

## EDITORIAL

## Training prospects in Spain for the endocrinology and nutrition specialty<sup>☆</sup>



### Perspectivas en la formación de la especialidad de endocrinología y nutrición en España

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The specialist area of Endocrinology and Nutrition (E&N) is currently in an unusual situation characterised by: 1) an increasing amount of super-specialisation which, although improving the depth of knowledge in the field, could lead to fragmentation if the process does not develop around the common core of the specialty; 2) the imperative need posed by society for advances in diseases with a very high prevalence and social/healthcare burden, such as obesity, diabetes, altered nutritional status and osteoporosis; 3) the essential relationship with other specialties that care for patients with these disorders; and 4) its necessary participation in the diagnosis and treatment of other conditions which are known to involve E&N elements, such as neurodegenerative, psychiatric and oncological diseases, to name but a few.<sup>1</sup>

All of this must be combined with the perspectives in the development of new medical education programmes<sup>2</sup> that will modify healthcare, teaching, research and management structures in the coming years.

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The changes in the teaching methodology, supported in part by the application of new technologies which have burst onto the scene during the current COVID-19 pandemic, will be aimed at training specialists who are specifically equipped for a multidisciplinary approach that makes the collaboration between different specialists so much smoother. The fact that E&N is so intertwined with all medical and surgical disciplines and so closely interrelated with basic research<sup>3</sup> means that it occupies a central position in these new educational approaches, which are destined to lay the foundations for the change in endocrine-nutritional practice in all educational settings, whether undergraduate, postgraduate or continuing education.

### Undergraduate teaching

Modern teaching involves the progressive implementation of the integrated curriculum, which will substantially change the educational methods for learning in E&N.<sup>4,5</sup> The transition will not be easy, quick or without difficulties, but some Medical Schools have already started to move in that direction.<sup>5</sup>

For now, enhanced training in the resolution of clinical cases can be adapted well to classic teaching methods through its incorporation into seminars, combined with

established clinical internship programmes carried out in E&N departments.

Curricular integration fosters interrelation between subject areas so as to educate students within the framework of simultaneous clinical and basic coordination, and in multidisciplinary approaches to resolve healthcare, research and management problems.<sup>4,5</sup> All this is brought together in a new teaching methodology based on flipped classrooms, teaching based on problem solving and teamwork, moving away from the classic lectures towards work outside the classroom, active self-learning and interpersonal communication. The result is aimed at acquiring competences that will be assessed by procedures different from traditional exams. Integration tightens the relationship between the basic sciences and clinical disciplines, enriching their multi-lateral participation and generating a more solid knowledge base, enabling students to reach a holistic perspective of medical knowledge.<sup>4,5</sup> One of the most relevant consequences would be a necessary increase in the attractiveness of E&N<sup>6</sup> among medical students as a cross-disciplinary subject present at the core of practically all diseases, and the impact of that on their choice of specialty after finishing their undergraduate studies.

However, establishing an integrated curriculum should in no way marginalise knowledge about apparently less common disorders, such as those of pituitary, adrenal or gonadal origin which, requiring multidisciplinary teams, remain the most representative of the specialty. The adaptation of E&N to the integrated curriculum is associated with a commitment to initiative and leadership<sup>7</sup> that must also be shown in university teaching. The impact of this change on teaching programmes entails a necessary continuity in postgraduate teaching.

## Postgraduate teaching

Discarding the core programme opens up new expectations in resident training programmes based on acquiring skills with the resulting innovations in the area of assessment. We are, therefore, at a critical point in designing new training programmes. As part of this task, it is important that the ministerial teams interact with the national specialty commissions and the corresponding scientific societies to generate a modern programme which, in the case of E&N, should aspire to strengthen training in strategically relevant areas such as diabetes, obesity, nutrition, the multidisciplinary nature of the specialty, and learning in research and management, in line with the strategic focus of the Sociedad Española de Endocrinología y Nutrición (SEEN) [Spanish Society of Endocrinology and Nutrition].<sup>8</sup> Rotations in other units, nationally and/or abroad, can complement residents' training, provided they do not undermine their career in their own department, as they enable them to explore other working systems, facilitate learning from specialists more experienced in specific areas, and provide the department with new imported knowledge and opportunities for improvement and collaboration. Research training should become a priority, especially for those residents who show interest and aptitude for choosing a complementary or alternative path to the traditional one dominated by care provision. Research means moving forward. It is not com-

