

ARTIGO DE PERSPETIVA

Training Process in Anaesthesiology and Intensive Care in Slovakia

Programa de Formação em Anestesiologia e Medicina Intensiva na Eslováquia

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Afilição

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Palavras-chave

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INTRODUCTION

Anaesthesiology and intensive care (AIC) is one of the basic components of every hospital. The current concept of this speciality is from 2007. From a medico-legal point of view, it is defined as an interdisciplinary section of health care that researches and provides anaesthetic and intensive care and cooperates with operative and non-operative segments of health care. Professional-methodical management of care in this specialty is provided by the Ministry of Health of the Slovak Republic (MHSR) in cooperation with the main expert of the MHSR for AIC. Professional management is carried out in cooperation with the Slovak Society of Anaesthesiology and Intensive Medicine (SSAIM), as a professional and scientific authority and professional organisations of workers in this specialised area.¹ This association is a national society member of European Society of Anaesthesiology and Intensive Care (ESAIC) and a member society of World Federation of Societies of Anaesthesia (WFSA). SSAIM has 768 members (valid to 31.1.2022).² Statistical data show that in year 2022, were performed 322 800 anaesthetic procedures in the Slovak Republic, of which 76.5% were in total anaesthesia.³ This article discusses the educational process in AIC in Slovakia. The standardisation of training systems has been recommended by the European Union of Medical Specialists (UEMS) to facilitate the mutual recognition of professionals. There is still diversity in the training in AIC in Europe. In 2012, UEMS published their guidelines on European training requirements for the specialty of anaesthesiology, pain and intensive care medicine in an attempt to promote standardisation in training across Europe.⁴

ACCEPTANCE PROCESS

Education is carried out in accordance with Act about health care providers, health workers and professional organisations in the health sector (no. 578/2004). After completing a 6-year study of general medicine, a physician can enrol in a specialised study in AIC.⁵ The candidate must meet the conditions set by legislation for the performance of the medical profession. A standard condition for enrolment in a specialised study is an employment relationship with a healthcare provider in Slovakia. For registration in the study program, formal requirements must be met (such as a complete application with attachments).⁶

FURTHER EDUCATION AFTER MEDICAL SCHOOL

There are three forms of medical education in Slovakia: certified, specialised study and continuous education. Educational evaluation is carried out in regular five-year cycles. The government regulation establishes professional competence for the performance of professional, specialised and certified work activities in individual health professions, methods of further education of health workers and system of their realisation. Professional preparation for obtaining qualification in AIC in the Slovak Republic takes the form of a specialised study. Certification preparation is performed in an accredited certification study program (e.g. clinical drug testing, echocardiography). This education is in a shorter period, usually 2 years. It is also about a lower professional load and thus expertise.⁵

Continuous education of a healthcare worker is evaluated in the currently performed healthcare profession. This type of education is fulfilled, if the health worker obtained at least 90 credits in the health profession of physician during the given period. Examples of the possibilities to obtaining credits are as follows: training activity in the Slovak Republic or abroad

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(seminar, workshop, conference, congress, various courses), practice or internship in a medical facility, lecturing, publishing, teaching and scientific research activity.⁷

PROFESSIONAL GUARANTEE OF THE STUDY PROGRAM, TEACHING STAFF, TRAINER

The professional guarantee of the program is approved by the Accreditation Commission of the MHSR and is responsible for the quality of teaching and supervises its progress. Guarantee evaluates and approves study plans, proposes or assigns trainers and lecturers to the practical part, determines the topics of specialisation papers, assesses professional medical practice and performed medical procedures, assesses the crediting of the completed part of specialisation study and usually chairs the committee for the final specialisation exam. The teaching staff consists of lecturers for the practical part and lecturers for the theoretical part and is approved by the Accreditation Commission of the MHSR. The practical part of the study is carried out by the trainee under the supervision of a trainer - who is a specialised doctor with the professional qualification for teaching and supervision in the relevant field of specialisation appointed by an educational institution that guarantees a specialisation program. Trainer confirms the performed medical procedures to logbook.^{5,6}

Organisation of Specialisation Studies

Currently, it is possible to complete specialisation studies at all four medical universities - Košice, Martin and two in Bratislava. Certificate of accreditation in postgraduate specialisation program for the specialisation in AIC for the given educational institution is issued by the MHSR. It is not possible in our country to study specifically only anaesthesiology or only intensive care medicine. Individual specialised workplaces, or health care providers have contracts with medical schools and thus the necessary internship of students is ensured. Specialisation studies last at least five years. It consists of a practical part and a theoretical part, while practical education is predominant.

