

«APPROVED» by
Rector of JSK «SKMA»
Seltzhanova Zh. S.

« 05 » 2025y.



SOUTH KAZAKHSTAN
**MEDICAL
ACADEMY**

EDUCATIONAL PROGRAM OF RESIDENCY
7R01137
"NEUROLOGY (ADULT, CHILDREN) »

Shymkent, 2025y.

The educational program of the residency 7R01137 "Neurology (adult, children)" was developed by the Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery.

Head of the Department, Professor Zharkinbekova N.A.
 Protocol № 8 from "18" "03" "2025 Y.

Agreed with the employer:

Chief physician of City Hospital No. 2 of Shymkent Pozilov B.D.

Discussed at the meeting of the Residency educational programs committee

Chairman of the educational programs committee Kauyzbai Zh.A.
 Protocol № 4 from "21" "04" "2025 Y.

Approved at the Clinical Council

Chairman of the Clinical Council Nurmashev B.K.
 Protocol № 8 from "25" "04" "2025 Y.

Approved by the Academic Council

Protocol № 13 from "2" "02. 05." "2025 Y.

Educational program passport

1. The mission of the educational program is to be recognized as a leader in the field of training competitive personnel, meeting the needs of a resident doctor in achieving learning outcomes, providing the healthcare system and society with highly qualified neurologists.

2. The purpose of the educational program is to train doctors who have the professional abilities of a neurologist and independently provide specialized highly qualified neurological care to the population regardless of age and gender.

Prevention, diagnosis, treatment, medical rehabilitation of patients (adults, children) with neurological diseases under the control and supervision of a mentor.

Objectives of the educational program:

- in-depth mastering of theoretical issues of neurology;
- improvement of practical skills according to modern principles of diagnosis, treatment, interpretation of the results of the examination from the standpoint of evidence-based medicine.
- independent implementation of qualified medical care for various conditions and diseases.

3. Justification of the educational program:

Nervous diseases are one of the most complex branches of medicine, in which the fact that the clinical picture of many diseases has changed over time, the emergence of more advanced diagnostic methods and, of course, the treatment of neurological diseases, which in some cases have become diametrically opposed to traditional schemes, is especially obvious.

The large group of clinical neurologists in our country is constantly being replenished with young doctors who need to master the logic of clinical thinking of a neurologist, based on anatomical and physiological data about the nervous system. With a clear understanding of the anatomy and physiology of the nervous system, you can become a qualified clinician - a neurologist.

Residency in neurology involves a more in-depth study on the systemic-functional principle of illuminating anatomical and physiological information about the nervous system, training in techniques for identifying individual symptoms (reflexes, tests, tests), in the light of new neurophysiological data, consideration of the organizations of brain function on a systemic principle, the values of neurotransmitters and neuropeptides, introducing modern methods for additional research of neurological patients, including radionuclide methods, computed tomography nuclear magnetic resonance, as well as studying the problems most often encountered in the practice of a neurologist - vascular diseases of the nervous system, infectious and inflammatory diseases, epilepsy and other convulsive syndromes, diseases of the peripheral nervous system.

Pediatric neurology is a branch of medicine that studies the mechanisms of normal and pathological development of the nervous system from birth to 18 years. A pediatric neurologist deals with the prevention, diagnosis and treatment of neurological diseases that occur in childhood.

This is a fairly "young" specialty, which originated at the intersection of several sciences - neurology, pediatrics, neonatology, genetics, psychology and neurosurgery. It is the neurologist who evaluates psychomotor development at different age periods, evaluates the state of the brain and other parts of the nervous system.

4. Professional standard on the basis of which the educational program is developed: Professional standard "Neurology (adults, children)".

According to the Order of the Minister of Health dated July 04, 2022 No. RK MH-63 "On approval of professional standards in the field of healthcare."

5. Area of professional activity. Healthcare.

6. Objects of professional activity. Medical organizations providing inpatient and outpatient care, healthcare systems of the Republic of Kazakhstan.

