

JSC "SOUTH KAZAKHSTAN MEDICAL ACADEMY"

«APPROVED» by
Rector of JSC «SKMA»
Professor Rysbekov M.




SOUTH KAZAKHSTAN
MEDICAL
ACADEMY

EDUCATIONAL PROGRAM OF RESIDENCY
7R01131
«NEONATOLOGY»



Position	Full name	Signature
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Minutes of the department meeting № <u>119</u> from « <u>04</u> » « <u>08</u> » 202 <u>2</u> y.		
Discussed at the meeting of the Committee of Educational Programs of the Residency Chairman of the Educational Programs Committee № <u>59</u> from « <u>04</u> » « <u>08</u> » 202 <u>2</u> y.	Zh.A. Kauyzbay	
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ОНТҮСТІК ҚАЗАҚСТАН MEDISINA АКАДЕМИАСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»
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Educational program passport

1. Mission of the educational program:

To be a recognized leader in the field of training highly specialized, competitive neonatologists.

2. Purpose of the educational program:

To prepare a qualified neonatologist with a system of universal professional competencies, capable and ready to provide qualified assistance to a newborn to restore and maintain the functions of vital organs and systems.

3. Rationale for EP:

Neonatology is a branch of pediatrics, the science of caring for newborns. The essence of neonatology: finding optimal methods for diagnosing and treating diseases in children in the first four weeks of life, rehabilitation of sick newborns, creating in the neonatal period the conditions necessary for the formation of a state of health throughout the subsequent life of a person. It is in the perinatal period (from the 28th week of a person's intrauterine life to the 7th day of life after birth) that primary and secondary prevention of many chronic human diseases is highly effective. Neonatology is a young science: if pediatrics as an independent branch of medicine arose only in the first half of the 19th century, then neonatology - in the 20th century. American pediatrician Alexander Shaffer proposed the terms "neonatology" and "neonatologist" in 1960 in the manual "Diseases of the Newborn."

Teaching this discipline includes modern knowledge of the anatomical and physiological characteristics of the fetus and newborn, as well as the growing organism during the 1st year of life, morphofunctional characteristics of the organs and systems of the newborn and child during various periods of development, and nutritional issues in modern conditions. An integral part of the discipline is the study of the pathogenesis of various childhood diseases in the neonatal period in the light of the latest achievements of medical science, as well as issues of diagnosis, treatment and follow-up of various types of pathology based on this knowledge.

Improving the organization of neonatal services. To introduce modern methods of diagnosis and treatment into practice, it is necessary to improve the organization of neonatal services as a whole. This includes optimizing the routing of pregnant women and newborns, developing a network of perinatal centers, and equipping departments with equipment in accordance with standards.

The introduction of new technologies also requires new knowledge from medical workers. It is necessary to modernize educational programs in neonatology, organize advanced training cycles, trainings and master classes on mastering best practices.

4. The educational program is developed on the basis of:

- Order of the Minister of Health of the Republic of Kazakhstan dated 07.04.2022 No. KR DSM-63 "On approval of state mandatory standards for levels of education 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.

General information


1	Registration No	7R09100104
2	Code and classification of field of education	7R01 Healthcare (medicine)
3	Code and classification of areas of training	7R011 Healthcare
4	Group of educational programs	R031 Neonatology
5	Code and classification of field of education	7R01131 «Neonatology »
6	Type of EP	NewEP
7	Degree по ISCE	7
8	Degree по NFC	7
9	Degree по ORC	7
10	Distinctive features of EP	no
	HED-partner	
	HED-partner	
11	List of competencies	<p>CC1. Able to identify the main pathological symptoms and syndromes of diseases, be able to carry out differential diagnosis according to the leading syndrome, interpret the results of the examination to make a clinical diagnosis, taking into account the International Statistical Classification of Diseases and Related Health Problems.</p> <p>CC2. Able to communicate effectively with patients and their relatives, involving them in discussion and participation in the process of diagnostic, treatment and preventive measures.</p> <p>CC3. Able to carry out dynamic monitoring of healthy and sick newborns in neonatal preventive institutions.</p> <p>CC4. Able to conduct a clinical examination of infectious and non-infectious patients and make a clinical diagnosis in accordance with modern clinical protocols.</p> <p>CC5. Able to assess the potential risks of therapy in neonatology, prescribe treatment according to evidence-based practice and determine its effectiveness.</p> <p>CC6. Able to organize and carry out a complex of early rehabilitation measures for major diseases of neonatal age</p>
12	Results of education	<p>LO1: Able to formulate a clinical diagnosis, assign a treatment plan and evaluate its effectiveness based on evidence-based practice at all stages of neonatal care;</p> <p>LO2: Able to effectively interact with relatives of the newborn, with health professionals in order to achieve the best results for the newborn;</p> <p>LO3: Able to assess risks and use the most effective methods to ensure a high level of safety and quality of neonatal care;</p> <p>LO4: Able to act within the legal and organizational</p>

