Federal State Budgetary Educational Institution of Higher Education "Privolzhsky Research Medical University" of the Ministry of Health of the Russian Federation (FSBEI HE "PRMU" of the Ministry of Health of Russia)



PROGRAM STATE FINAL ATTESTATION OF GRADUTES IN SPECIALITY 31.05.01 GENERAL MEDICINE

Qualification: General Practioner

Nizhny Novgorod 2024

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1. GENERAL PROVISIONS

The program of state final attestation of graduates in the specialty 31.05.01 General Medicine (qualification: general practitioner) is based on the documents:

- 1. Federal Law "On Education in the Russian Federation" dated 29.12.2012 No. 273-FZ.
- 2. Order of the Ministry of Education and Science of the Russian Federation dated 29.06.2015 No. 636 "On approval of the procedure for conducting state final attestation for educational programs of higher education bachelor's programs, specialist programs and master's programs".
- 3. Order of the Ministry of Science and Higher Education of the Russian Federation dated 12.08.2020 No. 988 "On approval of the federal state educational standard of higher education specialist in specialty 31.05.01 General Medicine"
- 4. Order of the Ministry of Education and Science of the Russian Federation dated 08.08.2016 No. 964 "On amendments to certain orders of the Ministry of Education and Science of the Russian Federation concerning the approval of Federal state educational standards of higher education in the area of training and specialties included in the enlarged groups of areas of training and specialties of higher education related to the field of education "Healthcare and Medical Sciences".
- 5. Regulations "On the procedure for conducting state final certification for educational programs of higher education Bachelor's degree programs, specialist programs in the Federal State Budgetary Educational Institution of Higher Education "PRMU" of the Ministry of Health of Russia", approved by the order of the rector dated 01.02.2019 No. 13.

2. PURPOSE OF THE STATE FINAL ATTISTATION

The purpose of the state final attestation of graduates of Privolzhsky Research Medical University (PRMU) is to determine whether the results of students' mastering of the main educational programs correspond to the relevant requirements of the federal state educational standard

A graduate in the specialty 31.05.01 General Medicine (qualification: general practioner) must solve the following professional tasks in accordance with the types of professional activity of the Federal State Educational Standard:

Table 1

| The field of | Types of tasks of | |
|------------------|-------------------|--|
| professional | professional | |
| activity (in | activity of | Tasks of professional activity |
| accordance. with | graduates (in | |
| the registry | accordance with | |
| Ministry of | with FSES | |
| Labor) | HE) | |
| 01 Education and | Medical | Improvement of theoretical knowledge and |
| science | | practical skills |

| | | by continuing professional education: |
|---------------|---------------------|---|
| | | studying |
| | | modern domestic and foreign medical |
| | | |
| | | literature, participation in educational events |
| | | (forums, congresses, conferences, master |
| | | classes, |
| | | simulation cycles) |
| | Scientific research | Analysis of scientific literature and official statistics |
| | | |
| | | reviews, participation in |
| | | statistical analysis and |
| | | public presentation of the results obtained; |
| | | participation in the solution of individual |
| | | research and scientific- |
| | | applied tasks in the field of health diagnostics, |
| | | |
| | | treatment, medical rehabilitation and |
| | | prevention. |
| 02 Healthcare | Medical | Prevention of diseases among the population |
| | Tytodical | by carrying out preventive and anti-epidemic |
| | | measures; carrying out preventive medical |
| | | examinations, medical examination, medical |
| | | supervision; |
| | | |
| | | diagnosis of diseases and pathological |
| | | conditions of patients; |
| | | diagnosis of emergency conditions; |
| | | diagnosis of pregnancy; examination of |
| | | temporary disability and participation in |
| | | other types of medical examination; |
| | | provision of primary medical and sanitary |
| | | care in outpatient and day hospital conditions; |
| | | provision of primary medical and sanitary |
| | | care for sudden acute diseases, conditions, |
| | | exacerbation of chronic diseases that are not |
| | | accompanied by a threat to the patient's life |
| | | and do not require emergency medical care; |
| | | participation in the provision of emergency |
| | | medical care |
| | | |
| | | |
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| | | assistance in conditions requires was at |
|-------------------|---------------------|--|
| | | assistance in conditions requiring urgent medical intervention; provision of medical |
| | | assistance in emergency situations, |
| | | including participation in medical |
| | | evacuation; participation in medical |
| | | rehabilitation and sanatorium- |
| | | |
| | | spa treatment; teaching patients basic hygienic measures of |
| | | a health-improving nature that contribute to |
| | | the prevention of diseases and health |
| | | promotion; |
| | | formation in the population, patients and |
| | | their families |
| | | motivation aimed at preserving and |
| | | strengthening your |
| | | health and the health of others; |
| | | health and the health of others, |
| | | |
| | | |
| | Scientific research | Collection and medical-statistical analysis of |
| | | information about |
| | | health indicators of the population of various |
| | | age and gender groups |
| | | groups that characterize the state of their |
| | | health; |
| 07 | Organizational | Application of the basic principles of the |
| Administrative, | and managerial | organization of medical care in medical |
| managerial and | | organizations and their structural divisions; |
| office activities | | creation of favorable conditions in medical |
| | | organizations for the stay of patients and |
| | | the work of medical personnel; |
| | | maintenance of medical documentation |
| | | in medical organizations; organization of |
| | | medical examination; |
| | | participation in the organization of the |
| | | assessment of the quality of medical care to |
| | | patients; compliance with the basic |
| | | requirements information security |
| | | |
| | | |
| | | |

medical activities:

- prevention of occurrence of diseases among the population by carrying out preventive and anti-epidemic measures;
- carrying out preventive medical examinations, clinical examinations, clinical observation;
- carrying out collection and medical-statistical analysis of information on health indicators of the population of various age and sex groups, characterizing their state of health;
 - diagnostics of diseases and pathological conditions of patients;
 - diagnostics of emergency conditions;
 - diagnostics of pregnancy;
- carrying out examination of temporary incapacity for work and participation in other types of medical examination;
- rendering primary medical and sanitary care in outpatient conditions and day hospital conditions;
- rendering primary medical and sanitary care in case of sudden acute diseases, conditions, exacerbation of chronic diseases, not accompanied by a threat to the patient's life and not requiring emergency medical care;
- participation in providing emergency medical care in conditions requiring urgent medical intervention;
- provision of medical care in emergency situations, including participation in medical evacuation;
 - participation in medical rehabilitation and spa treatment;
- formation of motivation in the population, patients and their families aimed at maintaining and strengthening their health and the health of others;
- training patients in basic hygienic health measures that help prevent diseases and improve health;

organizational and managerial activities:

- application of the basic principles of organizing the provision of medical care in medical organizations and their structural divisions;
- creation of favorable conditions in medical organizations for the stay of patients and the work of medical personnel;
 - maintenance of medical records in medical organizations;
 - organization of medical examination;
- participation in organizing the assessment of the quality of medical care provided to patients;
 - compliance with basic information security requirements; research activities:
 - analysis of scientific literature and official statistical reviews, participation in

statistical analysis and public presentation of the results;

- participation in solving individual research and applied scientific problems in the field of healthcare in diagnostics, treatment, medical rehabilitation and prevention.

A student who has no academic debt and has fully completed the curriculum is admitted to the state final attestation.

Persons who have successfully passed the state final attestation are awarded the appropriate qualification and a state diploma of higher education.

3. REQUIREMENTS FOR GRADUATES IN THE SPECIALTY 31.05.01 GENERAL MEDICINE

Theoretical training includes knowledge of the basics of humanitarian, socioeconomic, natural science, medical and biological, medical and preventive, clinical disciplines necessary for understanding the etiology, pathogenesis, clinical picture, diagnostic methods, treatment, rehabilitation and prevention of major human diseases.

As a result of mastering the specialist program, the graduate must have developed the competencies established by the specialist program:

The universal competences of the graduate:

- UC-1. Able to carry out critical analysis of problem situations based on a systematic approach, develop a strategy of action
- UC-2. Able to manage the project at all stages of its life cycle
- UC-3. Able to organize and manage the work of the team, developing a team strategy to achieve the goal
- UC-4. Able to apply modern communication technologies, including in a foreign language(s), for academic and professional interaction
- UC-5. Able to analyze and take into account the diversity of cultures in the process of cross-cultural interaction
- UC-6. Is able to determine and implement the priorities of its own activities and methods of its improvement based on self-esteem and lifelong education
- UC-7. Able to maintain the proper level of physical fitness to ensure full-fledged social and professional activities
- UC-8. Able to create and maintain safe living conditions in everyday life and in professional activity and for the preservation of the natural environment, ensuring sustainable development of society, including in the event of a threat and occurrence emergency situations and military conflicts
- UC-9. Able to use basic defectological knowledge in social and professional spheres
- UC-10. Able to make informed economic decisions in various areas of life
- UC-11. Able to form an intolerant attitude to corrupt behavior

The specialist program must establish the following general professional competencies: Ethical and legal basics of professional activities

GPC-1. Able to implement moral and legal norms, ethical and deontological principles in the professional activities

Healthy lifestyle

GPC-2. Able to conduct and realize control efficiency activities for prevention, formations; healthy lifestyle life and sanitary-hygienic education of population

GPC-3. Able to counteraction application of doping in sports and fighting it

Diagnostic instrumental methods of examination

GPC-4. Able to apply medical goods, provided for the order of rendering medical help, as well as to organize patient examination for the purpose of defining the diagnosis Etiology and pathogenesis

GPC-5. Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional tasks

Primary health care

GPC-6. Able to organize patient care, provide primary health care, ensure the organization of work and professional decision-making in case of emergency states on prehospital stage, in the conditions of emergency situations, epidemics and centers of mass defeats.

Treatment of diseases and states.