mon for E&N departments with accredited teaching to have basic research units which enable translational research to be carried out. The training needs of specialists in E&N do not allow for restricting accreditations to departments that include research laboratories. That is why it is necessary to explore new options for collaboration. In our specialty, we have different examples that show this is possible, through the identification of national or regional hubs that make it possible to offer collaboration with departments with mainly clinical activity, so they have access to basic research. This organisation, in which central government and the different autonomous regions must assume their responsibility, will effectively expand the comprehensive training of our residents, offering the capacity to work on doctoral theses and promote academic study and learning at a national level.

The new teaching programmes will unquestionably require the training of resident tutors, who will undoubtedly require academic and financial recognition for their educational commitments. Department and unit heads also need management training, without which, organising the running of the different departments often becomes an unattainable goal.

The assessment of residents is an objective as difficult as it is fundamental. Hospital teaching commissions can offer rules that must be standardised by the government in order to ensure, as far as possible, equality of assessment criteria.

Modern E&N residents must demonstrate an aptitude for care provision, teaching, research and management, creating an all-round profile of excellence.<sup>9</sup> They must have the aptitude to lead teams in the pathologies that are central in their specialty, such as obesity, nutritional disorders, diabetes, and thyroid, pituitary, adrenal and gonadal disorders, and at least form part of the teams treating related conditions, such as hypertension and cardiovascular risk, and in oncology and sleep units. They need to demonstrate sound technological training in instrumental procedures in the field of thyroid, nutritional and vascular ultrasound, body composition methods and technology applied to diabetes and nutritional assessment. They have to have sufficient knowledge to design competitive research protocols, leading or collaborating on projects within multidisciplinary teams. They need to be able to communicate, including having a command of English, and to develop educational programmes aimed at integration with healthcare workers, patients, the general population and health authorities. They must also have the option of being able to apply for teaching and health management positions. They need to feel integrated with other European health services, in an environment which encourages mobility and collaboration with international teams.

This represents an enormous challenge for department heads, specialists and resident tutors. Harmony within departments is therefore an essential element to achieve a fruitful interpersonal collaboration, which is fundamental for achieving such high goals.

## Continuing education

The way E&N is constantly and rapidly evolving makes it vital to have resources for the continuing education of specialists. The congresses that cover the specialty as a

whole, or partial aspects of it, are fantastic opportunities to share new advances. Virtual teaching does not replace face-to-face teaching, but it offers interesting perspectives which will probably be incorporated into a blended model. Nowadays, collaboration with the pharmaceutical industry is strategically important in this context. The interrelation between scientific societies in Spain is essential for optimising knowledge and learning, both among those that are vertical and in the specialty, such as SEEN, and those that are cross-disciplinary, such as SED (Sociedad Española de Diabetes [Spanish Diabetes Society]), SENPE (Sociedad Española de Nutrición Clínica y Metabolismo [Spanish Society of Clinical Nutrition and Metabolism]), SEEDO (Sociedad Española para el Estudio de la Obesidad [Spanish Society for the Study of Obesity]), SEEP (Sociedad Española de Endocrinología Pediátrica [Spanish Society of Paediatric Endocrinology]) as well as the primary care and internal medicine societies. Both types of society are fundamental for organising both intra-specialty interactions and integration with other specialist areas that converge in pathologies affecting broad sections of the population. Cooperation and collaboration between the two types of society is essential to provide a sound structure and opportunities for specialists, students, patients and the general population.

The trajectory and the present format of this journal, *Endocrinología, Diabetes y Nutrición* [Endocrinology, Diabetes and Nutrition], are a great example of this, in

the sense of helping to build bridges with other cross-disciplinary societies in our setting to join forces against any challenges the specialty will undoubtedly have to face.

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