		framework of the health care system of the Republic of Kazakhstan in providing neonatal care, intensive care, resuscitation, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of improving the health of the newborn; LO5: Able to formulate adequate research questions, critically evaluate professional literature on neonatology, effectively use international databases in their daily activities, participate in the work of the research team; LO6: Able to train independently and train other members of the professional team of neonatologists, actively participate in discussions, conferences and other forms of continuous professional development.
13	Educational form	full-time
14	Language of education	Kazakh and Russian
15	Volume of credits	140
16	Training period	2 year
17	Awarded degree, qualification	Doctor-neonatologist
18	Availability of an annex to the license for the direction of personnel training	KZ36LAA00011387
19	Availability of EP accreditation	Have from 20.09.2022
	Name of accreditation organisation	IAAR
	Validity period of accreditation	№ KZ73LAA00011788 27.05.2021 -26.05.2026
20	Information about disciplines	App 1.2

Application 1.1

Matrix for correlating learning outcomes in the educational program as a whole with the competencies being developed

	LO1	LO2	LO3	LO4	LO5	LO6
CC1	+	+	+			
CC2		+		+		
CC3			+		+	
CC4				+		
CC5					+	
CC6						+

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Application 1.2

Competency/learning outcome attainability matrix

№	Name of discipline	Brief description of the discipline	Cycle	Component	Num. of credits.	LO formation
1	Neonatology in Hospital	Organization of neonatal service in the Republic of Kazakhstan. Principles of organization and operation of neonatal pathology departments. Evidence-based medicine in neonatology. Determination of the method and scope of examination of the newborn. Apgar score. Defining tactics in accordance with established protocols and standards. Carrying out differential diagnosis, substantiating the clinical diagnosis, prescribing adequate therapy.	SD	RC	64	LO1 LO4 LO5
2	Newborns pathology	Pathologies of newborns: causes and types. Physiological and neurological acquired pathologies. Genetically determined pathologies. Congenital malformations of vital organs. Infectious diseases of newborns. Birth injuries. Diseases of the newborn period. Management of newborns with certain pathological conditions. Organization and conduct of treatment for newborns with perinatal lesions.	SD	RC	14	LO1 LO2 LO3
3	Nursing of premature babies	Organization of prenatal and postnatal care of premature newborns. Nursing of premature newborns at all stages, features of care from the perspective of WHO programs for effective perinatal care. Feeding premature babies. Equipment for nursing newborns. Respiratory therapies and strategies to prevent lung damage. Treatment of newborns after asphyxia. Nursing of children with newborn pathologies.	SD	RC	14	LO1 LO4
4	Resuscitation and intensive care of newborns.	Diagnosis, etiopathogenetic treatment and intensive therapy of syndromic disorders and critical conditions in newborns. Nursing newborns.	SD	RC	14	LO3 LO4 LO6



		Monitoring of vital functions of newborns. Calculation of infusion-transfusion therapy, correction of electrolyte disturbances, coagulation potential and blood gas composition in newborns. Resuscitation and intensive care for critical conditions in newborns according to WHO programs.				
5	Outpatient neonatology.	Organizational issues of neonatal service at the level of outpatient care. Modern technologies for diagnosis, treatment and rehabilitation of newborns with pathologies of the perinatal period at the outpatient stage. Rational feeding in the perinatal period and infancy. Protocols for diagnosis, treatment and rehabilitation of children with perinatal lesions of the central nervous system who have suffered hemolytic disease of the newborn, respiratory distress syndrome, and purulent-inflammatory diseases.	SD	RC	14	LO2 LO3
6	Neonatal neurology	Criteria for assessing the neurological status of newborns. Normal development of basic neurological functions. Diagnosis of diseases. Early diagnosis of developmental pathologies. Features of the development of the nervous system of a full-term and premature newborn. Genetic predisposition and hereditary diseases. Pathological conditions of the perinatal period. Providing emergency care to newborns. Observation and rehabilitation of newborns.	SD	RC	7	LO1 LO2 LO5
7	Neonatal surgery	Organization of care for newborns with surgical pathology. Developmental defects of the neonatal period. Purulent-septic diseases. Birth and household injuries. Prenatal diagnosis. Indications for emergency and planned neonatal operations. Modern methods of diagnosis and surgical treatment of neonatal diseases.	SD	RC	7	LO1 LO3 LO5