GPC-7. Able to prescribe treatment and implement control of its efficiency and safety Medical rehabilitation

GPC-8. Able to implement and realize implementation and monitoring of the effectiveness of the patient's medical rehabilitation, including the implementation of individual rehabilitation or habilitation programs for the disabled, assessment of the patient's ability to carry out

Quality Management

GPC-9. Able to implement the principles of management qualities in professional activity

Information literacy

GPC-10. Able to understand the principles of modern information technologies and use them to solve the tasks of professional activity

Scientific and organizational activity

GPC-11. Able of preparing and applying scientific, scientific and production, design, organizational and managerial and regulatory documentation in the healthcare system health care

Professional competencies are determined by the Organization independently on the basis of professional standards corresponding to the professional activities of graduates.

A graduate who has mastered the specialist program must have professional competencies corresponding to the type (types) of professional activity to which the specialist program is oriented:

- PC -1 Able to assess the condition of a patient requiring medical care in emergency or emergency forms
- PC-2 Able to recognize conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care, recognize conditions that pose a threat to the patient's life, including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration), requiring the provision of emergency medical care
- PC-3 Able to provide emergency medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life, to provide emergency medical care to patients with conditions that threaten the patient's life, including clinical death (stopping vital functions of the human body (blood circulation and/or breathing)
- PC-4 Able to use medicines and medical devices in the provision of medical care in emergency or emergency forms
- PC-5 Able to collect complaints, anamnesis of the patient's life and illness, conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation), formulate a preliminary diagnosis and make a plan for laboratory and instrumental) patient examinations, including diagnostic studies using modern technical means and digital technologies
- PC-6 is able to refer the patient for laboratory, instrumental examination, for consultation with specialist doctors in the presence of medical indications in accordance with the current procedures for medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care, as well as to refer the patient for specialized medical care in inpatient conditions or in a day hospital in the presence of medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
- PC-7 Able to carry out differential diagnostics with other diseases/conditions, including urgent ones, to establish a diagnosis taking into account the current international statistic classification of diseases and problems connected with health (ISC)
- PC-8 is able to develop a treatment plan for a disease or condition and prescribe medications, medical devices, therapeutic nutrition and non-drug treatment, taking into account the diagnosis, age and clinical picture in accordance with

current procedures medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care and to evaluate the effectiveness and safety of the use of medicines, medical devices, therapeutic nutrition and other treatment methods

- PC-10 Able to organize personalized treatment of the patient, including pregnant women, elderly and senile patients, to evaluate the effectiveness and safety of treatment
- PC-11 is able to carry out an examination of temporary disability and work as part of a medical commission carrying out an examination of temporary disability
- PC-12 Able to prepare the necessary medical documentation for the implementation of medical and social expertise in federal state institutions of medical and social expertise and refer a patient with a persistent impairment of body functions caused by diseases, the consequences of injuries or defects for medical and social expertise
- PC-13 is able to refer a patient in need of medical rehabilitation to a specialist doctor for the appointment and conduct of medical rehabilitation measures, including for the appointment and conduct of sanatorium treatment, and to carry out medical rehabilitation measures for the patient, including when implementing an individual rehabilitation program or habilitation of disabled people, in accordance with the current procedures providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care
- PC-14 is able to assess the effectiveness and safety of medical rehabilitation measures of the patient in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
- PC-15 Able to organize and conduct medical examinations taking into account age, health status, profession in accordance with applicable regulatory legal acts and other documents
- PC-16 is able to organize and monitor the immunoprophylaxis of infectious diseases in the adult population, prescribe preventive measures to patients taking into account risk factors in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care and monitor compliance with preventive measures
- PC-17 Able to conduct dispensary monitoring of patients with identified chronic non-communicable diseases and to carry out medical examination of the adult population in order to early identify chronic non-communicable diseases and the main risk factors for their development in accordance with current regulatory

legal acts and other documents

PC-18 Able to determine medical indications for the introduction of restrictive measures (quarantine) and indications for referral to a specialist doctor in the event of infectious (parasitic) diseases, issue and send an emergency notification to the territorial body of the Federal Service for Supervision of Consumer Rights Protection and Human Well-being when an infectious or occupational disease is detected, carry out anti-epidemic measures in the event of a focus of infection, including quarantine measures for the identification of particularly dangerous (quarantine)

infectious diseases

PC-19 is able to form healthy lifestyle programs, including programs to reduce alcohol and tobacco consumption, prevent and combat non-medical use of narcotic drugs and psychotropic substances, and evaluate the effectiveness of preventive work with patients

PC-20 is able to draw up a work plan and a report on its work, issue a passport of a medical (therapeutic) site

PC-21 is capable of analyzing morbidity, disability and mortality indicators to characterize the health of the attached population

PC-22 Able of maintaining medical records, including in electronic form within the framework of the MIS

PC-23 is able to provide internal quality control and safety of medical activities within the scope of official duties and control of the performance of official duties by a district nurse and other medical workers at their disposal

A graduate who has mastered the basic educational program in the specialty "General Medicine" must **know**:

- methods and techniques of philosophical analysis of problems; forms and methods of scientific knowledge, their evolution; basic patterns and trends in the development of the world historical process; the most important milestones in the history of Russia, the place and role of Russia in the history of mankind and in the modern world; the influence of Russia on the development of medicine; the influence of the environment on human health, the history of the search for effective means of treatment and prevention, the formation and development of medical science; an idea of medical systems and medical schools; the doctrine of a healthy lifestyle, the relationship "doctor-patient"; outstanding figures in medicine and pharmacy, outstanding medical discoveries, the influence of humanistic ideas on medicine; norms of foreign law, information law, the basic principles and provisions of constitutional, civil, labor, family, administrative and criminal law; moral and ethical standards, rules and principles of professional medical behavior, the rights of the patient and the doctor, the ethical foundations of modern medical legislation; duties, rights, place of the doctor in society; the main ethical documents of international organizations, domestic and international professional medical

associations; principles of conducting discussions in conditions of pluralism of opinions and the main methods of conflict resolution; a lexical minimum of 4,000 educational lexical units of a general and terminological nature (for a foreign language); basic medical and pharmaceutical terminology in Latin and a foreign language; the main areas of psychology, general and individual characteristics of the psyche of a teenager and an adult, the psychology of personality and small groups; mathematical methods for solving intellectual problems and their application in medicine; safety regulations and work in physical, chemical, biological laboratories with reagents, devices, animals; the main laws of physics, physical phenomena and patterns underlying the processes occurring in the human body; characteristics and biophysical mechanisms of the impact of physical factors on the body; physical foundations of the functioning of medical equipment, the structure and purpose of medical equipment; the physicochemical essence of the processes occurring in a living organism at the molecular, cellular, tissue and organ levels; properties of water and aqueous solutions; methods of expressing the concentration of substances in solutions, methods of preparing solutions of a given concentration; the main types of chemical equilibria (proteolytic, heterogeneous, ligand exchange, oxidation-reduction) in vital processes; the mechanism of action of the body's buffer systems, their relationship and role in maintaining the acidbase state of the body; electrolyte balance of the human body, colligative properties of solutions (diffusion, osmosis, osmolarity, osmolality); the role of colloidal surfactants in the assimilation and transfer of low-polar substances in a living organism; the structure and chemical properties of the main classes of biologically important organic compounds; the main metabolic pathways for the transformation of carbohydrates, lipids, amino acids, purine and pyrimidine bases, the role of cell membranes and their transport systems in metabolism; structure and functions of the most important chemical compounds (nucleic acids, natural proteins, water-soluble and fat-soluble vitamins, hormones, etc.); physicochemical methods of analysis in medicine (titrimetric, electrochemical, chromatographic, viscometric); the role of biogenic elements and their compounds in living organisms, the use of their compounds in medical practice; fundamentals of hemoglobin chemistry, its participation in gas exchange and maintenance of acidbase balance; classification and main characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications for the use of drugs, side effects; general principles of prescription writing and compilation of prescriptions for drugs; general patterns of origin and development of life, anthropogenesis and human ontogenesis; laws of genetics, its importance for medicine, patterns of heredity and variability in individual development as the basis for understanding the pathogenesis and etiology of hereditary and multifactorial human diseases; basic concepts and problems of the biosphere and ecology, the phenomenon of parasitism and bioecological diseases; classification, morphology and physiology of microorganisms and viruses, their impact on human health, methods of microbiological diagnostics, use of basic antibacterial, antiviral and biological drugs; basic patterns of development and vital activity of the organism based on the structural organization of cells, tissues and organs; histofunctional features of tissue elements, methods of their study; structure, topography and development of

cells, tissues, organs and systems of the organism in interaction with their function in norm and pathology, features of organismic and population levels of life organization; anatomical and physiological, age-sex and individual features of the structure and development of a healthy and sick organism; concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of disease, nosology, principles of disease classification, basic concepts of general nosology; functional systems of the human body, their regulation and self-regulation when exposed to the external environment in norm and pathology; structural and functional bases of diseases and pathological processes, causes, basic mechanisms of development and outcomes of typical pathological processes, dysfunctions of organs and systems; structure and functions of the human immune system, its age-related characteristics, cellular and molecular mechanisms of development and functioning of the immune system, main stages, types, genetic control of the immune response, methods of immunodiagnostics; methods of assessing the immune status, indications and principles of its assessment, immunopathogenesis, methods of diagnosing the main diseases of the human immune system, types and indications for the use of immunotropic therapy; theoretical foundations of informatics, collection, storage, retrieval, processing, transformation, dissemination of information in medical and biological systems, use of information computer systems in medicine and healthcare; fundamentals of the legislation of the Russian Federation on public health protection, main regulatory and technical documents; basic principles of management and organization of medical care to the population; fundamentals of the legislation on the sanitary and epidemiological well-being of the population, main official documents regulating anti-epidemiological services to the population for infectious and parasitic diseases; regulatory documents on the prevention of hospital infections, legal foundations of state policy in the field of immunoprophylaxis; social insurance and social security, principles of organizing insurance medicine in the Russian Federation, comparative characteristics of health care systems in the world; financing of the health care system; planning, financing of health care institutions; organization of medical monitoring of the state public health, issues of disability assessment and medical and legal assistance to the population; methods for calculating medical statistics indicators; the basics of applying the statistical method in medical research, the use of statistical indicators in assessing the health status of the population and the activities of medical organizations: maintaining standard accounting and reporting documentation in medical organizations; organizing the work of junior and midlevel medical personnel in medical organizations; population health indicators, factors shaping human health (environmental, professional, natural and climatic, endemic, social, epidemiological, psychoemotional, professional, genetic); diseases associated with the adverse effects of climatic and social factors; hygienic aspects of nutrition, hygiene of medical organizations, hygienic problems of medical and sanitary care for the working population; fundamentals of preventive medicine, organizing preventive measures aimed at strengthening public health; methods of health education work; the doctrine of the epidemiological process, the epidemiological approach to the study of human diseases, types of epidemiological studies and their purpose; the epidemic process and non-infectious epidemiology,

