enable them to control patient admissions and request the relevant specialists - those with somewhat varying admission borders - and receive training through the daily clinical visit of the various specialties involved.

This methodology reduces the need to create excessive positions for the complementary internship in the subspecialties, which are "invented" to get the necessary labor-force for the routine work of the service, and do not meet the needs of the community or the capacity of the institutions to hire these doctors after the period of training, which in therefore generally not used to the maximum. Thus, we managed to rationalize the pyramid of hospital internship, which should have many more doctors in training, both as general doctors and as internists, and less subspecialists.

A fundamental tool of the system is called the "morning meeting" which takes place at the start of each day, in which the director of the department, who, according to this philosophy, may be any of the directors of the specialty services and not necessarily an internist, has the chance to be more informed and discuss critically all patients admitted to or discharged from the department, interact with all the residents of the department, and motivate the participation of the various specialties of importance for each patient.

For the unity of the department, a major contribution is the weekly and joint visit to all patients, and the clinical session carried out with the same regularity and for which themes of interest for various specialties are selected.

At the Garcia Orta Hospital, in a department with 110 beds, we recorded a global occupancy rate of 90.2%, with an average stay of 10.8 days, and an availability rate of 1.13 beds. Through our system we managed obtain, for the 60 beds initially attributed to subspecialties, an occupancy rate of 90.9%, with an average stay of 11.3 days and an availability rate of 1.13. This represents a major homogeneity in the profitability of these beds, comparing favorably with the few specialty services of the hospital, which are not, for logistical reasons, integrated in the departmentalization, and for which occupancy rates do not exceed 65%.

On the other hand, favoring the collaboration of more than one specialist for each patient, departmentalization enables, service by service, occupancy rates in relation to the average number of beds attributed to them to be 120% to 145% on average, considerably expanding the casuistic and admittance potential of each.

Currently, we believe that the system already implemented still has aspects that require improvement and ongoing revision, but we feel that it constitutes an alternative with its own inherit merit, and we would like to compare it with other organizational models. ■

References

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