

JSC «SOUTH KAZAKHSTAN MEDICAL ACADEMY»



SOUTH KAZAKHSTAN  
MEDICAL  
ACADEMY

EDUCATIONAL PROGRAM OF RESIDENCY

7R09111

"Infectious Diseases in (Adults, Children)"

Shymkent, 2024



The residency educational program 7R01111 “Infectious diseases (adults, children)” was developed on the basis of the order “On approval of state compulsory standards for levels of education in the field of healthcare” dated July 4, 2022 No. HDKR-63 and updated in accordance with the requirements of the order of the Minister of Health of the Republic of Kazakhstan dated January 25, 2024 No. 46 “On approval of professional standards in the field of healthcare.”

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## Educational program passport

### 1. Mission of educational program:

To be a recognized leader in the field of training competitive personnel, meeting the need of the resident physician to achieve learning outcomes, providing the health care system and society with highly qualified infectious disease doctors.

**2. The aim of the educational program:** training of qualified, meeting modern requirements to the quality of doctors, infectious disease doctor with a system of universal and professional competencies, capable and ready for independent professional activity in outpatient conditions and hospitals of infectious profile, providing specialized highly qualified assistance to the population regardless of age and gender, including the organization of anti-epidemic measures.

### Objectives of the educational program:

- To ensure the integration of practice and theory
- In-depth study of the theoretical issues of infectious diseases;
- Improvement of practical skills in modern principles of early, differential and syndromic diagnosis, interpretation of the results of the examination from the position of evidence-based medicine, treatment and prevention of infectious diseases in adults and children, the organization of anti-epidemic measures in foci of infection; foci of SARS
- Independent implementation of qualified emergency medical care in the clinic of infectious diseases

### 3. Rationale for the educational program:

Infectious diseases are one of the urgent problems of modern health care -. The extreme socio-economic importance of infectious diseases at this stage around the world, including in Kazakhstan, is due to their global spread and high economic losses associated with the disability of the population, the costs of treatment and anti-epidemic measures. In recent decades, they have noted the emergence of previously unknown "new" infectious diseases and the return of "old" infections, many of which pose a high epidemiological danger and are characterized by high mortality. The heavy burden was left after the pandemic of the new coronavirus infection COVID-19, which led to high morbidity and mortality of the population. Every year, a high incidence of acute respiratory, intestinal and neuroinfections of viral and bacterial etiology is recorded in the especially pediatric population. There is an increase in morbidity from infection caused by the human immunodeficiency virus, as well as the incidence of chronic viral hepatitis and an increase in mortality from their adverse outcomes. Natural-focal infections remain an important problem, among which brucellosis, listeriosis, tick-borne infections. The residency in the specialty "Infectious diseases (adults, children's)" has students for a more in-depth study of issues and mastering practical skills, algorithms for the clinic and diagnosis of infectious diseases in adults and children, knowledge and understanding of the causal relationships of the infectious process, features of immunological aspects, vaccine prophylaxis, coverage of such unresolved problems of infectious pathology as: the emergence of new infections caused by previously unknown infectious agents (microorganisms) that cross the interspecies barrier between animals and humans appearing in an unusual geographical area; the appearance of drug-resistant forms of pathogens; a feature of modern infectious pathology, where the dominant and increasing role of viruses as etiological agents, especially newly detected infections, is manifested; unfavorable situation with the diagnosis of viral intestinal infections, which is fully carried out only in single laboratories; the problem of nosocomial infections (VBI), the lack of full registration, the untimely implementation of preventive measures that contribute

to the spread of VBI; the lack of full registration of infectious agents, which leads to the fact that a number of so-called "somatic" diseases considered non-infectious were caused by various bacteria and viruses.

#### 4. Information about the educational program

Order of the Minister of Health of the Republic of Kazakhstan dated 04.07.2022 No. KR DSM-63 "On the approval of state generally binding standards for levels of education in the field of health care";

- Occupational standard "Infectious diseases (adults, children)" (Order of the Minister of Health of the Republic of Kazakhstan dated January 25, 2024 No. 46 "On the approval of professional standards in the field of health."