epidemiology of infectious and parasitic diseases, implementation of anti-epidemic measures, protection of the population in foci of especially dangerous infections, in case of deterioration of the radiation situation and natural disasters; etiology, pathogenesis and preventive measures of the most common diseases; modern classification of diseases; clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups; diagnostic methods, diagnostic capabilities of methods of direct examination of patients with therapeutic, surgical and infectious diseases, modern methods of clinical, laboratory and instrumental examination of patients (including endoscopic, radiological and ultrasound diagnostics); fundamentals of organizing medical (outpatient and inpatient) care for various population groups, principles of population medical examination, patient rehabilitation, fundamentals of organizing medical care for those involved in physical education; diagnostic criteria for various diseases; features of the organization and scope of work of an outpatient physician, modern diagnostic capabilities of the outpatient service, methods of conducting emergency measures, indications for planned hospitalization of patients; treatment methods and indications for their use; the mechanism of the therapeutic effect of exercise therapy and physiotherapy, indications and contraindications for their use, features of their implementation; clinical manifestations of the main surgical syndromes; types and methods of modern general anesthesia (mask, endotracheal, intravenous), ways and methods of preventing postoperative pulmonary complications, features of managing patients in a comatose state, intensive care for patients who have suffered a critical condition; features of organizing medical care during mass and sporting events, in emergency situations and disasters in peacetime and wartime; features of providing first aid and resuscitation measures to victims of road accidents, drowning, electrical injury, strangulation asphyxia, methods of restoring patency of the upper respiratory tract; clinical symptoms of injuries to the musculoskeletal system, chest, abdomen, pelvic cavity, head and cranial cavity; methods for determining the area of the burnt surface, features of applying contour bandages in burn disease and cold injury; organization of obstetric and gynecological care to the population, diagnosis of gynecological diseases, diagnosis of pregnancy, methods of pregnancy management and childbirth; types of inheritance of diseases and clinical manifestations of hereditary pathology, general characteristics of diseases with a hereditary predisposition, general principles and features of diagnostics of hereditary diseases, causes of origin and diagnostic significance of morphogenetic variants of diseases; congenital anomalies; pathogenesis of infectious diseases, their main clinical manifestations, main methods of laboratory and instrumental diagnostics used in infectology (indications for use, theoretical foundations of the method, interpretation of results); basic principles of treatment of infectious diseases and rehabilitation of patients, indications for hospitalization of an infectious patient, specific and non-specific prevention of infectious diseases; structure of the infectious service, indications for outpatient treatment of an infectious patient, transportation of an infectious patient to a hospital: rules of isolation during hospitalization of patients, sanitary and hygienic requirements for the arrangement, organization of work and regime of infectious hospitals,

departments, boxes; features of the organization of work with patients with HIV infection; the main clinical manifestations of skin diseases (scabies, pediculosis, dermatophytosis), HIV infection and sexually transmitted infections; organization of mass tuberculin diagnostics among the population, selection of patients for vaccination and revaccination with the tuberculosis vaccine (hereinafter referred to as BCG) taking into account the results of mass tuberculin diagnostics, vaccination reactions, possible post-vaccination complications; features of diagnosis, treatment (etiotropic and pathogenetic agents), rehabilitation of patients with tuberculosis; clinical and pharmacological characteristics of the main groups of drugs and rational choice of specific drugs in the treatment of the main pathological syndromes of diseases and emergency conditions in patients, including the basics of anti-doping legislation; the system of organizing the production of forensic medical examination in the Russian Federation; the rights, duties and responsibilities of a doctor involved in procedural actions as a specialist or expert, the main methods and techniques used in conducting a forensic medical examination; the social role of physical education in the development of the individual and his preparation for professional activity; principles of a healthy lifestyle; types of sanitary treatment of patients, types of fevers, features of observation and care of patients with diseases of various body systems; the main stages of the work of junior medical personnel; the main stages of the work of a ward nurse; the main stages of the work of procedural medical personnel; the main stages of the work of a doctor in a hospital of therapeutic, surgical and obstetricgynecological profile; the main stages of the work of a doctor in the primary health care link in an outpatient clinic.

A graduate who has mastered the basic educational program in the specialty "General Medicine" must **be able to**:

- competently and independently analyze and evaluate the social situation in Russia and abroad and carry out their activities taking into account the results of this analysis; navigate the current regulatory and legal acts on labor, apply labor legislation in specific practical situations; protect the civil rights of doctors and patients of different ages; use at least 900 terminological units and term elements; evaluate and determine their needs necessary for continuing education; build and maintain working relationships with other team members; analyze economic problems and social processes, be an active subject of economic activity; use educational, scientific, popular science literature, the Internet for professional activities; use physical, chemical and biological equipment; work with magnifying equipment (microscopes, optical and simple magnifying glasses); make calculations based on the results of an experiment, carry out elementary statistical processing of experimental data; classify chemical compounds based on their structural formulas;

predict the direction and result of physicochemical processes and chemical transformations of biologically important substances; perform thermochemical calculations necessary for compiling an energy menu, to study the basics of rational nutrition; use the IUPAC nomenclature to compose names based on the formulas of typical representatives of biologically important substances and drugs; analyze the effect of drugs based on the totality of their pharmacological properties

and the possibility of their use for therapeutic treatment; write prescriptions for drugs, use various dosage forms in the treatment of certain pathological conditions, based on the characteristics of their pharmacodynamics and pharmacokinetics; apply basic antibacterial, antiviral and biological drugs; assess possible manifestations of drug overdose and ways to eliminate them; give a histophysiological assessment of the state of various cellular, tissue and organ structures; palpate the main bone landmarks on a person, outline the topographic contours of organs and the main vascular and nerve trunks; explain the nature of deviations during development that can lead to the formation of variants of anomalies and defects; solve genetic problems; describe morphological changes in the studied macroscopic, microscopic preparations and electronograms; interpret the results of the most common methods of functional diagnostics used to identify pathologies of the blood, heart and blood vessels, lungs, kidneys, liver and other organs and systems; determine and evaluate the results of electrocardiography; spirography; thermometry; hematological parameters; distinguish normal values of metabolite levels (glucose, urea, bilirubin, uric acid, lactic and pyruvic acids, etc.) from pathologically changed ones in blood serum, read a proteinogram and explain the reasons for the differences; interpret the data of enzymological studies of blood serum; diagnose pathogens of human parasitic diseases on a preparation, slide, photograph; conduct microbiological and immunological diagnostics; analyze issues of general pathology and modern theoretical concepts and trends in medicine; substantiate the principles of pathogenetic therapy of the most common diseases; characterize and evaluate the levels of organization of the human immune system, evaluate the mediator role of cytokines; justify the need for clinical and immunological examination of the patient, interpret the results of the immune status assessment using level 1 tests; interpret the results of the main diagnostic allergy tests; justify the need for immunocorrective therapy; visually assess and record changes in the organs and tissues of the corpse, justify the nature of the pathological process and its clinical manifestations; provide an opinion on the cause of death and formulate a pathological diagnosis; fill out a medical death certificate; plan, analyze and evaluate the quality of medical care, the health of the population and the impact of environmental and industrial factors on it; participate in the organization and provision of medical, preventive and sanitary-anti-epidemic care to the population, taking into account its socio-professional (including professional sports) and age-gender structure; carry out preventive, hygienic and anti-epidemic measures; conduct an environmental assessment and environmental forecasting of human activities; determine the patient's status: collect anamnesis, interview the patient and/or his relatives, conduct a physical examination of the patient (inspection, palpation, auscultation, measurement of blood pressure, determination of arterial pulse properties, etc.); assess the patient's condition to decide on the need for medical care; conduct a primary examination of the systems and organs of the nervous, endocrine, immune, respiratory, cardiovascular, blood and hematopoietic organs, digestive, urinary, reproductive, musculoskeletal and joint systems, eyes, ears, throat, nose; set priorities for solving the patient's health problems: critical (terminal) condition, condition with pain syndrome, condition with a chronic disease, condition with an infectious disease, disability, geriatric