		Endoscopic surgery. Prospects for the development of neonatal surgery.				
8	Clinical laboratory diagnostics in neonatology.	Organization of work of the clinical diagnostic laboratory. Legal issues of laboratory services. Indications for prescribing laboratory diagnostics of disorders and diseases characteristic of the perinatal period. Diagnosis of congenital malformations and hereditary diseases in the fetus. Indications for invasive methods of prenatal diagnosis in the fetus. Effective and safe methods of prenatal diagnosis.	SD	CC	4	LO3 LO5
9	Clinical pharmacology in neonatology.	Basic principles of clinical pharmacology in neonatology. Antibiotic therapy during the neonatal period. Pain and analgesia in neonatology. Features of the pharmacology of lactating women. Conducting pharmacotherapy for newborns. Determination of indications and contraindications, route of administration for prescribing medications to newborns.	SD	CC		LO3 LO5 LO6
10	Fundamentals of medical genetics in neonatology.	Introduction to genetics. Determination of birth defects and genetic syndromes. Determination of tactics for the management and treatment of newborns with birth defects and genetic syndromes. Organization and conduct of medical genetic counseling. Determination of the genesis of congenital and hereditary diseases. Identifying the risk of having a sick child. Organization of screening of newborns for hereditary diseases and metabolic diseases.	SD	CC		LO1 LO2 LO6
	Total:				138	
	Final examination				2	
	Total:				140	

Matrix for achieving LO by various teaching methods and assessment methods

Learning outcomes	Methods of education and teaching	
LO1. Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all stages of neonatal care.	Analysis of the material, feedback from the resident	Modeling situations Maintaining medical records
LO2. Able to effectively interact with the newborn's relatives and health care professionals in order to achieve the best results for the newborn.	Reflective diary	Maintaining medical records
LO3. Able to assess risks and use the most effective methods to ensure the highest level of safety and quality of neonatal care	Supervision of clinical work	
LO4. Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan when providing neonatal care, intensive care, resuscitation care, provide basic care in emergency situations, work as part of interprofessional teams to implement policies to improve the health of the newborn.	Supervision of clinical work	Maintaining medical records
LO5. Able to formulate adequate research questions, critically evaluate professional neonatology literature, effectively use international databases in their daily activities, and participate in the work of a research team.	«Magazine Club»	Writing abstracts and articles Public performance
LO6. Able to learn independently and train other members of the professional neonatology team, actively participate in discussions, conferences and other forms of continuing professional development.	Observation	

Matrix of compliance of LO with assessment methods

LO	Assessment methods	
LO1. Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all stages of neonatal care.	Testing Oral survey	Essay (Short and long) Short answer
LO2. Able to effectively interact with the newborn's relatives and health care professionals in order to achieve the best results for the newborn.	OSCE (with skill testing stations). Mini clinical exam.	Long-term case Keeping diaries
LO3. Able to assess risks and use the most effective methods to ensure the highest level of safety and quality of neonatal care	Analysis of records in the medical history Analysis of doctor's activity records	Analysis of records in the medical history
LO4. Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan when providing neonatal care, intensive care, resuscitation care, provide basic care in emergency situations, work as part of interprofessional teams to implement policies to improve the health of the newborn.	360 score	Patient reviews Feedback from other students Score 360
LO5. Able to formulate adequate research questions, critically evaluate professional neonatology literature, effectively use international databases in their daily activities, and participate in the work of a research team.	Abstract/presentation	Publications
LO6. Able to learn independently and train other members of the professional neonatology team, actively participate in discussions, conferences and other forms of continuing professional development.	Portfolio	Clinical records Self-esteem



Work plan for the entire period of study:

Cycle of discipline	Code of discipline	Name of discipline/module	Amount of credits	Common hours	Classrooms	IWR		1 year education	2 year education	Form of controle	Final examination	
						IWRT	IWR					
PD/		Cycle of major disciplines	138	4140								
		required component	134	4020								
PD/	R-NS	Neonatology in Hospital	64	1920	384	1248	288	42	22	Ex		
		Neonatology in Hospital	42	1260	252	819	189	42		Ex		
		Neonatology in Hospital	22	660	132	429	99		22	Ex		
	R-VND	Nursing of premature babies	14	420	84	273	63	14		Ex		
	UC/	R-PN	Newborns pathology	14	420	84	273	63		14	Ex	
		R-RITN	Resuscitation and intensive care of newborns.	14	420	84	273	63		14	Ex	
		R-AN	Outpatient neonatology.	14	420	84	273	63	14		Ex	
		R-NN	Neonatal neurology	7	210	42	136	32		7	Ex	
		R-NH	Neonatal surgery	7	210	42	136	32		7	Ex	
			Component of choice:	4	120	24	78	18		4		
OC/	R-KLDN	Clinical laboratory diagnostics in neonatology										
	R-KFN	Clinical pharmacology in neonatology	4	120	24	78	18		4	Ex		
	R-OMGN	Fundamentals of medical genetics in neonatology										
		TOTAL:	138	4140	828	2691	621					
IC		INTERMEDIATE CERTIFICATION										
FE		FINAL EXAMINATION	2	60					2		60	
		TOTAL:	140	4200	828	2691	621	70	70		60	