Theoretical part

The theoretical part of education includes control days of the program, ongoing and thematic training courses and pre-exam training courses. These courses are mostly scheduled evenly throughout the whole duration of the program, or one longer course is implemented at the end of the course.⁸

Practical part

The practical part of the program is recommended to be divided into anaesthesiology training lasting 42 months and for specialised training in intensive care lasting 18 months. It is recommended to complete the anaesthesiologic training in a minimum of 24 months at your workplace.⁵

Scope and focus of professional medical practice

1. Paediatric anaesthesiology 2 months;
2. Neurosurgical anaesthesiology 2 months;
3. Thoracic anaesthesiology 1 month;
4. Intensive care unit at your workplace 12 months;
5. Clinical workplace of a teaching health care facility 2 months.⁵

RANGE OF PRACTICAL SKILLS AND EXPERIENCE

Number of separately performed general and local anaesthesias: 1000 of which:

- 600 in surgical departments, of which at least 200 are inhalation anaesthesias;
- 100 in gynaecology and obstetrics, of which 15 are caesarean sections, of which at least 5 in regional anaesthesia;
- 25 in infants and young children up to the 5th year of life independently performed or participation in them;
- 30 in neurosurgery (20 during head surgeries) done separately, or co-participating in them;
- 20 in cardio-thoracic surgery conducted independently or co-participating in them;
- 15 peripheral nerve blockades;
- 50 subarachnoid (spinal) anaesthesia;
- 20 epidural anaesthesias, of which 5 with introduction of epidural catheter.

Independent assessment and pre-anaesthetic evaluation of 150 patients, including the evaluation of 150 ECG records and assessment and interpretation of clinical and laboratory findings in 150 patients.⁸

Expertise Index and Logbook

Documents on the education of a health worker are the index of expertise and the logbook. Their uniform structure is approved by the MHSR. Enrolment, progress and changes in the specialisation study are recorded to the expertise index. Entries to the index are performed by an educational institution, trainer, or authorised health worker. The type and the number of medical procedures and other professional activities are recorded to the logbook. Every record is confirmed by the supervisor. A trainee in a specialised program can request to include medical procedures and professional experience completed abroad or in Slovakia before enrolling in a specialised program from the educational institution. A part of the completed study in another specialisation in the length of maximum one-half can be added to an actual specialisation study.⁵

SPECIALISATION THESIS

The specialisation thesis has the character of a final scientific work. Topic of specialisation thesis is approved by the professional guarantee of the study program no later than six months before the date of the defence. The recommended

scope of the specialisation thesis is at least 40 pages of the standardised text. The structure of the work, its formal arrangement, citations and bibliographic references are governed by the directive of the rector of the educational institution. Specialisation thesis is submitted by the trainee together with the application for the final specialisation exam at the latest four weeks before the date of its defence. One printed copy together with its electronic version is intended for the relevant university or academic library of the faculty of medicine, one to the professional guarantee and one copy remains to the opponent of the work. Together with the specialisation thesis, the participant of the education submits 2 signed copies of the licence agreement, which specifies the method of use of the school work. The specialisation thesis has one opponent - an expert in the field of anaesthesiology and intensive care, who is appointed by the professional guarantee of the study program. Opponent prepares an opponent's report. The defence of the specialisation thesis is part of the specialisation exam.^{6,9}

SPECIALISATION EXAM

The specialisation study is finished with a final exam. Based on the index and logbook the department for further education will make an evaluation protocol, which is the basis for the guarantee and after him the dean to recommend the trainee for the specialisation exam. Specialisation exam consists of the practical part, the defence of the specialisation thesis and the theoretical part. During the practical part, the examinee must perform one general anaesthesia under supervision of the trainer or appointed lecturer. The protocol from this anaesthesia is attached to the exam.