- On amending and supplementing the order of the Minister of Health of the Republic of Kazakhstan "On Approval of the List of Medical Specialties of Residency Programs" dated May 25, 2021 No. KR DSM - 43 and "On Approval of Standard Training Programs for Medical and Pharmaceutical Specialties" dated January 9, 2023 No. 4. (Order of the Minister of Health of the Republic of Kazakhstan dated November 10, 2023 No. 164).

The need for training in the residency of infectious disease doctors is due to the need of medical organizations for infectious disease specialists, due to the unpredictable epidemiological situation in the world, the growing relevance of infectious disease, primarily at the regional level, taking into account the main strategies and programs for the development of the health care system at the international, national and regional levels, in order to increase the level of medical care to the population of the Republic of Kazakhstan.

#### 5. Area of professional activity. Health care

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



### General information

№	Name of field	Note
1	Registration number	7R01100258
2	The code and classification of the field of education	7R01 Health care (medicine)
3	The code and classification of training areas	7R011 Health care
4	Group of educational programs	R011 "Infectious diseases (adults, children)"
5	Code, name of the educational program	7R01111 "Infectious Diseases (adults, children)" (residency)
6	Type Op	Updated educational program
7	ISCED level	7
8	The level of the NRK	7
9	ORC Level	7
10	Distinctive features of the OP	no
	Partner University (SOP)	
	Partner University (SOP)	
11	List of core competencies	<p><b>CC1</b> He is able to comply with the principles of management organization in medical organizations and their structural units in the field of infectious pathology in adults and children.</p> <p><b>CC2</b> is able to carry out effective communication with infectious patients and his relatives, involving them in the discussion and participation in the process of diagnostic and medical and preventive measures.</p> <p><b>CC3</b> Able to carry out dynamic monitoring of patients with infectious diseases in adults and children</p> <p><b>CC4</b> He is able to conduct a clinical examination of an infectious patient and make a clinical diagnosis in accordance with modern clinical protocols.</p> <p><b>CC5</b> He is able to assess the potential risks of therapy in infectious diseases in adults and children, prescribe treatment according to evidence-based practice in determining its effectiveness.</p> <p><b>CC6</b> Able to organize and carry out a set of anti-epidemic, rehabilitation measures for infectious diseases in adults and children</p>
	Learning outcomes:	<p><b>LO1</b> . Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for infectious patients</p> <p><b>LO2</b>. Able to effectively interact with an infectious patient, his environment, health care professionals in order to achieve the best results for the patient</p>

		<p>LO3 Able to assess the risks of an infectious disease and use the most effective methods to ensure a high level of safety and quality of care.</p> <p>LO4 Able to act within the legal and organizational framework of the health care system of the Republic of Kazakhstan for infectious diseases, provide basic assistance in emergency situations, carry out anti-epidemic measures, work as part of interprofessional teams to implement the policy of promoting the health of the nation</p> <p>LO5. Able to formulate adequate research questions in the field of infectology, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of the research team</p> <p>LO6 He is able to study independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuous professional development. Able to independently work in the professional electronic system of the treatment and prevention facility .</p>
13	The form of study	Full-time
14	The language of instruction	<i>Kazakh and Russian</i>
15	Volume of loans	140
16	The duration of the training:	2 year
17	Degree awarded, qualification	Infectious disease doctor
18	Availability of an appendix to the license for the direction of training	KZ 22BFA00167288
19	Availability of OP accreditation	Have
	Name of the accreditation body	<i>IAAR</i>
	The validity period of the accreditation	27.05.2021-26.05.2026
20	Information about the disciplines	Application 1.2

