

ARTIGO DE PERSPETIVA

Anesthesia Training in Croatia from the Young Physician's Perspective: Generation Gap and Transition from Learning by Doing to Modern Techniques

A Formação em Anestesia na Croácia na Perspetiva do Jovem Médico: Diferença entre Gerações e Transição do Aprender Fazendo para Técnicas Modernas

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Afiliação

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Keywords

Anesthesiology/education; Clinical Competence; Croatia; Curriculum

Palavras-chave

Anestesiologia/educação; Competência Clínica; Croácia; Currículo

Anesthesiology is a demanding specialization that is constantly developing, and accordingly there are numerous challenges in the training of future anesthesiologists. The medical expert in anesthesiology should acquire all necessary competencies enabling him/her to fulfill the expert role in the multidisciplinary settings of perioperative medicine, intensive care medicine, critical emergency medicine, and pain medicine in all patient categories (including newborns, frail elderly, and pregnant women).¹ Broad theoretical knowledge and manual skills were significant factors for a higher level of interest in this residency which was in the top five among medical students in Zagreb's School of Medicine in the year 2017, as compared to previous studies.

However, work-related stress was the main argument against this medical specialty.² In Croatia, the Minister of Health determines the network of public healthcare, which includes the number of approved specializations for a certain institution each year. Candidates are selected in accordance with the Ordinance on criteria for the admission of residents. Success in medical studies, scientific activity and previous work in the health sector are scored, and a significant number of points are awarded by an interview with a committee made up of members of the professional college of the Clinic.³

The anesthesiology training program in Croatia is aligned with the EU law Directive 2005/36. The Croatian Society for Anesthesiology and Intensive Care Medicine of the Croatian Medical Association gives professional guidelines

on the specialization program, which is then approved by the National Committee for Specialist Training of Doctor of Medicine at the Ministry of Health.⁴ The program should be in concordance with the European Union of Medical Specialists (UEMS) European Training Requirements (ETR) to guarantee clinical standards and to harmonize medical training as a prerequisite for mobility of doctors throughout Europe.

The full title of the training course in Croatia is "Anesthesiology, reanimatology and intensive care medicine", and the duration of training is five years. It consists of General anesthesia, regional anesthesia and immediate postoperative treatment (15 months), Special anesthesia (14 months), Treatment of pain, acute and chronic (2 months), Basics of resuscitation and selected chapters from emergency medicine (2 months), Intensive care medicine (22 months), and annual leave (5 months in total). The specificity of the specialist training program in anesthesiology is that it must be followed in the exact order of clinical rotations.

Within the program, the resident must complete postgraduate specialist study "Anesthesiology, resuscitation and intensive care medicine" in three months. During the specialization, the resident is obliged to attend the courses of continuing medical education associated with the field of interest. What courses are obligatory is not defined, but depend largely on individual engagement and professional preferences.^{4,5} According to the Collective Labour Agreement, the employee is entitled to paid leave for the education he was directed to by the employer.⁶

The training takes place in accredited training centers, approved by the Ministry of Health. The duration of training and the part of the program for which the institution is

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accredited depends on the previously obtained opinion of the National Committee for Specialist Training of Doctor of Medicine. The Ministry then authorizes a healthcare institution that meets the conditions by means of a decision within a period of five years. Most of the education takes place in one of the five university hospital centers in Croatia (Osijek, Rijeka, Split and two in Zagreb), and/or clinical hospitals that meet most of the prescribed criteria.

It is not uncommon for residents from general hospitals to spend most of their time on education in university hospital centers, and only to be on 24-hour duty at the parent institution. Although this type of education has its advantages, because the trainee can work in several locations and thus gain different experiences, it is also challenging because they must plan their lives in different cities and are often separated from their families. In such cases, the trainee gets a separate living allowance.

Although UEMS ETR in Anesthesiology describes competence-based education, the training program in Croatia is still time-based and count-based. The probable reason for this is that due to the general shortage of anesthesiologists and the large scope of work, it is difficult to organize education in which the development of competencies would be accurately monitored, since the work of a resident is usually followed by several different specialists. The progress in the resident's work is monitored through completed rotations in individual departments and a personal work diary kept by the resident, under the supervision of a mentor.