problems, condition of mentally ill patients; assess social factors influencing the patient's physical and psychological health: cultural, ethnic, religious, individual, family, social risk factors (unemployment, violence, illness and death of relatives, etc.); make a preliminary diagnosis - synthesize information about the patient in order to determine the pathology and the causes that cause it; outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result; determine the presence of a fracture and dislocation, free gas in the abdominal cavity, hydropneumothorax based on an Xray; select an individual type of care for treating a patient in accordance with the situation: primary care, emergency care, hospitalization; formulate a clinical diagnosis; develop a plan of therapeutic (surgical) actions, taking into account the course of the disease and its treatment; formulate indications for the selected method of treatment, taking into account etiotropic and pathogenetic agents, justify pharmacotherapy in a specific patient with the main pathological syndromes and emergency conditions, determine the route of administration, regimen and dose of drugs, evaluate the effectiveness and safety of the treatment; use various routes of administration of drugs; make a preliminary diagnosis - synthesize information about the patient in order to determine the pathology and the causes that cause it; outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result; use primary and secondary prevention methods (based on evidence-based medicine) in medical activities, establish cause-and-effect relationships between changes in health status due to exposure to environmental factors; conduct a physiological pregnancy; provide assistance during obstetrics; provide first aid in emergency conditions, first medical aid to victims in the affected areas in emergency situations; examine patients with various traumatic injuries, with purulent-septic conditions, identify life-threatening disorders during bleeding, apply transport splints, bandages and sling dressings, administer medications through drains and microirrigators, assess the suitability of blood and its products for transfusion, monitor hemodynamic and respiratory parameters; carry out resuscitation measures in the event of clinical death; before surgery and surgical manipulations, treat hands, the surgical field, put on a sterile surgical mask, put on or change sterile gloves, a sterile gown independently and with the help of a surgical nurse; to carry out activities with the population of the assigned area on primary and secondary prevention of the most common diseases requiring therapeutic or surgical treatment, to carry out preventive measures to increase the body's resistance to unfavorable environmental factors using various methods of physical education and sports, hardening, to promote a healthy lifestyle; to select individuals for BCG vaccination and revaccination taking into account the results of mass tuberculin diagnostics, assess the nature of the local vaccination reaction and possible post-vaccination complications; form high-risk groups for tuberculosis, assess the effectiveness of dispensary monitoring of patients; fill out a medical history, write a prescription; apply legal and medical aspects of establishing a person's death, certify biological and clinical death, conduct an examination of a corpse at the place of its discovery, identify material evidence of biological origin and organize their referral for examination; conduct a forensic medical examination of living persons and

interpret the results of laboratory tests of forensic medical examination objects; understand issues of physical education used for the purposes of prevention and treatment; perform sanitary treatment of a patient upon admission to the hospital and during his stay in the hospital, change the patient's underwear and bed linen, treat bedsores; care for patients of different ages suffering from diseases of various organs and systems, and transport them; measure body temperature, daily diuresis, collect biological material from patients for laboratory tests; feed patients; perform anthropometry, various types of enemas, disinfect and pre-sterilize medical instruments, materials and patient care products; perform manipulations to care for patients - ward nurse assistant (after the 2nd year); perform manipulations of a ward nurse - procedural nurse (after the 3rd course); perform manipulations of a procedural nurse - physician's assistant (after the 4th year); examine patients with the most common therapeutic, surgical and obstetric-gynecological diseases; evaluate the data of examination and questioning of the patient; formulate a preliminary diagnosis; draw up an examination plan; give a short-term and longterm prognosis, recommendations for treatment; treat patients under the supervision of a physician; correctly complete medical documentation; participate in the reception of physiological births and perform primary treatment of newborns - physician's assistant of an outpatient clinic (after the 5th year); provide medical and preventive care to the population in a clinic; provide emergency care to patients at the pre-hospital stage.

A graduate who has mastered the basic educational program in the specialty "General Medicine" must **possess**:

- the skills of presenting an independent point of view, analysis and logical thinking, public speaking, moral and ethical argumentation, conducting discussions and round tables, the principles of medical deontology and medical ethics; the skills of reading and writing clinical and pharmaceutical terms and prescriptions in Latin; the skills of informing patients and their relatives in accordance with the requirements of the "informed consent" rules; a foreign language to the extent necessary for the possibility of communication and obtaining information from foreign sources; basic information transformation technologies: text, spreadsheet editors, Internet search; the concept of limitations in reliability and the specifics of the most common laboratory tests; medical and anatomical conceptual apparatus; skills of microscopy and analysis of histological preparations and electron the simplest medical instruments (phonendoscope, micrographs; neurological hammer, scalpel, tweezers, probe, clamp, dilator, etc.); skills in making a preliminary diagnosis based on the results of biochemical studies of human biological fluids; skill in comparing morphological and clinical manifestations of diseases; methods of studying heredity in humans (cytogenetic method, genealogical method, twin method); algorithm for making a preliminary immunological diagnosis with subsequent referral to an allergist-immunologist; the basics of medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening conditions with immune disorders; skills in the use of drugs in the treatment, rehabilitation and prevention of various diseases and pathological conditions; methods of clinical and anatomical analysis of autopsy, examination of biopsy and surgical material; correct maintenance of medical records; assessments of the state of public health; methods of general clinical examination; interpretation of the results of laboratory and instrumental diagnostic methods; algorithm of a detailed clinical diagnosis; algorithm of a preliminary diagnosis with subsequent referral of the patient to the appropriate medical specialist; consolidating indicators characterizing the degree of development of the health care economy, methods of calculating medical statistics indicators; basic medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening conditions; the social role of physical culture in the development of the individual and his preparation for professional activity; principles of a healthy lifestyle; methods of physical self-improvement and self-education; skills of caring for patients taking into account their age, nature and severity of the disease including seriously ill and dying patients.

4. STAGES AND PROCEDURE OF STATE FINAL ATTESTATION

The state exam in the specialty 31.05.01 General Medicine (qualification: general practitioner) is conducted in stages and includes the following mandatory certification tests:

- checking the level of mastery of practical skills;
- checking the level of theoretical preparedness by means of test control;
- final interview.

The program of the state final certification is communicated to students no later than six months before the start of the state final certification.

Practical skills are assessed at the specialized departments of the faculty according to the list of manual skills of the student. The result is expressed as "passed" or "failed".

The level of theoretical preparation is checked by means of a test exam using a bank of tests provided by the Ministry of Education and Science of the Russian Federation. The result is expressed as "passed" or "failed".

The final interview is conducted using tickets that include situational tasks. When preparing for an oral answer, students make the necessary notes for each question on sheets of paper issued by the secretary of the examination committee. The first student is given up to 60 minutes to prepare for the answer, the rest of the students answer in order of priority. No more than 30 minutes are allocated for the student's answer on the ticket and questions from the commission members. The results of the state final certification are summarized at open meetings of the certification commissions with the participation of at least 2/3 of their members.

5. RECOMMENDATIONS FOR PREPARING FOR THE STATE EXAM

Independent preparation for the state exam in general professional and special disciplines includes both repetition at a higher level of the blocks and sections of the state educational program obtained in the process of professional training, submitted for the exam, and deepening, consolidation and self-testing of acquired and existing knowledge.

To master the list of practical skills, students need to undergo training based on the simulation and training complex.

To prepare for computer testing, students should use the test tasks presented on the distance education portal in training mode. The bank of test tasks is 1000 questions formulated for all disciplines of the specialty.

To conduct rehearsal testing in online mode, a bank of test tasks for graduates in all specialties "Tests for the state final attestation" is open on the distance education portal. Three tests are provided, once a week. Upon completion of testing, the graduate is advised to review the protocol to familiarize himself with the test results. To prepare for the final interview, the student is asked to use the list of questions presented in the Program and situational tasks developed on the basis of the material studied.

6. STATE EXAM PROGRAM

6.1 State examination program in clinical disciplines Internal diseases

Community-acquired pneumonia: definition, etiology, pathogenesis,

clinic, diagnostic criteria, differential diagnosis, complications and outcomes. Treatment. Approach to empirical antibacterial therapy. Prevention.

Hospital pneumonia: definition, etiology, pathogenesis, clinical presentation, diagnostic criteria, differential diagnosis, complications and outcomes. Treatment. Approach to empirical antibacterial therapy.

COPD: definition, etiology, pathogenesis, classification, clinical manifestations, diagnostic criteria, differential diagnosis, course, complications, comorbid conditions and outcomes. Treatment. Prevention. Dispensary examination.

Bronchial asthma: etiology, pathogenesis. Mechanisms of formation and development of bronchial asthma. Classification. Clinical picture of an attack of bronchial asthma and asthmatic status. Criteria for the diagnosis of bronchial asthma, differential diagnostics. The concept of bronchial asthma control. Basic and symptomatic therapy. Prevention. Clinical examination.

Treatment measures during an attack of bronchial asthma. Bronchiectatic disease: definition of the concept, etiology, pathogenesis, clinical and radiological manifestations, criteria for diagnosis. Treatment tactics.

Differential diagnostics of lung diseases accompanied by the appearance of dry and wet wheezing.

Differential diagnostics of diseases accompanied by dyspnea.

Atherosclerosis: definition of the concept, contribution of domestic scientists to understanding the etiology and pathogenesis of the disease, clinical manifestations, criteria for diagnosis. The main complications of atherosclerosis and their manifestations. Non-drug methods of prevention. Therapy of lipid metabolism disorders.

Ischemic heart disease: definition of the concept, classification, diagnostic methods. Stable angina: classification, clinical and electrocardiographic manifestations, verification of myocardial ischemia, criteria for diagnosis, differential diagnosis, course and outcomes, treatment. Prevention. Clinical examination.

Treatment of stable angina. Physician's tactics during an attack of chest pain in a patient.

Acute coronary syndrome: definition of the concept, classification, clinical and electrocardiographic manifestations, differential diagnosis, course and outcomes. Treatment tactics at the prehospital and hospital stages. Clinical examination of patients with coronary heart disease after myocardial revascularization.

Myocardial infarction: definition, classification, clinical and electrocardiographic manifestations depending on the localization and stage of the process, course and outcomes. Treatment tactics. Rehabilitation of patients who have had myocardial infarction.

Differential diagnostics of diseases accompanied by pain in the heart.

Complications of myocardial infarction in the acute period of the disease: mechanisms, development, clinical and instrumental manifestations. Diagnostics. Course and outcomes. Treatment tactics.