Information about the educational program

№	Field name	Note
1	Registration number	7R09100107
2	Code and classification of the field of education	7R01 Healthcare (medicine)
3	Code and classification of training areas	7R011 Healthcare
4	Group of educational programs	R037 Neurology (adult, children)
5	Name of the educational program	7R01137 Neurology (adult, children) (residency)
6	Type of EP	Updated EP
7	Level according to the international standard classification of education	7
8	Level according to the national qualifications framework	7
9	Level according to the industry qualifications framework	7
10	Distinctive features of the EP	According to professional standard
	Partner higher education institution(СОП) Partner higher education institution (ДЮОП)	
11	list of competencies	FC1 Patient supervision: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of medical care for patients with diseases of the nervous system. FC2 Communication and Collaboration: able to effectively interact with the neurological patient, his environment, healthcare professionals in order to achieve the best results for the patient FC3 Safety and Quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical neurological care. FC4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Neurology, including children's", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation FC5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of the research team

		FC6 Training and development: he is able to study independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development in the field of neurology.
12	Learning outcomes	LO1. diagnoses clinical neurological diagnosis, differentiates diagnosis, analyzes, prescribes treatment with observance of continuity at all stages, conducts medical examination of patients with neurological diseases, conducts and monitors the effectiveness of measures aimed at preventing neurological diseases and their complications among the population, prescribes and conducts restorative treatment and medical rehabilitation of patients with diseases of the nervous system in patients (adults, children). LO2. able to effectively interact with the neurological patient, their environment, and healthcare professionals in order to achieve the best results for the patient. LO3. able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical neurological care. LO4. operates within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan under the educational program "Neurology (Adult, children)", participates in the management of medical documentation, medical and statistical information, provides basic assistance in emergency situations, and works as part of interprofessional teams to implement national health promotion policies. LO5. formulates adequate research questions, critically evaluates professional neurology literature, effectively uses international databases (SCOPUS, PubMed, Medlin) and digital tools in his daily activities, and participates in the work of the research team. LO6. learns independently, continuously develops professionally, improving professional knowledge and trains other members of the professional team, actively participates in discussions, debates, reviews scientific research and presents at international, domestic conferences and other forms of continuous professional development in the field of neurology.
13	Form of training	Full - time If necessary with the use of digital technologies
14	Language of instruction	Kazakh and Russian

15	Volume of credits	Total 140 credits Of these: 1. Theoretical training – 138 credits; 2. Intermediate certification 3. Final certification – 2 credits.
16	Duration of training	2 years
17	Assigned qualification	Neurologist (adult, children)
18	Availability of an appendix to the license for the direction of training	KZ 36LLA00011387
19	Availability of EP accreditation Yes	Yes
	Name of accreditation institution	HAAP
	Validity period of accreditation	Certificate № AB 3512, 05/27/2021 - 05/26/2026
20	Information about disciplines	Appendix 1.2

Appendix 1.1

Matrix of correlation of learning outcomes according to the educational program as a whole with the competencies being formed

	EP1	EP2	EP3	EP4	EP5	EP6
C1	+	+	+			
C2				+		
C3			+		+	
C4				+		
C5					+	
C6						+

Appendix 1.2

Matrix of achievability of competencies/learning outcomes

№	Matrix of achievability of competencies/ learning outcomes Name of the discipline	Short description	Cycle (DB, PD)	Comp onent (UC, RC, OC)	Number of credits	Formed learning outcomes
1	Neurology in the hospital, adult	Possesses knowledge and practical skills in establishing a diagnosis, conducting instrumental diagnostic methods, treatment, prevention and medical examination, medical rehabilitation in adult patients with diseases of the nervous system at the inpatient level. Effectively interacts with patients and their environment,	PD	UC	54	LO1 LO2 LO3 LO4

		various healthcare specialists, participates in the management of medical documentation, medical and statistical information, provides basic assistance in emergency situations, works as part of interprofessional teams.				
2	Neurology in the hospital, children's	Possesses knowledge and practical skills in establishing a diagnosis, conducting instrumental diagnostic methods, treatment, prevention and medical examination, medical rehabilitation in children with diseases of the nervous system at the inpatient level. Effectively interacts with patients and their environment, various healthcare specialists, participates in the management of medical documentation, medical and statistical information, provides basic assistance in emergency situations, works as part of interprofessional teams.	PD	UC	30	LO1 LO2 LO3 LO4
3	Instrumental research methods in neurology	Methods of studying brain biopotentials – electroencephalography, echoencephalography and interpretation of the results of the study. The technique of electroneuromyographic research and interpretation of the results. Ultrasound Dopplerography of extracranial and brachiocephalic vessels is a method of investigation and interpretation of the results. Genodiagnostics in neurology.	PD	UC	8	LO1 LO2 LO3
4	Emergency conditions in neurology and neuro-resuscitation	Coma in adults and children. Epileptic status. Acute neurological pathology in poisoning. Syndrome of increased intracranial pressure, cerebral edema. Brain death. Intensive therapy for neuroinfectious diseases. Cerebral and spinal strokes. Artificial intelligence in neuroimaging diagnostics (MRI, CT) of the central nervous system. Myasthenic crisis. Cholinergic crisis. Correction of water-salt balance in children. Medical tactics for acute respiratory failure. Emergency dehydration in pediatric neurology.	PD	UC	12	LO1 LO2 LO3 LO4