Monitoring of daily activities of the resident during specialist training, verification of acquired knowledge and skills, monitoring of patient case presentations, and monitoring of published professional works in the field of specialization should be entered daily in the work diary. Given that these are booklets that are filled in by hand, the mentor is responsible for the reliability of the data in the booklet on the specialist training of the Doctor of Medicine, and for the accuracy of the data in the work diary of the Doctor of Medicine's Specialist Training for the part of the program that he signs⁴. A period of five years is planned for the development of the electronic logbook, and we hope that with its development, the organization of education and the monitoring of competence will be facilitated in the future.

As in most European countries, teaching is not part of undergraduate or post-graduate training in anesthesiology and current practice in Croatia is "learning teaching by doing". According to the Ordinance of the specialist training, we distinguish the head of the specialist training program, chief mentor, mentor and co-mentor. Training staff must have sufficient time allocated for the training assignment, but in everyday practice, it is almost impossible to organize a direct teaching process between the mentor and the resident and a large part of the teaching rests on experienced

specialists who directly supervise the resident's work in the theater or other locations. The methods of monitoring the progress and evaluating the trainees are formative (during the specialization with the purpose of constructive and concrete advice for mastering clinical competencies) and summative (at the end, a specialist exam). During the practical part of the specialization, a discussion of patient cases is regularly conducted. The leader of the discussion with the residents is the main mentor, mentor or specialist, and the clinical picture of the patient, the diagnostic methods and the therapeutic approach are discussed, and residents are encouraged to make clinical judgments.⁴

The specialist exam is taken by the resident after completing the specialization program and after the chief mentor has given a final opinion. The specialist exam consists of a theoretical and practical part and is conducted as a written (multiple choice questions, MCQ) and oral exam.

The oral exam is taken in front of the exam board and consists of a practical part, during which the competencies acquired through the specialist training program are evaluated. The oral exam is held in a health facility where the president of the exam commission is employed. Interested persons may attend the oral exam with prior notice. The candidate's overall success in the specialist exam is graded as "passed" or "failed". The costs of the exam are borne by the institution that referred the candidate for specialization. Exceptionally, the Ministry of Health, by decision, recognizes the specialist exam passed before the European Association of Medical Specialists (UEMS).

To gain a decision on the passed exam in that case, the candidate is obliged to properly and fully complete the entire specialization program and acquire all the prescribed competencies and additionally, pass the practical part of the specialist exam before the examination board in Croatia. We hope that in the future the European specialist exam will be fully recognized as proof of the highest European standard in the training of doctors without additional administrative steps.^{4,7}

Although it is not officially prescribed, clinical hospitals in Croatia are starting to establish clinical skills cabinets and develop simulation-based education programs. We hope that in the future simulation centers will contribute to better mastering of competencies, gaining self-confidence in learning invasive manual procedures and improving patient safety. As it is stated in the Training Requirements for the Specialty of Anesthesiology, attaining full competencies in all domains of the broad discipline of anaesthesiology in the minimum training time frame would be an ideal but utterly impossible demand in any European country, but with the standardization of education and the sharing of positive practices from different centers, we will be closer to achieving that goal.

CONTRIBUTORSHIP STATEMENT / DECLARAÇÃO DE CONTRIBUIÇÃO

IBV: Conception, design, writing and critical revision of the manuscript

RCR: Conception, design, writing, supervision and critical revision of the manuscript

All the authors contributed equally to the design and writing of the manuscript. All approved the final version to be published

IBV: Conceção, desenho, redação e revisão crítica do manuscrito

RCR: Conceção, desenho, redação, supervisão e revisão crítica do manuscrito

Todos os autores contribuíram de igual forma para o desenho e escrita do manuscrito. Todos aprovaram a versão final a ser publicada

Ethical Disclosures

Conflicts of Interest: The authors have no conflicts of interest to declare.

Financial Support: This work has not received any contribution, grant or scholarship.

Provenance and Peer Review: Commissioned; without externally peer review.

Responsabilidades Éticas

Conflitos de Interesse: Os autores declaram não possuir conflitos de interesse.

Suporte Financeiro: O presente trabalho não foi suportado por nenhum subsídio ou bolsa.

Proveniência e Revisão por Pares: Comissionado; sem revisão externa por pares.

Received: 11th of June, 2024 | Submissão: 11 de junho, 2024

Accepted: 16th of June, 2024 | Aceitação: 16 de junho, 2024

Published: 30th of June, 2024 | Publicado: 30 de junho, 2024

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