Hypertension (essential arterial hypertension): definition of the concept, contribution of Russian scientists to the study of the disease. Classification, clinical manifestations, criteria for diagnosis, differential diagnosis, course, complications and outcomes. Target blood pressure levels. Principles of therapy. Treatment. Prevention. Clinical examination.

Differential diagnostics of diseases accompanied by arterial hypertension.

Emergency care for hypertensive crises.

Myocarditis: etiology, pathogenesis, classification, clinical and electrocardiographic manifestations, criteria for diagnosis, differential diagnosis, course and outcomes. Treatment tactics.

Clinical examination.

Acute rheumatic fever: definition, etiology, pathogenesis, clinical forms and manifestations, diagnostics and therapy, consequences of previous ARF, prevention. Clinical examination.

Infective endocarditis. Definition, etiology, pathogenesis, Clinic. Criteria for diagnosis, differential diagnosis, course, complications and outcomes. Treatment tactics. Prevention. Clinical examination.

Valvular heart disease. Mitral valve insufficiency: causes and mechanisms of development, clinical forms and manifestations, criteria for diagnosis. Treatment algorithms. Clinical examination.

Valvular heart disease. Mitral orifice stenosis: causes and mechanisms of development, clinical forms and manifestations, criteria for diagnosis. Mechanism of heart failure development. Treatment methods. Clinical examination.

Valvular heart disease. Aortic valve insufficiency: causes and mechanisms of development, clinical forms and manifestations, criteria for diagnosis. Prevention of circulatory failure. Clinical examination.

Valvular heart disease. Aortic stenosis: causes, clinical forms and manifestations, mechanisms of heart failure development. Treatment methods. Clinical examination.

Heart rhythm disorders: extrasystole, classification, etiology, differential ECG diagnostics.

Atrial fibrillation, epidemiology, etiology, pathogenesis, classification, main approaches to the treatment of AF and prevention of complications. Clinical examination.

Emergency care and management of patients with "life-threatening" arrhythmias. The concept of chronic heart failure. Etiology.

Pathogenetic mechanisms. Classification. Diagnostics. Differentiated therapy of chronic heart failure. Clinical examination.

Systemic lupus erythematosus: definition, etiology, pathogenesis, clinical form and manifestations, criteria for diagnosis, differential diagnosis, course and outcomes. Treatment. Clinical examination. Rheumatoid arthritis: definition, etiology, pathogenesis. The role of immune mechanisms in the development and progression of the disease. Classification. Clinical manifestations, criteria for diagnosis, differential diagnosis, course and outcomes. Treatment. Clinical examination.

Differential diagnostics of diseases accompanied by joint syndrome (arthritis, gout, SLE).

Chronic gastritis: definition, etiology, pathogenesis. Diagnostic criteria. Treatment. Clinical examination.

Functional dyspepsia: definition, etiopathogenesis, clinical syndromes. Diagnostic algorithm. Treatment. Clinical examination.

Gastroesophageal reflux disease: definition of the concept, etiology, pathogenesis, classification, clinical manifestations, diagnostic criteria, differential diagnosis, course, outcomes. Treatment. Prevention. Clinical examination.

Peptic ulcer of the stomach and duodenum: modern concepts of the mechanisms of disease development, diagnostic methods, differential diagnosis, course and outcomes. Treatment. Prevention. Clinical examination. Indications for spa treatment.

Differential diagnostics of complications of peptic ulcer of the stomach and duodenum.

Diseases of the operated stomach: mechanisms of development, clinical forms and manifestations, criteria for diagnosis, differential diagnosis, course and outcomes. Treatment. Indications for spa treatment.

Chronic cholecystitis and cholangitis: definition of concepts, etiology, pathogenesis, clinical forms and manifestations, diagnostic methods, course, complications and outcomes. Treatment. Indications for surgical treatment. Prevention. Clinical examination. Principles of referral to spa treatment.

Chronic pancreatitis: definition of the concept, etiology, pathogenesis, classification, clinical forms and manifestations, criteria for diagnosis, differential diagnosis, course, outcomes. Treatment. Prevention. Clinical examination.

Liver cirrhosis. Definition, variants. Modern classification, etiology, pathogenesis, clinical picture. Criteria for diagnosis and principles of treatment of liver cirrhosis. Complications of liver cirrhosis. Clinic. Principles of treatment.

Hepatomegaly: causes and mechanisms of development. Differential diagnostics of diseases occurring with dense lumpy liver.

Management of patients with chronic liver failure. Inflammatory bowel diseases (UC, Crohn's disease):

definition of the concept, etiology, pathogenesis, classification, clinical manifestations, diagnostic criteria, differential diagnosis, course, outcomes, complications. Treatment. Clinical examination.

Constipation: mechanisms of development. Differential diagnostics of diseases accompanied by constipation.

Acute poststreptococcal glomerulonephritis: etiology, pathogenesis, classification, clinical forms of the disease, diagnostic criteria, differential diagnosis. Treatment. Complications, outcomes. Clinical examination.

Chronic glomerulonephritis: etiology, pathogenesis, classification, clinical and morphological forms, diagnostic criteria, differential diagnosis, complications and outcomes. Treatment. Prevention. Clinical examination.

Chronic pyelonephritis. Definition. Etiology. Classification. Pathogenesis. Clinic. Peculiarities of pyelonephritis development in men and women. Laboratory and instrumental diagnostics. Differential diagnosis. Treatment. Prevention.

Differential diagnostics of kidney diseases occurring with urinary syndrome.

Chronic kidney disease and renal failure: definition of concepts. Uremic toxins. Classifications. Main clinical syndromes. Principles of conservative therapy. Indications for renal replacement therapy. Prevention. Dispensarization.

Primary medical and sanitary care for pregnant women in a polyclinic.

Iron deficiency anemia: definition of the concept, etiology, pathogenesis, clinical forms and manifestations, criteria for establishing a diagnosis, differential diagnosis, course and outcomes. Treatment.

B12-deficiency and folate deficiency anemia: definition, causes of deficiency, classification, clinical manifestations, diagnostic criteria, differential diagnosis of macrocytic anemias. Treatment.

Idiopathic thrombocytopenic purpura: definition, etiology, pathogenesis, clinical manifestations, diagnostic criteria, differential diagnosis, course, complications and outcomes. Treatment.

Acute myeloid leukemia: definition, etiology, pathogenesis, variants according to the WHO classification, diagnostic criteria, differential diagnosis. Concomitant treatment and principles of organizing cytostatic therapy.

Chronic bcr abl + myeloid leukemia: definition, etiology, pathogenesis, disease stages, diagnostic criteria, differential diagnosis with other myeloproliferative diseases. Treatment.

Chronic B-cell lymphocytic leukemia: definition, etiology, pathogenesis, disease stages, diagnostic criteria, differential diagnosis with other lymphomas. Treatment.

Lymphomas: definition, WHO classification, disease stages, role of immunological methods in lymphoma diagnostics. Treatment principles.

Endogenous hypercorticism: definition, etiology, pathogenesis, clinical forms and manifestations, diagnostic criteria, differential diagnosis, course and outcomes. Treatment.

Diffuse toxic goiter: definition, etiology, pathogenesis, classification, clinical manifestations, diagnostic criteria, differential diagnosis, course and outcomes. Treatment.

Hypothyroidism: definition, classification, etiology, pathogenesis, clinical manifestations, diagnostic criteria, differential diagnosis, course, outcomes and complications. Treatment. Obesity: definition, etiology, pathogenesis, clinical forms and manifestations, diagnostic criteria, differential diagnosis, course, complications and outcomes. Concept of metabolic syndrome. Treatment. Prevention.

Type 1 diabetes mellitus: definition, etiology, pathogenesis, clinical forms and manifestations, diagnostic criteria, differential diagnosis, course, complications and outcomes. Treatment. Prevention. Clinical examination.

Type 2 diabetes mellitus: definition, etiology, pathogenesis, clinical forms and manifestations, diagnostic criteria, differential diagnosis, course, complications and outcomes. Treatment. Prevention. Clinical examination.

Chronic adrenal insufficiency (Addison's disease): definition, etiology, pathogenesis, clinical forms and manifestations, diagnostic criteria, differential diagnosis, course, complications and outcomes. Treatment.

Stages of the examination of temporary loss and permanent loss of working capacity: terms, documents, organs.

Registration of documents for temporary disability. Registration of documents for spa treatment.

Registration of documents for medical and social examination.

Registration of documents for medical examination, when referring for examinations, consultation, hospitalization, high-tech medical care.

Infectious diseases:

Differential diagnostics of infectious diseases occurring with fever (typhoid and typhus, paratyphoid, malaria, HIV infection, sepsis, hemorrhagic fever with renal syndrome, leptospirosis). The concept of "fever of unknown genesis". Rules for examining a febrile patient.

Differential diagnostics of infectious diseases occurring with jaundice (viral hepatitis, leptospirosis, yersiniosis, malaria, mononucleosis, generalized salmonellosis, sepsis, opisthorchiasis, amebiasis). Algorithm for examining a patient with jaundice syndrome.

Differential diagnostics of infectious diseases accompanied by diarrhea (salmonellosis, PTI, dysentery, cholera, yersiniosis, pseudotuberculosis, amebiasis, helminthiasis, botulism). Examination of the patient and approaches to therapy. Differential diagnostics of infectious diseases accompanied by tonsillar syndrome (tonsillitis, diphtheria, mononucleosis, adenovirus infection, tularemia). Early diagnostics of diphtheria. Physician's tactics in relation to a patient with tonsillitis. Features of diagnostics of infectious mononucleosis.

Differential diagnostics of infectious diseases accompanied by meningeal syndrome (meningococcal infection, serous, secondary purulent and tuberculous meningitis). Meningococcal infection, early diagnostic signs.

