

doi:10.1093/eurheartj/ehaa1039

At the Heart of Hospital Universitario Central de Asturias (HUCA), Oviedo, Spain

The Heart Area is a clinical management area integrated within the Hospital Universitario Central de Asturias (HUCA), the main healthcare centre in the region of Asturias (Principado de Asturias) (Spain), and one of the most important in the country. Historically, the HUCA is the result of the merging of three hospital centres: Hospital Nuestra Señora de Covadonga, the Instituto Nacional de Silicosis, and Hospital General de Asturias.

The new HUCA was inaugurated in 2014 and is located in Oviedo, the capital of the Principado de Asturias, on the northern coast of Spain. The HUCA was conceived from the beginning as a new organization for the provision of medical care. Leaving behind the rigid hospital structure of the past, as well as segmentation into nearly isolated individual departments, the HUCA focused priority on adapting the structure to function, guided by the example provided by nature: 'the function creates the organ' (J.B. Lamarck 1809).

the essence represented by patients and their cardiovascular disorders. In the context of the structural cardiac intervention care process of the HUCA, since 2004 we accepted the challenge of launching this model of change at a national level, instead of waiting for the changes to come to us.

In the HUCA's Heart Area, the integration of structural and valve diseases offers the best-individualized solution for each patient and each problem, through super-specialized care processes.

As an example of these processes, we can cite percutaneous aortic valve treatment. Since we introduced the first transcatheter self-expanding aortic valve implantation in Spain in 2007, the Heart Area has been and remains a leading national centre, not only in the number of procedures carried out but also in terms of innovation and development.

The intervention targeted at the mitral valve has been another field of development in recent years. The HUCA's Heart Area, with a consolidated trajectory, has become one of the Spanish national reference centres in



The HUCA's Heart Area is the paradigm of this philosophy and is oriented towards patients and the integral management and diagnosis of cardiovascular diseases, replacing the classic organizational model based on individual departments. Under a single leadership of the Area (Prof. César Morís), more than 50 specialists work in three units that function transversely in the interdisciplinary *continuum* of the cardiovascular care process: Cardiology, Cardiac Surgery, and Critical Cardiac Care.

Aiming to secure excellence, it was necessary to increasingly advance towards greater organization into specialized functional units: Coronary disease, Structural and valve disease, Heart failure, and Arrhythmias and electrophysiology. Each of these units is staffed by clinical and imaging cardiologists, interventionists, heart surgeons, and geriatricians.

This functional organization places the human and material resources at the disposal of the main care processes, and with due consideration of the clinical practice guides, offers each patient the treatment option or options best adapted to their particular characteristics.

In recent years, the development of new techniques and procedures has modified the frontiers of invasive management of structural heart disease, requiring interventional cardiologists to become structural interventionists, while cardiac surgeons have become hybrid surgeons. The convergence of both specialties responds to the need and obligation to adequately address

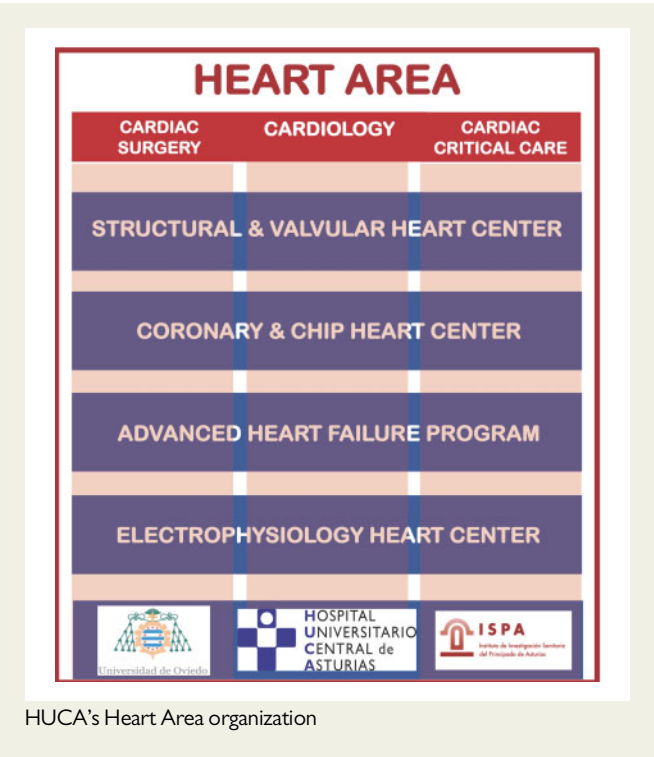
transcatheter mitral valve repair.

Other processes encompassed within structural interventional practice are the percutaneous management of congenital heart disease in the adult (with a specific follow-up clinic), appendage closure, and interventions targeted to the tricuspid valve.

One of the care processes that reflect the treatment continuum is complex and high-risk percutaneous coronary intervention (CHIP). In this regard, we are a high-volume European reference centre in rotational atherectomy and other atheroma plaque-modifying techniques, with the application of specific programs such as the chronic total occlusions program.

Advanced heart failure reflects the transverse nature of patient care. We encompass scenarios ranging from emergencies with the availability of the most advanced hemodynamic support and ventricular assist measures, to more chronic situations such as the heart transplant program or long-term patient care.

The electrophysiology and arrhythmias program is one of the national references in the field of high-complexity ablations, with one of the highest number of device implantation procedures in the country. We lead a number of international research and innovation projects in the field of intrinsic mechanisms in cardiac fibrillatory rhythms.




At the HUCA's Heart Area, patient care is complemented by teaching activities through its ties with the University of Oviedo. The Director is a Full University Professor. The teaching team is completed by an assistant professor and five associated professors. In the last 4 years, the teaching activities have taken place in an area of the hospital itself, specifically designed for this purpose.

The research activity in turn is carried out within the Instituto de Investigación Sanitaria del Principado de Asturias (ISPA), in which the Heart Area constitutes one of the main references, with a large number of translational research lines of its own.


The driving principle of the HUCA's Heart Area is a holistic vision of the heart and of cardiovascular disease. The functional organization in specialized processes offers precise solutions adapted to each individual circumstance. However, the individual excellence of each procedure takes on a real meaning as a part of the transverse process. This functional organization binds and places each of its parts into perspective.

From structure adapted to function, and from its transverse approach to integral management and diagnosis, the HUCA's Heart Area embodies the essence of the 'Heart Team'.


Conflict of interest: none declared.



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