Application 1.1

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

	LO 1	LO2	LO3	LO4	LO5	LO6
CC1	+	+	+			
CC2		+		+		
CC3			+		+	
CC4				+		
CC5					+	
CC6						+

Application 1.2

Matrix of achievability of competencies/learning outcomes

№	Name of the discipline	A brief description of the discipline	Cycle discipline	Component	Number of credits.	Formed RO
1	Pediatric infectious diseases in the polyclinic	Organization of care for children with infectious diseases in the outpatient clinic. Accounting and reporting documentation Cabinet of Infectious Diseases. Current clinical protocols for children's infectious diseases. Algorithms of early and differential diagnosis, treatment and prevention of children's infectious diseases in the clinic. Algorithms of emergency care at primary care stage. Principles of DM. IVDBV of infectious diseases in the outpatient clinic. Antiepidemic measures. Dispensary care. Rehabilitation. Vaccine prophylaxis.	PD	MC	17	LO1 LO2 LO4
2	Infectious diseases in the hospital	Organization of care for infectious diseases in the hospital setting. Current clinical protocols for infectious diseases. Principles of Evidence-based	PD	MC	50	LO1 LO3 LO5



		Medicine in infectious diseases. Methods of early and clinicallaboratory diagnosis, treatment and prevention of infectious diseases in hospital (intestinal infections, airborne infections, hemocontact, helminthiasis, protozoa, etc.) Emergency and intensive care of infectious diseases. Rehabilitation. Particularly dangerous infections. Guarantee activities.				
3	Infectious diseases in the polyclinic	Organization of outpatient infectious disease service. Accounting and reporting documentation. The current clinical protocols of infectious diseases Algorithm diagnosis and differential diagnosis of syndromes: diarrhea, lesions of the pharynx, exanthema, fever, jaundice, meningal syndrome, etc. in the outpatient clinic. Tactics of management of patients at pre-hospital stage. Emergency care. Mandatory methods of examination for HIV infection, AIDS-associated diseases. Dissemination of infectious diseases.	PD	MC	17	LO1 LO2 LO4
4	Pediatric infectious diseases in the hospital	Organization of care for children with infectious diseases in hospital conditions. Accounting and reporting documentation. Current clinical protocols for children's infectious diseases. Methods of early and clinicallaboratory diagnosis, treatment of children's infectious diseases in the hospital. Principles of Evidence Based Medicine. Integrated Management of Childhood Illnesses. Emergency conditions and intensive care: Infectious-toxic shock, sepsis, toxemia with excicosis, brain edema, DIC syndrome, bronchoobstructive syndrome, Acute stenotic laryngotracheitis, etc.	PD	MC	50	LO1 LO3 LO5
5	Especialli dangerous infections	Natural focal infections. Algorithms of early and differential diagnosis of especially dangerous infections. Standard case definitions: plague, cholera, tularemia, brucellosis, anthrax, botulism,	PD	MC		LO2 LO3 LO4



		rabies, CrimeanCongo hemorrhagic fever. Laboratory diagnosis. Clinical treatment protocols, Evidence-based medicine of high risk infections. Emergency and intensive care in acute conditions of especially dangerous infections. Quarantine and anti-epidemic measures.			2	
6	Modern Problems of HIV Infection	Organization of services for preventing and combating HIV and AIDS. Issues of medical ethics and deontology when working with infected and HIV/AIDS patients. Epidemiology, immunology, modern classification, clinical stages of HIV infection. HIV-associated infections. Terminal stage-AIDS. Antiretroviral therapy: classification of drugs, indications for prescription, doses, combination therapy regimens, effectiveness criteria.	PD	MC		LO1 LO2 LO3 LO5
7	Infectious hepatology	Diagnosis of infectious liver diseases (acute viral hepatitis A, B, C, D, E; chronic viral hepatitis B, C, D; viral liver cirrhosis; hepatitis caused by HBV, CMV, EBV), differential diagnosis of infectious liver diseases (including pregnant women), modern methods of therapy, complications and outcomes, principles of prevention and anti-epidemic measures.	PD	MC	2	LO1 LO3 LO5 LO6
8	Current respiratory tract infections including COVID19	Diagnosis of infectious diseases of the respiratory tract Influenza, SARS, COVID-19, respiratory chlamydia, mycoplasmosis, etc.), differential diagnosis of respiratory tract infectious diseases (including pregnant women), modern methods of therapy, complications and outcomes, principles of prevention and antiepidemic measures	PD	MC		LO1 LO3 LO5 LO6
	<b>Total</b>				<b>138</b>	
	<b>Final certification</b>				<b>2</b>	
	<b>Total</b>				<b>140</b>	