Differential diagnostics of infectious diseases with exanthema (typhoid and typhus, paratyphoid A and B, measles, rubella, chickenpox, scarlet fever,

meningococcal sepsis). Features of skin lesions in erysipelas and anthrax. Physician's tactics.

Differential diagnostics of infectious diseases with lymphadenopathy (tularemia, plague, infectious mononucleosis, HIV infection). Endogenous infections. Physician's tactics.

Acute respiratory diseases. Group composition. Differential diagnostics. Outpatient treatment. Complications.

Influenza. Clinical classification. Early diagnostics of hypertoxic form variants. Indications for hospitalization. Home treatment.

Viral hepatitis: clinical and laboratory diagnostics. Outcomes.

Physician's tactics.

HIV infection. Classification. Clinical syndromes. Early diagnostics. Possibilities of diagnosis confirmation.

Particularly dangerous infections (cholera, plague, anthrax). Clinical and epidemiological diagnostic criteria. Causes, pathogenesis, manifestations, emergency measures in emergency conditions in the clinic of infectious diseases:

- infectious toxic shock
- dehydration shock
- acute renal injury
- acute liver failure
- acute respiratory failure.

Surgical diseases:

Purulent-inflammatory diseases of the subcutaneous tissue: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Tactics.

Osteomyelitis: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Tactics.

Thyroid diseases: indications for surgical treatment, types of surgical interventions, clinical examination of patients after surgery.

Hormone-producing tumors of the pancreas and adrenal glands: surgical treatment, clinical examination of patients after surgery.

Purulent-inflammatory diseases of the lungs and pleura - abscess, pulmonary gangrene, bronchiectasis, pyothorax and pleural empyema: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Complex treatment.

Chest injuries: differential diagnosis, course, outcomes. Emergency care, indications for surgery and types of surgical treatment.

Bronchopulmonary hemorrhages: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Hemorrhagic shock. Indications for surgery and types of surgical treatment. Blood transfusions.

External and internal abdominal hernias: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Indications for surgery and types of surgical treatment.

Surgical course of esophageal diseases - stenosis, diverticulum: indications for surgery and types of surgical treatment. Gastrointestinal bleeding: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Hemorrhagic shock. Indications for surgery and types of surgical treatment. Blood transfusions.

Peptic ulcer of the stomach and duodenum: complications, their differential

diagnosis, indications for surgery and types of surgical treatment, clinical examination of patients after surgery.

Acute appendicitis: etiology, pathogenesis, classification, differential diagnosis, course, complications, surgical treatment.

Acute intestinal obstruction: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Indications for surgery, types of surgical treatment.

Diseases of the large intestine - Crohn's disease, nonspecific ulcerative colitis, diverticulum, hemorrhoids: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Indications for surgery, clinical examination of patients after surgery.

Acute cholecystitis, acute cholangitis and their complications: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Indications for surgery, types of surgical treatment.

Portal hypertension and its complications: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Indications for surgery, types of surgical treatment.

Chronic venous diseases of the lower extremities: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Indications for surgery, types of surgical treatment.

Acute pancreatitis, pancreatic necrosis and its complications: etiology, pathogenesis, classification, diagnostic criteria, differential diagnosis, course, outcomes. Tactics.

Peritonitis: etiology, pathogenesis, classification, differential diagnosis, course, outcomes. Complex treatment.

Trauma of abdominal organs: differential diagnosis, course, outcomes. Emergency care, indications for surgery and types of surgical treatment.

Congenital heart defects: etiology, classification, differential diagnosis. Indications for surgery and types of surgical treatment, clinical examination of patients after surgery.

Acquired heart defects: etiology, classification, differential diagnosis. Indications for surgery and types of surgical treatment, clinical examination of patients after surgery.

Surgical treatment of ischemic heart disease: indications, types, clinical examination of patients after surgery.

Surgical treatment of arrhythmias: indications, types of interventions, clinical examination of patients after surgery.

Pericardial diseases: classification, etiology, differential diagnosis, differential diagnosis, course and outcomes. Management tactics.

Venous thrombosis, pulmonary embolism: etiology, classification, clinical features, differential diagnosis. Anticoagulant therapy. Indications for thrombolytic therapy and surgical treatment. Prevention.

Thrombosis and embolism of the main arteries: etiology, classification, clinical features, differential diagnosis. Indications for surgery and types of surgical treatment.

Obliterating diseases of the arteries of the lower extremities: etiology, pathogenesis, classification, clinical features, differential diagnosis. Indications for

surgery and types of surgical treatment, clinical examination of patients after surgery.

Anesthesiology, resuscitation and emergency medical care:

Acute cardiovascular failure: etiology, pathogenesis, clinical variants, diagnostics, emergency care, intensive care.

Acute respiratory failure: etiology, pathogenesis, severity assessment and diagnosis, clinical variants, emergency care, intensive care.

Multiple organ dysfunction syndrome: etiology, pathogenesis, clinical variants, severity assessment, emergency care, intensive care.

Sepsis and septic shock: etiology, pathogenesis, diagnosis and severity assessment, clinical variants, emergency care, intensive care.

Pulmonary embolism (PE): etiology, pathogenesis, clinical variants, diagnosis, emergency care, intensive care.

Primary (cerebral) and secondary (extracerebral) comas: etiology, pathogenesis, diagnosis and severity assessment, clinical variants, emergency care, intensive care.

Life-threatening cardiac arrhythmias: etiopathogenesis, diagnosis, emergency care, intensive care.

Anaphylactic shock: etiopathogenesis, diagnostics, emergency care, intensive care.

Traumatic and hemorrhagic shock: etiology, pathogenesis, diagnostics and assessment of severity, clinical variants, emergency care, intensive care.

Tuberculosis:

Detection of tuberculosis by general practitioners; Prevention of tuberculosis;

Assessment of the Mantoux test with 2 TE PPD-L and Diaskintest;

Characteristics of the course of primary tuberculosis in adolescents and adults:

Disseminated tuberculosis; Focal tuberculosis; Infiltrative tuberculosis; Caseous pneumonia;

Tuberculomas; Cavernous tuberculosis;

Fibro-cavernous tuberculosis; Cirrhotic tuberculosis; Tuberculous pleurisy;

Complications of pulmonary tuberculosis (spontaneous pneumothorax, pulmonary hemorrhage).

Pediatrics:

Feeding children in the first year of life (natural, artificial). Advantages of breastfeeding. Composition of breast milk. Recommendations for supporting breastfeeding. Criteria for successful breastfeeding. Artificial feeding. Types of mixtures and principles of their appointment.

Complementary feeding. Types of complementary feeding. Principles of prescribing complementary feeding.

Physical development and neuropsychic development of children in the first year of life. Weight and height indicators of children in the first year of life in norm and in pathology. Parametric and non-parametric methods for assessing physical development. Factors affecting the physical development of children.

Protein-energy malnutrition. Etiopathogenesis. Classification. Clinical and

laboratory criteria for the diagnosis of PEM. Principles of therapy. Treatment. Therapeutic mixtures.

Diseases accompanied by malabsorption syndrome (cystic fibrosis, celiac disease, lactase deficiency).

Newborn child. AFO of organs and systems of the newborn. Peculiarities of examination of the newborn in the delivery room and after discharge from the maternity hospital. Apgar scale. Transitional states of the newborn. Principles of newborn care.

Pathological conditions in the neonatal period. Asphyxia of the newborn. Clinical and laboratory diagnostic criteria. Resuscitation principles. Perinatal CNS damage. Clinical and laboratory criteria. Birth injury. Causes. Classification. Diagnostic criteria. Correction principles. Jaundice of the newborn. Causes. Differential diagnostics. Hemolytic disease of the newborn. Etiopathogenesis. Clinical and laboratory diagnostic criteria. Treatment principles.

Rickets. Risk factors. Pathogenesis of rickets. Classification. Criteria for laboratory and instrumental diagnostics. Bone changes in rickets. (Ro-grams). Prevention and treatment of rickets in children.

Iron deficiency anemia. Classification of anemias. Diagnostic criteria for clinical variants of iron deficiency. Treatment principles and prevention.

Atopic dermatitis. Risk factors. The role of heredity and food allergy. Triggers. Pathogenesis. Diagnostic criteria for AD manifestations. Clinical forms. SCORAD scale. Functional tests. Treatment principles. Diet therapy.

Pneumonia in children. Definition and classification. Etiology and course options depending on age. Pathogenesis. Clinical presentation and diagnostic methods. Differential diagnostics. Treatment choice.

Bronchial asthma. Risk factors. The mechanism of bronchial asthma development. Classification. Diagnostic methods, therapy, exacerbation therapy.

Congenital heart defects. Classification. Defects with left-right shunting "pale" - PDA, ASD, VSD. Right-to-left shunt defects ("blue"): tetralogy of Fallot, hypoplastic left heart syndrome, TMS, Eisenmenger syndrome. Hemodynamic features. Clinic. Diagnostic methods. Complications. Therapy principles.

Acute rheumatic fever in children. Etiology. Pathogenesis. Diagnostic criteria. Classification. Clinic. Treatment features.

Carditis in children. Etiology. Pathogenesis. Classification. Clinical variants. Differential diagnostics. Diagnostics. Treatment.

Blood system pathology in children: Hemolytic anemia (hereditary spherocytosis), hemoglobinopathies (sickle cell anemia, thalassemia). Hemorrhagic syndromes in pediatrics: Coagulopathies (hemophilia). Immune thrombocytopenia. Etiology. Pathogenesis. Clinic. Diagnostics. Therapy principles.

Functional disorders of the gastrointestinal tract in young children. Regurgitation and vomiting syndrome. Intestinal colic. Causes. Diagnostics. Treatment. Diet therapy. Causes.

