



EDITORIAL

Where is the future of the training of medical specialties heading? ☆

¿Hacia dónde va el futuro de la formación de las especialidades médicas?



Medical training is a key element of healthcare, and thus must constitute a relevant issue in scientific research. Defining the most effective training models in order to address the challenges of modern society requires the generation of scientific evidence in the same way as in other areas of knowledge¹.

Specialized medical training, including the training of specialists in Intensive Care Medicine, has followed the classical model of training programs based on the experience acquired from programmed rotations through different care areas, with the participation of clinical experts as teachers and tutors. The learning methods have focused on teaching using the traditional tools. The evaluation of results in turn is made through the certification of these clinical stays and rotations, based on subjective observation and supervised practice — in most instances without any final examination. This training model does not guarantee the homogeneity of the results obtained, which should be oriented towards the offering of excellent healthcare capable of covering the needs of the patients, their families, and society as a whole, and does not always meet the expectations of the professionals.

Competency-based training (CBT) currently represents an alternative to these classical medical specialty training models. In the context of Intensive Care Medicine, there are experiences such as the CoBaTriCE project of the European Society of Intensive Care Medicine², adapted to Spain, that have been shown to be feasible and which are accepted by the professionals^{3,4}. These models are based on the definition of a series of observable and measurable competencies, understood as the global knowledge, skills, behaviors and attitudes which a professional must have in order to satisfy the needs of the patients and resolve

their problems. Training is based on reflexive learning and places the physician in training at the center of the system, incorporating innovative teaching tools such as clinical simulation for the acquisition of competencies. Due training is required of all the teaching agents as facilitators of such learning, emphasizing periodic and structured training evaluation using objective and validated instruments with a registry of the goals that have been reached, and in some cases summative evaluation is incorporated or facilitated through certifications that reliably ensure the effectiveness of the training process⁵. All this favors an objective, structured, transparent and effective training process, promotes autonomous professional development, and would serve to reduce the variability of learning. In the case of the CoBaTriCE project, harmonization of training among the different European countries, with mobility of their professionals, is also intended⁶.

In this number of the journal, Castellanos et al.⁷ present the results of a multicenter observational study carried out in 13 Departments of Intensive Care Medicine in Spain. The primary objective of the study was to determine the level of competencies (I novice - V autonomous) of the residents in Intensive Care Medicine at the end of their third year of training, using an Objective Structured Clinical Examination (OSCE) based on simulation; identify gaps or shortcomings in performance; and investigate the reliability and validity of the OSCE as an evaluation method. The results evidenced good internal consistency of the checklists, with high inter-evaluator reliability. The levels of competency reached were 18.8% level I, 26.2% level II, 42.6% level III and 3.4% levels IV-V, with broad heterogeneity among the participating professionals. The findings question the current training model and suggest the need for a model more fundamented upon objectives and evidences, with adequate feasibility and reliability of the simulated scenarios used for the evaluation.

This interesting study highlights some of the limitations of the current medical specialties training model and intro-

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duces tools that can help to improve and adapt the training programs to meet the current needs.

Clinical simulation has been incorporated in recent years as a teaching and evaluative method in the training of healthcare professionals⁸. The authors used the OSCE as a standardized and validated instrument allowing the evaluation of competencies through modules involving different simulated clinical situations. Despite its established usefulness as an evaluation tool, there are limitations inherent to the instrument, and the evaluations are not always concordant with other evaluations at the patient bedside or point of care. The instrument therefore should be considered for use in certifying professional competencies in the context of summative evaluations⁹. Limitations have been described in validly establishing the definition of competencies, the training methodology and evaluation techniques¹⁰.

This new training model requires structural changes in the specialties teaching programs. We need to define competencies in line with the present and future needs of society; resources to ensure not only technical competency-oriented learning; professional and teaching certification of the tutors; validated and objective training and evaluative instruments; and a cultural change in our healthcare organizations to generate an environment capable of facilitating change.

The randomized, multicenter clinical trial currently in the development phase on the impact of a model based on the CoBaTriCE project versus the current official programs based on time will contribute important information for the future of medical specialization.

I wish to highlight the professionalism of the residents in training and the Departments of Intensive Care Medicine participating in the study, agreeing to take part in a non-official evaluation process that evidences their commitment to quality improvement, and allowing the identification of weaknesses of the current model of specialized medical training. This type of investigation, with great methodological rigor and using validated tools, allows the generation of essential scientific evidence for promoting a necessary change in the medical professions training models. Only by adapting these models to the needs of current society will we be able to deserve the confidence of the patients and their families in our profession, and ensure the commitment to society of the accredited teaching units.

The evaluation of training models is crucial for quality improvement. In order to ensure the excellence of the model, we must not only demonstrate its effectiveness in acquiring the established competencies and their transfer to clinical practice on the part of the professionals, but also its impact upon the clinical and organizational outcomes, and the returns on the investments made.

Specialized medical training should be adapted to the current context of a complex society undergoing constant change, and in a scenario of uncertainty which the SARS-CoV-2 pandemic has made even more apparent. This demands responsibility in the training of competent physicians capable of affording balanced, effective and comprehensive care for patients, families and communities, adjusted to the needs and values of each concrete society.

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