The theoretical part of the exam consists of the oral part - answering 3 questions in front of the examination committee. Examination committee is set up according to valid principles of accreditation of study programs for further education and in the presence of an independent witness. The questions are divided into three areas, namely Anaesthesiology, Intensive Care Medicine and Resuscitology. The result of the specialisation exams - the "passed" or "failed" rating - is recorded in the expertise index and protocol from the specialisation exam. These documents are the basis for issuing a diploma on specialisation, valid in the European Union.⁶

AFTER SPECIALISATION

A doctor who has obtained a professional qualification in a set specialisation can independently provide health care in the relevant specialty.⁵

There is currently no recertification program for specialists, nowadays. The physician can participate in various courses (ultrasonography, difficult airway, advanced CPR), as well as in various educational events implemented through the professional organisation SSAIM. However, none of the

above is obligatory. According to the law, each physician must obtain before and after specialisation a certain already mentioned number of credits for every 5-year cycle. However, the mandatory number of credits is not tied to a specific specialisation. If he does not obtain the required number of credits, he is asked to supplement them by the Slovak Medical Chamber within at the latest a period of six months. When it is not fulfilled, he is threatened with a financial penalty.¹⁰

STRONG POINTS OF TRAINING PROCESS IN ANAESTHESIOLOGY AND INTENSIVE CARE IN SLOVAKIA

- Most of the study consists of practical training;
- It is provided by all 4 medical faculties;
- During the study, the trainee takes part in an internship at all specific types of workplaces specialising in AIC.

FUTURE DEVELOPMENT

New minimum standards for the AIC specialisation study program are being prepared with the changes listed below. This document is currently in the comment procedure at the MHSR. Perhaps, in time, the European Diploma in Anaesthesiology and Intensive Care (EDAIC) will also be accepted as a uniform form of obtaining expertise without the subsequent need to complete a specialisation.

In the following text, we present some content elements from the new minimum standards: There are two categories to be created within education – basic stem and full specialisation. First category should be focused mainly on the anaesthesiology and essential principles of intensive care medicine (something like EDAIC part one). For the advanced part, the trainee must have broader professional knowledge and a larger minimum number of selected practical interventions. For example a certain amount of self-assessment of USG according to the FAST protocol, knowledge and personal skills with ECMO and so on. The new minimum standards will contain specific mandatory and optional (recommended) educational activities (guaranteed by an accredited workplace for specialised studies in the anaesthesiology and intensive care medicine or by the professional society SSAIM).

The overall extent of mandatory professional medical practice in weeks at individual types of workplaces should be also adjusted.

After at least 24 months of basic training from the time of admission to the department, it will be possible to check the acquired knowledge and practical skills. The guarantee will be responsible for the aforementioned verification and will issue a written confirmation. A physician enrolled in specialised training in the basic stem will only be able to work under mentorship. Professional mentorship will be carried out by a doctor specialising in AIC and he will have to be physically present in a hospital with availability within 15 minutes. A physician who will have a certificate

Table 1. Specific mandatory and optional (recommended) educational activities

Item	Mandatory	Optional
Advanced Resuscitation Course (ALS)	Yes	-
Airway course with different levels of difficulty	Yes	-
Basic course of regional anaesthesia including USG	Yes	-
Course of basics of ultrasonography in anaesthesiology and intensive care medicine	Yes	-
Course of legal regulations in healthcare	Yes	-
Course of selected scenarios on simulators	-	Yes
Advanced regional anaesthesia course including USG	-	Yes
Echocardiography basics course for anaesthesiologists and intensivists	-	Yes
Life-threatening bleeding management course	-	Yes

of completion of the basic stem can work under professional supervision. Professional supervision will be carried out by a doctor specialising in AIC with permanent telephone availability and physical availability in a medical facility within 30 minutes.

CONCLUSION

Education in anaesthesiology and intensive care in Slovakia currently takes place at all medical faculties. Specialisation study lasts at least 5 years. The trainee must meet certain criteria of practical and theoretical training. The education ends with an exam in front of the commission, a specialisation thesis is part of the requirements. After obtaining a certificate of expertise, further formal specific education is no longer necessary. However, it is mandatory to acquire credits, specifically at least 90 in five years, this condition applies generally to all physicians. In the future, it would be appropriate to synchronise education within the EU from the point of view of the free movement of persons, goods and services. But also to increase the expertise of health care provided. One of the options that could help with this is the EDAIC. It was established to help the standardisation of knowledge and training. It is now available throughout the continent.

Equilibration of standards is the main goal of this approach. They represent a mark of quality and allow to evaluate formally the core knowledge of trainees in whole Europe.¹¹

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PT, AD: Conceção, desenho, redação, supervisão e revisão crítica do manuscrito

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