**The matrix of achievement of LO by various teaching methods and assessment methods**

Learning outcomes	Teaching and learning methods	
<p><b>LO1</b> . Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for infectious patients</p>	<p>Lectures (training, discussion, mini) clinical analysis, clinical case protection, (SP - standart patient Analysis of situations (CS - case-study).</p>	<p>Curation of patients with infectious disease, Patient Survey (PS - Patient Survey), Participation in morning medical conferences, in rounds, participation in consultations.Maintenance of medical records, diary</p>
<p><b>LO2.</b> Able to effectively interact with an infectious patient, his environment, health care professionals in order to achieve the best results for the patient and prevention facility</p>	<p>Lectures (training, discussion, mini) clinical analysis,clinical case protection, (SP - standart patient Analysis of situations (CS - case-study) Participation in morning medical conferences, in rounds. Analysis of the material, feedback from the resident</p>	<p>Curation of patients with infectious disease, Patient Survey (PS - Patient Survey), Participation in morning medical conferences, in rounds, participation in consultations.Maintenance of medical records, diary</p>
<p><b>LO3</b> Able to assess the risks of an infectious disease and use the most effective methods to ensure a high level of safety and quality of care.</p>	<p>Lectures (training, discussion, mini) clinical analysis,clinical case protection, (SP - standart patient Analysis of situations (CS - case-study) Analysis of the material, feedback from the resident.</p>	<p>Curation of patients with infectious disease. Participation in morning medical conferences, in rounds, participation in consultations.Maintenance of medical records, diary.</p>
<p><b>LO4</b> Able to act within the legal and organizational framework of the health care system of the Republic of Kazakhstan for infectious diseases, provide basic assistance in emergency situations, carry out anti-epidemic measures, work as part of interprofessional teams to implement the policy of promoting the health of the nation</p>	<p>Lectures (training, discussion, mini) clinical analysis,clinical case protection, (SP - standart patient Analysis of situations (CS - case-study).</p>	<p>Participation in scientific and practical medical conferences. Working with Regulations. Medical Record Keeping</p>
<p><b>LO5.</b> Able to formulate adequate research questions in the field of infectology, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of the research team</p>	<p>Lectures (training, discussion, mini) clinical analysis,clinical case protection, (SP - standart patient Analysis of situations (CS - case-study) Analysis of the</p>	<p>Patient Survey (PS). Participation in scientific and practical medical conferences, in consultations. RBL. Literary review., Preparation of</p>

	material, feedback from the resident.	scientific reports, articles, theses.
<b>LO6</b> He is able to study independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuous professional development. Able to independently work in the professional electronic system of the treatment	Lectures (training, discussion, mini) clinical analysis, clinical case protection, (SP - standart patient Analysis of situations (CS - case-study) Analysis of the material, feedback from the resident.	Curation, dynamic patient examination (PS - Patient Survey), participation in consultations, morning medical conferences. in rounds. Keeping medical records., diary.