		Craniocerebral hypothermia. Simptomimeticeski collapse.				
5	Ambulatory- clinic neurology, adult	Features of medical examination of patients with inflammatory diseases of the nervous system, diseases of the peripheral nervous system, vascular diseases of the brain, traumatic lesions of the Central nervous system, degenerative and hereditary diseases of the nervous system. Neuroses. The syndrome of vegetative dystonia. Vegetative paroxysms.	PD	UC	10	LO1 LO2 LO3 LO5
6	Ambulatory- clinic neurology, children	Features of clinical examination of sick children with consequences of antenatal, neonatal, perinatal pathologies. Headaches in children. Vegetative crises. Neurotic manifestations in children: stuttering, tics, sleep disorders. Neurotic disorders of appetite, neurotic enuresis, encopresis.	PD	UC	6	LO1 LO2 LO3 LO5
7	Neurorehabilit ation	The main normative documents of the Ministry of health of the Republic of Kazakhstan on rehabilitation in adults and children. Assessment of the functional state and life activity. Kinesiotherapy. Medical gymnastics. Manual therapy. Vibration stimulation. Position treatment, breathing exercises. Physiotherapy. Therapeutic magnetic and electroneurostimulation. Interstitial electrical stimulation. Drug blockade and pharmaco - acupuncture. Speech rehabilitation after stroke in various types of aphasia. Heat and water treatment. Psychological and social rehabilitation.	PD	UC	6	LO1 LO2 LO3 LO5
8	Visualization research methods in neurology	Visualization (x-ray, CT, ultrasound, MRI) of the musculoskeletal system. Magnetic resonance imaging, brain and spinal cord, and cerebral angiography-interpretation of the study results. Computer tomography of the brain, spinal cord, and spine-interpretation of the results of the study. Artificial intelligence in neuroimaging diagnostics (MRI, CT) of the central nervous system.	PD	UC	8	LO3 LO4 LO5 LO6
9	The problem of acute disorders of cerebral	Classification of vascular diseases of the brain. Current etiological factors, pathogenesis and clinical				LO1 LO2

	circulation: diagnosis, treatment	manifestations of acute disorders of cerebral circulation. Artificial intelligence in neuroimaging diagnostics (MRI, CT) of the central nervous system, principles of emergency treatment. Primary and secondary prevention of strokes, early and late rehabilitation of patients who have suffered a stroke. Tactical and therapeutic errors made in hospitals and outpatient settings.	PD	EC	4	LO3 LO4 LO5 LO6
10	Current aspects of differential diagnosis, treatment and issues of social rehabilitation in epilepsy	Etiology, pathomorphology, pathogenesis, research methods. Classification of epilepsy and epileptic seizures. Clinic, diagnosis, differential diagnosis. Types of epilepsy and epileptic syndromes. Epilepsy in pregnant women. Non-epileptic seizures. Modern aspects of therapy of patients with epilepsy.	PD	EC	4	LO1 LO2 LO3 LO4 LO5 LO6
11	Geriatric aspects of diseases of the nervous system	Morphophysiological characteristics of aging of the nervous system. Features of examination of patients of elderly and senile age. Features of the course of neurological diseases in the elderly and senile age. Peculiarities of pharmacotherapy in patients of elderly and senile age. Falls. Vegetative disorders. Syncopal States. Pain syndromes, sleep and wakefulness disorders in elderly and senile patients. Vitamin B12 deficiency. Epilepsy in elderly and senile patients.	PD	EC	4	LO1 LO2 LO3 LO4 LO5 LO6
12	Diseases with a predominant lesion of the extrapyramidal system	Modern aspects of the etiology, pathogenesis, clinical manifestations, and therapeutic approaches of Parkinson's disease, progressive supranuclear paralysis, Multisystem atrophy, cortical-basal degeneration, temora, dystonia, chorea, myoclonus, stratl syndrome, tics, Tourette's syndrome, hepatolenticular degeneration, Hallervorden-Spatz disease, and calcification of basal ganglia.	PD	EC	4	LO1 LO2 LO3 LO4 LO5 LO6

