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# Why Should Neurology Residency Training be Five Years in Duration?

## *Nöroloji Uzmanlık Eğitimi Süresi Neden Beş Yıl Olmalıdır?*

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## Introduction

In Turkey, neurology was accepted as a separate specialization for the first time in Medical Specialization Regulation in 1973 and the training period was set at 3 years (1). The neurology residency training period was increased to 5 years regarding Medical Specialization Regulation in 2002. Training periods of residency training programs have changed regarding specialty Training in Medicine and the Dental Medicine Regulation, which were published in the Official Gazette on July 18th, 2009, and an arrangement was made to make the neurology residency training period 4 years instead of 5. Finally, the neurology residency training period was set in stone to be 4 years regarding Article 10 of Law, dated 04.06.2011 and numbered 6225, which amended The Law on the Practice of Medicine and Medical Sciences (Medical Science Law, numbered 1219) (2). After four years, neurology residents should gain knowledge, skills, and attitudes about neurologic disorders and be able to apply acquired clinical and interventional competencies as a health care provider. The structured training program, teaching methods, and environments for the acquisition of these skills are defined within the neurology residency training curriculum.

A structured neurology training curriculum was prepared for the first time in 2004 by a commission that consisted of faculty members from the Turkish Neurological Society (TNS), Republic of Turkey Ministry of Health (TRMH), and universities on the basis of the neurology residency training curriculum of European Union of Medical Specialists. In 2010, the Board of Medical Specialties Curriculum Formation and Standards Setting System (BMSCFS) neurology commission was established within TRMH and curriculum works have been promoted through conducted workshops. The curriculum that is currently in use makes it compulsory for residents to complete specified rotations within and outside the discipline, prepare a thesis by conducting research on a topic related to neurology, and enter a specialty exam at the end of this period (3).

To take the title "Neurologist", and to acquire the ability to administer neurology clinics, it is required to also have adequate knowledge and experience about other related disciplines. The disciplines and periods of external rotations have changed many times over time. Finally, external rotations to be completed during the neurology residency training period were indicated on 27.12.2011 in a resolution numbered 246 of the Board of Medical Specialties (BMS) to be Endocrinology and Metabolic Diseases (1 month), Internal Medicine (2 months), Cardiology (1 month), Psychiatry (3 months), Pediatric Neurology (3 months) and Radiology (3 months) (4). These 13-month long external rotations constitute 27% of the 4-year neurology residency training period and performing them in certain residency academic years is advisable. The recommended rotation periods (total 9 months) in the BMSCFS Neurology Residency

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Training Curriculum version 2 (v2.0) are as follows: Psychiatry (3 months), Pediatric Neurology (3 months), Physical Medicine and Rehabilitation (1 month), Internal Medicine (1 month), and Cardiology (1 month).

It is essential for neurology residents to take part in person in examinations, diagnoses, treatment and follow-up processes of a sufficient number of patients during neurology residency training. It is required to participate in internal training (such as case reports, seminar presentations, article discussions, and joint meetings with other disciplines) and patient visits in order to obtain the required knowledge of modern neurology education. Learning the follow-up of neurology patients in neurology intensive care units and wards, follow-up of patients in outpatient clinics and working actively in intradisciplinary laboratories (such as electroencephalography (EEG), electromyography (EMG), sleep, and neurosonology laboratory) are indispensable parts of the education. Learning the approach and specific treatment options for specific patient groups is only possible with seeing patients with the trainer in intradisciplinary outpatient clinics (such as headache, dementia, epilepsy, movement disorders, stroke, multiple sclerosis, and neuromuscular diseases outpatients clinics) in addition to working in general neurology outpatient clinics.

The internal rotations and their periods that were proposed by the BMSCFS neurology commission, are as follows: "Clinical Electrophysiology" internal rotation period of 5 months (2 months EEG, 2 months EMG, 1 month sleep laboratory), "Neuroradiology" 3 months, "Neurosonology" 1 month and "Neurology intensive care" 3 months. The year of specializations in which this training should be done has also been described in the same survey (3). Now, EEG and EMG examinations are among routine hospital services that neurologists should perform, evaluate, and report in many secondary and tertiary health care facilities under the conditions of our country. However, these internal rotations cannot be completed in the specified years within the period specified in the legislation. Similarly, as the scope of TRMH includes making the intensive care services widespread, primary, secondary, and tertiary intensive care services are offered in many secondary and tertiary health institutions. Thus, it is a necessity that every neurologist is trained to a level to be able to deal with intensive care services of neurologic patients. In other words, the neurologic intensive care rotation has also become a requirement. The neurology intensive care rotation period determined by the BMSCFS commission is 3 months and constitutes 6% of the total education period. In a survey study conducted by the TNS on neurology residents, it was determined that the standardization between training institutions is not enough and that some competencies cannot be gained sufficiently during educational processes. When the results of this are analyzed, especially EEG, EMG and neurology intensive care education being deemed inadequate is noteworthy (5).

Interventional therapies (thrombolytic therapy, endovascular therapy) in clinical practice in acute stroke treatment are becoming increasingly common in recent years. TRMH supports the reflection of these developments in neurology within the scope of "featured health services". As a result, together with the fact that there is widespread treatment of acute stroke, it is necessary that every neurologist have this experience within the scope of "featured stroke treatment". Gaining the ability of therapeutic interventional procedures necessary for diagnostic and treatment processes can only be possible by taking part in person in a sufficient number of these procedures and for a sufficient period of time. Given the facts that cerebrovascular disease ranks second among the most common causes of death and first among the causes of disability in our country and the aging population will further increase these rates, training-sufficient manpower is a must to provide health care in this area. To evaluate neurology patients as a whole, it is necessary for neurology residents to complete all of this training and gain the necessary experience by working for adequate periods. The 4-year period deemed suitable by legislation is not sufficient to complete all stages of this aforementioned education, training, and experience.

Neurological science is one of the fastest growing and worldwide supported disciplines in the world. During the residency training, it is also necessary to make residents acquire the ability to research and publish and to prepare them for the academic field. Given the necessity to complete all the processes necessary for starting and maintaining a study, 4 years does not also seem adequate to develop skills of research and publications.

In neurology residency training core curriculum v1.0 prepared by the BMSCFS commission in 2010, it was emphasized that "The current legal 4-year neurology residency training period is not sufficient for the implementation of a curriculum in accordance with the requirements of the era and international standards, and the neurology residency training period should be at least five years" and was proposed to TRMH (3). In 2013, Neurology Residency Training Core Curriculum v2.0 was prepared and studies have been done on extension of the training period, regulation of the rotation periods, and completion of internal rotations accordingly. A proposal was given to the BMS to extend the neurology residency training period from 4 years to 5. Update proposals of the curriculum with some changes were prepared (v2.1) but these changes have not yet been approved by the BMS. By integrating these changes, well-trained neurologists who can provide better quality health care will emerge.

In conclusion, four years is an inadequate period of time for training neurologists with knowledge and features in accordance with the requirements of the era under the conditions of our country, providing protection, diagnosis and treatment of neurologic diseases with higher standards, and training scientists that promise hope for the future in education and research areas. The neurology residency training period should be five years.

## *Authorship Contributions*

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