### The matrix of compliance with RO assessment methods

PO	Assessment methods	
<b>LO1</b> . Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for infectious patients	Check sheet: Criteria for assessing practical skills, professional skills. Check sheet: Assessment of current control (QCD): Oral response Check sheet: Testing: Check list "Assessment 360°" for residents. Mini-clinical exam	Check sheet: Criteria for assessing the independent work of a student (IWS O) Check list "Assessment 360°" for residents. Portfolio
<b>LO2</b> . Able to effectively interact with an infectious patient, his environment, health care professionals in order to achieve the best results for the patient and prevention facility	Check sheet: Criteria for assessing practical skills, professional skills: Check sheet: Assessment of current control (QCD): Oral response Check sheet: Testing:	Check sheet: Criteria for assessing the independent work of a student (IWS O) Check list "Assessment 360°" for department heads
<b>LO3</b> Able to assess the risks of an infectious disease and use the most effective methods to ensure a high level of safety and quality of care.	Check sheet: Criteria for assessing practical skills, professional skills: Check sheet: Assessment of current control (QCD): Oral response Check sheet: Testing: Check sheet: Criteria for assessing the independent work of a student (IWS O) Check list "Assessment 360°" for residents. Mini-clinical exam.	Check sheet: Criteria for assessing the independent work of a student (IWS ) Clinical Case Analytics Assessment

<p><b>LO4</b> Able to act within the legal and organizational framework of the health care system of the Republic of Kazakhstan for infectious diseases, provide basic assistance in emergency situations, carry out anti-epidemic measures, work as part of interprofessional teams to implement the policy of promoting the health of the nation</p>	<p>Check sheet: Criteria for assessing practical skills, professional skills: Check sheet: Assessment of current control (QCD): Oral response Check sheet: Testing:</p>	<p>Check sheet: Criteria for assessing the independent work of a student (IWS)</p>
<p><b>LO5.</b> Able to formulate adequate research questions in the field of infectology, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of the research team</p>	<p>Check sheet: Assessment of current control (QCD): Oral response Check sheet: Testing: Check list "Assessment 360°" for residents.</p>	<p>Check sheet: Criteria for assessing the independent work of a student (IWS ) Check list Portfolio .Publications</p>
<p><b>LO6</b> He is able to study independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuous professional development. Able to independently work in the professional electronic system of the treatment</p>	<p>Check sheet: Criteria for assessing practical skills, professional skills: Check sheet: Assessment of current control (QCD): Oral response Check sheet: Testing: Check list "Assessment 360°" for residents.</p>	<p>Check sheet: Criteria for assessing practical skills, professional skills: Check sheet: Criteria for assessing the independent work of a student (IWS ) Check list "Assessment 360°"</p>



**Residents' workplan for the 7R01111 «Infectious diseases, for adults, children» educational program for the 2024–2028 academic year.**

Cycle disciplines	Discipline code	Name of the discipline/ modules	Amount of credits	General hours	classroom	RIC		year of study	year of study	The form control	FE	
						CPPH	RTIC					
PD	<b>CYCLE OF PROFILING DISCIPLINES</b>		<b>138</b>	<b>4140</b>								
PD	<b>Mandatory component</b>		<b>134</b>	<b>4020</b>								
	MC	R-CIDC	Children's infectious diseases in the clinic	17	510	102	357	51	17		Exam	
		R-IDH	Infectious diseases in the hospital	50	1500	300	1050	150	34	16	Exam	
		R-IDC	Infectious diseases in the clinic	17	510	102	357	51	17		Exam	
		R-IDCH	Infectious diseases of children in a hospital	50	1500	300	1050	150		50	Exam	
	OC	<b>Optional component</b>		<b>4</b>	<b>120</b>	<b>24</b>	<b>84</b>	<b>12</b>	<b>2</b>	<b>2</b>		
		R-EDI	Especially dangerous infections	2	60	12	42	6	2		Exam	
		R-MPHI	Modern problems of HIV infection									
		R-IH	Infectious Hepatology/ Current respiratory tract infections, including COVID19	2	60	12	42	6		2	Exam	
		<b>TOTAL</b>		<b>4140</b>	<b>828</b>	<b>2898</b>	<b>414</b>					
IC	<b>INTERMEDIATE CERTIFICATION</b>											
FE	<b>FINAL EXAMINATION</b>		<b>2</b>	<b>60</b>					<b>2</b>		<b>60</b>	
	<b>TOTAL</b>		<b>140</b>	<b>4200</b>	<b>828</b>	<b>2898</b>	<b>414</b>	<b>70</b>	<b>70</b>		<b>60</b>	