Приложение Б

Professional standard: "Neurology (adult, children)"

Profession Card «7.2 Neurologist»	Mandatory job functions:	1. Diagnosis of diseases of the nervous system in patients (adults, children). 2. Treatment of diseases of the nervous system in patients (adults, children), with observance of continuity at all stages. 3. Conducting medical examinations of patients with neurological diseases. 4. Organization, implementation and monitoring of the effectiveness of measures aimed at preventing neurological diseases and their complications among the population. 5. Restorative treatment and medical rehabilitation of patients with diseases of the nervous system in patients (adults, children). 6. Participation in the management of medical documentation, medical and statistical information
	Additional job functions:	1. Instrumental diagnostic methods for diseases of the nervous system in patients (adults, children). 2. Continuous professional development
	Skill 1: Examination of a patient with diseases of the nervous system	Skills: 1. Collect complaints, medical history, life history and conduct clinical examination of patients (adults, children). 2. Assess the neurological status of patients (adults, children). 3. To identify the topical level of damage to the nervous system. 4. Make a patient examination plan. 5. Determine indications for referring a patient with nervous system diseases to doctors of other specialties. 6. Determine indications for laboratory, instrumental, and visual studies (electroencephalogram, electromyography, ultrasound, radiological: X-ray, computed tomography, magnetic resonance) in patients with diseases of the nervous system and health disorders. 7. Evaluate the results of microbiological examination of biological fluids (cerebrospinal fluid, bacteriological examination of visible mucous membranes and oral cavity).

Mandatory job functions 1: Diagnosis of diseases of the nervous system in patients (adults, children).		8. Examine the patient before conducting biological and immunosuppressive therapy for autoimmune diseases of the nervous system. 9. Ensure safety and monitoring of diagnostic tests. 10. Have the skills to perform a lumbar puncture.
		Knowledge: 1. Anatomy and physiology of the nervous system, features of the anatomy and physiology of the nervous system in different age periods. 2. Etiology and risk factors, pathological physiology, pathological morphology and immunopathology, clinical presentation, diagnostic methods for diseases of the nervous system in patients (adults, children). 3. Methods for assessing neurological status disorders. 4. Features of nervous system diseases depending on age and in pregnant women. 5. Methods of diagnosing diseases of the nervous system: medical indications and contraindications.
	Skill 2: Carrying out diagnostic procedures on patients (adults, children).	Skills: 1. Have the skills to perform: - diagnostic lumbar puncture; - EEG; - ultrasound dopplerography of the brachiocephalic vessels; - ENMG. 2. Possess the skills of fundus examination and perimetry. Knowledge: 1. Methods for performing lumbar puncture, ultrasound dopplerography, EMG, EEG, examination of the fundus and perimetry.
		Skills: 1. Conduct differential diagnosis of the nervous system.

	Skill 3: Establishing a diagnosis of the nervous system in patients (adults, children)	2. Assess the neurological status of patients (adults, children), identify symptoms and syndromes of damage to the nervous system and establish the causes of these changes. 3. Establish and substantiate a preliminary or clinical diagnosis of diseases of the nervous system in accordance with the ICD and generally accepted classifications. Knowledge: 1. Diagnostic criteria for diseases of the nervous system in patients (adults, children). 2. Algorithms for differential diagnostic search for diseases of the nervous system. 3. Classifications of diseases of the nervous system.
Mandatory job functions 2: Treatment of diseases of the nervous system in patients (adults, children), with observance of continuity at all stages.	Skill 1: The use of drug and non-drug treatment methods in the treatment of diseases of the nervous system in patients (adults, children).	Skills: 1. Draw up and justify a patient treatment plan. 2. Conduct treatment of patients with diseases of the nervous system at the outpatient and inpatient stages, including orphan diseases. 3. Conduct the selection and referral of patients with diseases of the nervous system for hospitalization in a day hospital, for inpatient treatment. 4. Participate in the selection and referral of patients with diseases of the nervous system for the provision of high-tech medical services. 5. Determine indications, contraindications and conduct immunosuppressive and biological therapy for autoimmune diseases of the nervous system and orphan diseases. 6. Assess the effectiveness of treatment and adjust it taking into account dynamic changes in the results of clinical, laboratory, radiological, morphological and other studies. 7. Ensure the safety of treatment. 8. Set priorities in the provision of medical care. Knowledge: 1. Methods of treatment of diseases of the nervous system, indications, contraindications and complications. 2. Principles of diet therapy, features of dietary, enteral and parenteral nutrition of patients with diseases of the nervous system in patients (adults, children). 3. Mechanisms of action of drugs, their interactions, indications, contraindications, side effects, features of administration depending on age, taking into account the principles of evidence-based medicine.