Acid-dependent diseases in children: Chronic gastroduodenitis, Gastric ulcer and duodenal ulcer, GERD. Clinical and diagnostic criteria. Therapy principles

Thyroid pathology: congenital hypothyroidism, clinical and diagnostic criteria. Treatment. Hyperthyroidism: clinical and diagnostic criteria,

complications. Therapy principles.

Adrenal pathology: congenital dysfunction of the adrenal cortex. Causes. Classification. Diagnostic criteria. Therapy principles. Chronic adrenal insufficiency. Causes. Classification. Diagnostic criteria. Therapy principles. Prevention and treatment of acute adrenal insufficiency.

Pathology of the urinary system in children. Urinary tract infection: acute pyelonephritis, acute cystitis. Causes. Clinical and diagnostic criteria. Differential diagnosis. Treatment.

Glomerulonephritis in children. Acute poststreptococcal glomerulonephritis. Etiopathogenesis. Clinical picture. Diagnostics. Therapy principles.

Nephrotic syndrome. Definition. Clinical and morphological variants. Etiopathogenesis. Clinical and laboratory criteria. Therapy.

Intrauterine infections. General symptoms of intrauterine infections. Clinical features. Differential diagnostics. Laboratory diagnostic principles. Treatment options.

Acute respiratory viral infections. Causes. Clinical features and conditions associated with ARVI. Diagnostic and therapeutic principles.

Acute conditions requiring emergency care: acute laryngotracheitis, broncho-obstructive syndrome

Obstetrics and gynecology:

Signs of pregnancy. Diagnosis of early pregnancy. Methods of examination of pregnant women in antenatal clinics. Course and management of physiological pregnancy.

Management of pregnant women with increased risk in antenatal clinics. Diagnostics of late pregnancy. Determining the duration of prenatal leave. Medical examination of pregnant women.

The concept of "major obstetric syndrome": Preeclampsia, etiology, pathogenesis, clinical picture, diagnostics, principles of therapy, prevention.

Extragenital pathology and pregnancy: diabetes mellitus, kidney disease, cardiovascular disease.

Isoserological incompatibility of maternal and fetal blood. Obstetric hemorrhages.

Clinic of normal labor. Acute abdomen in gynecology.

6.2 List of graduate skills

General medical skills:

Collection and assessment of anamnesis: social, biological, genealogical. Anthropometric examination of the patient:

- measuring body weight and height, chest circumference, head circumference;
- assessing the patient's physical development based on the use of anthropometric standards and indices. Calculating the body mass index;

Psychometric examination and assessment of the patient's neuropsychic development (condition).

Conducting and assessing the results of functional stress tests.

Measuring and assessing the patient's blood pressure, heart rate, pulse and respiratory rate.

Determining the patient's health group based on a comprehensive assessment of the patient's health.

Clinical examination of a healthy and sick patient: inspection, palpation, percussion, auscultation.

Preparing documents for temporary disability. Preparing documents for spa treatment.

Preparing documents for medical and social examination.

Preparation of documents for medical examination, referral for examination, consultation, hospitalization, high-tech medical care.

Writing and issuing prescriptions, including discounted ones, for narcotic and equivalent drugs.

Drawing up a plan and conducting health education work. Conducting an analysis of the performance indicators of doctors and medical and preventive institutions.

Collection of material for laboratory tests for somatic and infectious pathology in a patient: blood, urine, feces, nasal secretions, bone marrow, cerebrospinal fluid.

Evaluation of test results:

- general blood test, sputum test, general urine tests, according to Nechiporenko, Addis-Kakovsky, Zimnitsky test, coprogram;
 - biochemical blood tests for somatic and infectious diseases:
- acute phase inflammatory tests (total protein, protein fractions, fibrinogen, haptoglobin, ceruloplasmin, C-reactive protein);
- renal complex (total protein, protein fractions, total cholesterol, triglycerides, urea, creatinine, estimated glomerular filtration rate, electrolytes potassium, calcium, phosphorus, sodium, chlorine);
- liver complex (total protein, protein fractions, total cholesterol, triglycerides, total bilirubin, its fractions, thymol test, ALT, AST, alkaline phosphatase, GGT);
 - acid-base and gas state of the blood;
- fasting blood glucose and 2 hours after a meal, urine glucose and acetone, blood and urine amylase;
- indicators of the coagulation and anticoagulation systems of the blood: coagulation time, bleeding time, APTT, AVR, antithrombin III, prothrombin time, INR.
 - serological marker spectrum in patients with viral hepatitis A, B, C, D;

- studies of the immune status and specific antibodies in various forms of autoimmune diseases in the patient;
- studies of the immune status and specific antibodies in various forms of infectious diseases in the patient;
- studies of serum markers in rubella, HIV infection, CMV infection, toxoplasmosis, infectious mononucleosis, etc.;
 - Mantoux test with 2 TE, Diaskintest

Determination of blood group according to the ABO and Rh systems. Performing a test for:

- individual compatibility of donor and patient blood;
- suitability of blood, blood substitutes, other solutions for transfusion.

Preparation of the patient for X-ray and ultrasound examination of the gastrointestinal tract, urinary system; for endoscopic examination of the gastrointestinal tract and respiratory organs.

Evaluation of the results of instrumental research methods:

- spirometry;
- X-ray examination;
- electrocardiographic examination;
- ultrasound scanning;
- multispiral computed tomography and magnetic resonance imaging;
- tracheobronchoscopy and bronchography, esophagogastroduodenoscopy, colonoscopy;
- lumbar, sternal, pleural punctures, laparocentesis and trephine biopsy, puncture of the lymph node and spleen.

Performing a digital rectal examination. Performing postural bronchial drainage.

Performing an external obstetric examination; auscultation of the fetal heartbeat; pelvic measurement; vaginal examination; examination of the placenta;

Determining the estimated weight of the fetus; gestational age and delivery; risk group in the pregnant woman; the term of maternity leave; signs of placental separation; acceptable blood loss during childbirth.

Drawing up a pregnancy and childbirth management plan;

Assessment of the newborn on the Apgar scale, assessment of the results of modern methods of prenatal diagnostics (CTG, ultrasound, DG MPPK).

Providing emergency care during childbirth in a typical case.

Conducting an objective examination of gynecological patients: examination of the cervix in mirrors, bimanual examination, taking a smear for bacterioscopic and oncocytological examination.

Evaluation of the results of instrumental and laboratory research methods in gynecology: functional diagnostic tests, ultrasound, X-ray examination; histological examination of cervical biopsy and endometrial scrapings; blood hormone studies.

Determination of the pupil's reaction to light.

Evaluation of pathological changes revealed during the patient examination and formulation of a preliminary diagnosis.

Justification of etiological, pathogenetic and syndrome-based therapy for various pathological conditions in patients.

Treatment of the oral cavity, ears, nose. Eye rinsing. Removal of a foreign body:

- from the conjunctiva;
- from the external auditory canal, from the nasal cavity;
- from the oral cavity.

Treatment of eyes in case of burns.

Carrying out anterior tamponade in case of nosebleed. Stopping external bleeding by:

- digital pressure on the vessel;
- applying a pressure bandage;
- applying a tourniquet.

Determining pulsation on the main arteries.

Gastric lavage. Setting up cleansing, siphon and medicinal enemas.

Evacuation of contents from the upper respiratory tract (using electric and mechanical suction).

Application of a colostomy bag. Treatment of bedsores.

Performing injections of drugs (intramuscularly, subcutaneously, intradermally, intravenously), calculating doses and dilutions of drugs.

Preparing a system for intravenous infusion and performing intravenous transfusion of fluids.

Installing an air duct.

Preparing a set of instruments, materials, medications and performing primary surgical treatment of the wound.

Dressing of clean and purulent wounds. Application of bactericidal dressings. Application of dressings to all areas of the body. Use of an individual dressing package.

Application of an elastic bandage to the lower limb in case of venous pathology.

Performing immobilization in case of dislocations and fractures of the upper and lower limbs using: improvised means, transport splints.

Determining the correct application of a plaster splint.

Performing indirect cardiac massage. Demonstrating the technique of working with a defibrillator. Performing artificial ventilation using the mouth-to-mouth, mouth-to-nose, Ambu bag.

Providing emergency care for:

- burns, frostbite and electrical injury;
- poisoning and intoxication;
- acute coronary syndrome;
- pulmonary edema;
- "life-threatening" arrhythmias;
- esophageal burns;
- acute dehydration;
- shock of various origins;
- hyperthermia;
- acute cerebrovascular accident;

- - hypertensive crises;
- - cerebral edema;
- - convulsive syndrome:
- - disseminated intravascular coagulation;
- - fainting, collapse;
- - sunstroke and heatstroke; drowning;
- - acute allergic reactions;
- - asthma attack;
- - diabetic comas:
- - biliary colic attack;
- - renal colic attack;
- - acute intestinal and respiratory infections;
- - animal, snake and insect bites.

7 EDUCATIONAL AND METHODOLOGICAL MATERIALS

7.1 List of visual aids

Illustrative materials for the State Interdisciplinary Examination in the specialty "General Medicine" (recommended by the Ministry of Health and Social Development of the Russian Federation), including:

7.1.1 Slides

Sets:

Infectious and parasitic diseases (15) Diseases of the hematopoietic system (5)

Diseases of the endocrine system (5) Diseases of the respiratory system (10)

Diseases of the cardiovascular system (12) Diseases of the digestive system (8)

Diseases of the musculoskeletal system (12) Obstetrics and gynecology (15) Surgical diseases (15)

Injuries (15)

7.1.2 Educational radiographs/MSCT data and MRI

«Lung diseases»

«Heart diseases»

«Vascular diseases»

«Gastrointestinal diseases»

«Urinary tract diseases»

«Diseases of the musculoskeletal system»

«Injuries»

Blood, urine, sputum, stool tests, biochemical and immunological blood tests, myelograms, immunochemical blood tests, spirograms, ECG, ABPM, EchoDCG, etc.