		4. Indications for planned and emergency hospitalization for inpatient treatment.
	Skill 2: Conducting dynamic observation of patients (adults, children) with diseases of the nervous system	Skills: 1. Conduct dynamic observation of chronic diseases of the nervous system. 2. Conduct monitoring of treatment of diseases of the nervous system. 3. Ensure continuity of observation between the inpatient and outpatient stages of medical care. Knowledge: 1. Principles of dynamic observation of patients with chronic diseases of the nervous system, including those who have undergone surgical neurosurgical interventions. 2. Monitoring periods and criteria for treatment effectiveness.
	Skill 3: Planning and monitoring the effectiveness of medical rehabilitation of patients (adults, children) with neurological diseases	Skills: 1. Determine medical indications for medical rehabilitation measures for patients with neurological diseases. 2. Determine medical indications for referring patients with neurological diseases to specialist doctors for the appointment and implementation of medical rehabilitation and spa treatment. 3. Develop a plan of activities for the rehabilitation of patients with neurological diseases. 4. Develop individual rehabilitation and habilitation programs for persons with disabilities. 5. Monitor the effectiveness of medical rehabilitation. Knowledge: 1. Fundamentals and methods of medical rehabilitation of patients with neurological diseases. 2. Medical indications and medical contraindications for medical rehabilitation of patients with neurological diseases.
	Skill 4: Provision of emergency medical care to patients	Skills: 1. Recognize life-threatening conditions, including clinical death (cessation of vital functions of the human body (circulation and/or respiration) requiring emergency medical care. 2. Assess the cause and severity of the patient's condition and take the necessary measures to bring the patient out of this condition. 3. Perform cardiopulmonary resuscitation. 4. Provide emergency medical care in life-threatening conditions, including clinical death

	(adults, children) with neurological diseases	(cessation of vital functions of the human body (circulation and (or) respiration). 5. Use drugs and medical products when providing emergency medical care. 6. Conduct an assessment of the effectiveness and safety of the use of drugs and medical devices in the provision of emergency medical care. 7. Identify critical conditions in neurological diseases in conditions outside a medical organization. Knowledge: 1. Clinical signs of sudden cessation of blood circulation and (or) respiration. 2. Cardiopulmonary resuscitation. 3. Methods for identifying critical conditions in patients outside of a medical organization. 4. Methods of intensive care and resuscitation of patients with neurological diseases outside of a medical organization.
Mandatory job functions 3. Conducting medical examinations of patients with neurological diseases.	Skill 1: Disability assessment	Skills: 1. Formulate medical reports based on the results of medical examination. 2. Determine signs of temporary disability and signs of persistent dysfunction of the human body caused by neurological diseases and the need for care when issuing a sick leave certificate for caring for sick family members. 3. Refer patients with neurological diseases for medical and social examination. 4. Prepare the necessary medical documentation for patients with neurological diseases to undergo medical and social examination. 5. Issue a certificate of incapacity for work to patients with neurological diseases. Knowledge: 1. Order of the Minister of Health of the Republic of Kazakhstan dated November 18, 2020 No. KP ДСМ-198/ patients with neurological diseases. 2020 "On approval of the rules for conducting an examination of temporary disability, as well as issuing a sheet or certificate of temporary disability" (registered with the Ministry of Justice of the Republic of Kazakhstan on November 20, 2020 No. 21660). 2. Preparation of medical documentation for the implementation of medical and social expertise. 3. Medical indications for referring patients with persistent dysfunction of the body caused by

		poisoning and its consequences, for medical and social expertise.
Mandatory job functions 4: Organization, implementation and monitoring of the effectiveness of measures aimed at preventing neurological diseases and their complications among the population.	Skill 1: Organization, implementation and monitoring of the effectiveness of measures aimed at preventing neurological diseases and their complications among the population	Skills: 1. Develop and implement measures for sanitary and hygienic education of the population, aimed at the formation of a healthy lifestyle and the prevention of diseases of the nervous system. 2. Have the skills to organize and operate a "school" for patients with diseases of the nervous system (stroke school). Knowledge: 1. Principles of primary and secondary prevention of diseases of the nervous system. 2. Forms and methods of health education work to promote a healthy lifestyle.
Mandatory job functions 5: Restorative treatment and medical rehabilitation of patients with diseases of the nervous system in patients (adults, children).	Skill 1: Drawing up a plan, evaluating the effectiveness and safety of measures for medical rehabilitation of patients (adults, children) with diseases of the nervous system	Skills: 1. Determine medical indications for carrying out measures for medical rehabilitation of patients with diseases of the nervous system. 2. Develop a plan of activities for medical rehabilitation of patients with diseases of the nervous system. 3. Conduct restorative treatment and medical rehabilitation of patients with diseases of the nervous system. Knowledge: 1. Principles of medical rehabilitation of patients with diseases of the nervous system. 2. Mechanisms of action of medical rehabilitation methods. 3. Basic programs of medical rehabilitation of patients with diseases of the nervous system.
Mandatory job functions 6: Participation in the management of medical documentation, medical and statistical information	Skill 1: Maintaining medical records, analyzing medical and statistical information, in accordance with the requirements of regulatory legal acts in the field	Skills: 1. Plan work and prepare a report with an analysis of your own performance indicators. 2. Maintain medical records, including in electronic form, and monitor the quality of its maintenance. 3. Conduct an analysis of medical and statistical indicators of the work of the specialized medical department. 4. Use personal data of patients and information in the work, in accordance with the legislation. 5. Use information systems in accordance with the established procedure. Knowledge: 1. Order of the Acting Minister of Health of the Republic of Kazakhstan dated October 30, 2020 No. KP ДСМ-175/2020 "On approval of forms of

		accounting documentation in the field of healthcare, as well as instructions for filling them out (registered with the Ministry of Justice of the Republic of Kazakhstan on November 4, 2020 No. 21579). 2. Order of the Minister of Health of the Republic of Kazakhstan dated December 22, 2020 No. ҚР ДСМ-313/2020 "On approval of forms of reporting documentation in the field of healthcare" (registered with the Ministry of Justice of the Republic of Kazakhstan on December 23, 2020 No. 21879). 3. Order of the Minister of Health of the Republic of Kazakhstan dated December 10, 2020 No. ҚР ДСМ-244/2020 "On approval of the rules for maintaining primary medical documentation and submitting reports" (registered with the Ministry of Justice of the Republic of Kazakhstan on December 11, 2020 No. 21761). 4. Electronic accounting and documentation systems. 5. Confidentiality of patients' medical information. 6. Fundamentals of medical statistics.
Additional job functions 1.: 1. Instrumental diagnostic methods for diseases of the nervous system in patients (adults, children).	Skill 1: Conducting diagnostic examination methods	Skills: Determine indications for conducting instrumental examination methods. Have the skills to conduct: - EEG. - Doppler ultrasound of the brachiocephalic vessels. - ENMG. Identify and differentiate signs of diseases based on the findings of instrumental examination methods. 4. Formulate a conclusion based on instrumental examination methods. Knowledge: 1. Medical indications and contraindications, methods of conducting EEG, ultrasound Doppler imaging of the brachiocephalic vessels, ENMG.
Additional job functions 2.: Continuous professional development	Skill 1: Striving for professional improvement	Skills: 1. Participate in professional training events: conferences, seminars, webinars, advanced training courses. 2. Participate in academic and scientific activities. 3. Take part in the work of professional associations, committees and working groups to discuss health issues and exchange experience with colleagues. Knowledge: 1. Order of the Minister of Health of the Republic of Kazakhstan dated December 21, 2020 No. ҚР ДСМ-303/2020 "On approval of the rules for

		additional and informal education of specialists in the field of health care, qualification requirements for organizations implementing educational programs of additional and informal education in the field of health care, as well as the rules for recognizing the learning outcomes obtained by specialists in the field of health care through additional and informal education (registered with the Ministry of Justice of the Republic of Kazakhstan on December 22, 2020 No. 21847). 2. Order of the Minister of Health of the Republic of Kazakhstan dated December 20, 2020 No. ҚР ДСМ-283/2020 "On approval of the rules for confirming the results of continuous professional development of healthcare workers" (registered with the Ministry of Justice of the Republic of Kazakhstan on December 22, 2020 No. 21843). 3. Opportunities to network and communicate with colleagues in your professional field. 4. Current trends, research and developments in your specialized field.
Requirements for personal competencies:	Empathy Sociability Tolerance and respect Cooperation and teamwork Stress resistance Reflection and self-analysis Compliance with professional ethics Openness and willingness to learn Activity and initiative Desire for professional development	

Head of the educational and methodological center



Doltaeva B.Z.