7.1.3 Set of instruments, dummies

Phonendoscopes, tonometers, peak flow meter, nebulizer, spirograph, ECG machine.

7.1.4 Videos

«Atherosclerosis, instrumental diagnostics»

«Correction of dyslipidemia»

«Examination of a patient with respiratory pathology»

«COPD. Diagnostics and treatment"

"Inhalation therapy"

- "COPD therapy"
- "Examination of a patient with digestive system pathology"
- "Atlas of endoscopy"
- "Rational therapy of type 2 diabetes"
- "Insulin therapy of diabetes"
- "Surgical minimally invasive treatment"
- "Osteosynthesis" and others.

7.2 Assessment materials for assessing the student's knowledge and skills

7.2.1 List of practical skills

- 1. Collect and assess the medical and life history.
- 2. Anthropometric examination of the patient.
- 3. Psychometric examination of the patient.
- 4. Assessing the results of functional stress tests.
- 5. Measuring and assessing the patient's blood pressure, pulse rate, heart rate and respiratory movements.
- 6. Determining the patient's health group based on a comprehensive assessment of the patient's health.
- 7. Clinical examination of a healthy and sick patient: inspection, palpation, percussion, auscultation.
 - 8. Examine the skin and its appendages.
 - 9. Determine dermographism.
 - 10. Palpate the peripheral lymph nodes.
 - 11. Examine the mucous membranes of the oral cavity and eyes.
 - 12. Assess the shape and mobility of the joints.
 - 13. Examine the abdomen.
 - 14. Perform superficial, deep, sliding topographic palpation of the abdomen.
 - 15. Determine the boundaries of the liver, spleen and their sizes.
 - 16. Auscultate the abdomen.
- 17. Determine the symptoms of Shchetkin-Blumberg, Voskresensky, Ker, Desjardins, Mayo-Robson, Ortner, Grekov.
 - 18. Determine vocal fremitus.
 - 19. Perform topographic and comparative percussion of the lungs.
 - 20. Determine the mobility of the pulmonary edges.
 - 21. Determine the nature and sonority of breathing.
 - 22. Identify signs of respiratory failure.
 - 23. Assess the pulse on the radial artery and other main arteries.
 - 24. Determine the localization, strength and height of the apical impulse.
 - 25. Percussion of the boundaries of relative and absolute cardiac dullness.
 - 26. Auscultation of heart sounds.
 - 27. Measure and evaluate blood pressure in the arms and legs.
 - 28. Palpation of the kidneys and bladder.
 - 29. Evaluation of the presence of peripheral edema.
 - 30. Collection of material for laboratory tests.
 - 31. Evaluation of a complete blood count.

- 32. Evaluation of sputum, general urine, Nechiporenko test, Zimnitsky test, and coprogram.
 - 33. Evaluation of biochemical and immunological blood tests.
 - 34. Evaluation of the coagulogram.
 - 35. Preparation of the patient for X-ray and ultrasound examination.
 - 36. Evaluation of the results of instrumental examination methods.
- 37. Conducting external and internal examination of pregnant women in the early and late stages of pregnancy.
- 38. Evaluation of ECG, ABPM, radiographs, tomograms, angiograms, spirometry results.
- 39. Evaluation of pathological changes revealed during patient examination and formulation of a preliminary diagnosis.
 - 40. Treatment of oral cavity, ears, nose. Washing of eyes.
 - 41. Removal of foreign bodies.
 - 42. Treatment of eyes in case of burns.
 - 43. Carrying out anterior tamponade in case of nosebleed.
 - 44. Stopping external bleeding.
 - 45. Gastric lavage. Setting up cleansing, siphon and medicinal enemas.
 - 46. Application of a colostomy bag. Treatment of bedsores.
 - 47. Carrying out injections of drugs, calculation of doses and dilutions of drugs.
- 48. Preparation of the system for intravenous infusion and carrying out intravenous transfusion of fluids.
 - 49. Installation of an airway.
- 50. Preparing a set of instruments, materials, medications and performing primary surgical treatment of the wound.
 - 51. Dressing a clean and purulent wound.
- 52. Performing immobilization in case of dislocations and fractures of the upper and lower extremities by using: improvised means, transport splints.
 - 53. Performing basic cardiopulmonary resuscitation
 - 54. Providing emergency care.
- 55. Writing and issuing prescriptions, including discounted ones, for narcotic and equivalent drugs.
 - 56. Maintaining standard medical records.
 - 57. Drawing up a plan and conducting sanitary and educational work
 - 58. Conducting anti-epidemic measures in infection foci.
- 59. Determining high-risk groups for tuberculosis, knowing the frequency and methods of their examination.
- 60. Minimum clinical examination for tuberculosis. Indications for referral to a phthisiatrician.
- 61. Examination of a patient with tuberculosis, prescribing the necessary laboratory and instrumental studies, formulating a preliminary diagnosis and preparing medical documentation.
 - 62. Evaluating the results of bacterioscopic and bacteriological examination.
- 63. Evaluating and describing pathological changes in patients identified by radiation examination methods.
 - 64. Evaluating pathological changes detected by morphological examination

methods.

- 65. Performing the Mantoux test with 2 TE PPD-L and Diaskintest. Determining indications, contraindications, evaluating the results.
 - 66. Determining indications for tuberculosis chemoprophylaxis.
- 67. Determining indications for antibacterial therapy, evaluating its tolerability and correcting side effects.
- 68. Diagnosis of emergency conditions (pulmonary hemorrhage, spontaneous pneumothorax) in patients with tuberculosis. First aid.

7.2.2 Examples of test tasks

- 1. Drugs related to angiotensin II receptor blockers: A) losartan, B) valsartan,
- C) levosimendan, D) aliskiren, D) candesartan. Select the correct combination of answers:
- 1) A, B, D
- 2) A, B, D
- 3) A, B, C
- 4) B, C, D
- 5) C, D, D
- 2. A group of substances that increase blood pressure, heart rate, increase atrioventricular conductivity, enhance glycogenolysis, and reduce bronchial tone
- 1) M anticholinergics
- 2) sympatholytics
- 3) alpha-beta-adrenergic agonists
- 4) alpha-adrenergic agonists
- 5) ganglionic blockers
- 3. Drugs related to ACE inhibitors: A) perindopril, B) enalapril, C) phenylephrine, D) ephedrine, D) lisinopril. Select the correct combination of answers
- 1) A, B, D
- 2) A, B, D
- 3) A, B, C
- 4) B, C, D
- 5) C, D, D
- 4. Signs characteristic of uremic pericarditis: A) increased body temperature, B) pain in the heart area, C) pericardial friction rub, D) tachycardia, D) accumulation of hemorrhagic fluid in the pericardial cavity. Select the correct combination of answers
- 1) all answers are correct
- 2) B, D
- 3) B, C, D, D
- 4) A, B, D

- 5) B, D
- 5. The shape that the median shadow acquires in exudative pericarditis
- 1) round
- 2) triangular
- 3) trapezoid
- 4) mitral
- 5) aortic
- 6. The most common cause of premature detachment of a normally located placenta is
- 1) preeclampsia
- 2) abdominal trauma
- 3) post-term pregnancy
- 4) polyhydramnios, multiple pregnancy
- 5) short umbilical cord
- 7. The skin-graded test is carried out for the purpose of
- 1) mass tuberculin diagnostics
- 2) determining individual sensitivity to tuberculin
- 3) selecting individuals subject to revaccination
- 4) selecting individuals subject to vaccination
- 8. The manifestation of a focal reaction during the Koch test is
- 1) increased body temperature
- 2) decreased appetite
- 3) inflammatory changes in the blood count
- 4) increasing perifocal reaction around the pulmonary affect
- 9. BCG vaccine injection site
- 1) middle third of the forearm
- 2) right shoulder
- 3) border of the middle and upper third of the left shoulder
- 4) border of the lower and middle third of the left shoulder
- 10. Early symptom of mesenteric vascular thrombosis
- 1) loose stools with blood
- 2) vomiting
- 3) abdominal pain radiating to the back
- 4) flabbiness of the anterior abdominal wall
- 11. Maximum period for issuing a certificate of incapacity for work by the medical commission of a health care institution without consulting the Medical and Social Expertise Commission for diseases (except tuberculosis, injuries and reconstructive surgeries) in the case of a favorable clinical and labor prognosis 1) 4 months

- 2) 10 months
- 3) 12 months
- 4) unlimited

Total number of test tasks -1000.

7.2.3 Examples of situational tasks

Task No. 1. Patient P., 32 years old, complains of pain and swelling of the joints of the hands and feet, wrist joints, limited mobility, morning stiffness. Considers herself ill for the last 4 months, when general weakness, weight loss, worsening sleep, appetite, fever up to 37.3-37.5°C first appeared. In the last 2 months, pain in the elbow joints has appeared.

Objectively: general condition is satisfactory. Correct build, poor nutrition. Skin and visible mucous membranes are of normal color. The metacarpophalangeal and proximal interphalangeal joints of the hands are swollen, painful on palpation, movements in them are limited. Limited mobility is noted due to pain in the interphalangeal joints. Peripheral lymph nodes are not palpable. Percussion reveals pulmonary sounds over the lungs, vesicular breathing, no wheezing. The boundaries of relative cardiac dullness are within normal limits. Heart sounds are sonorous, the rhythm of the heart is regular. Pulse is 82 per 1 min., satisfactory filling. Blood pressure is 130/80 mm Hg. The abdomen is soft and painless on palpation. The liver is not palpable.

X-ray of the hands: epiphyseal osteoporosis, moderate narrowing of the joint spaces in the metacarpophalangeal and proximal interphalangeal joints of the II-IV fingers.

Blood test: HGB (hemoglobin) - 130 g / l, RBC (erythrocytes) - 3.7x1012 / l, MCH - 35 pg; WBC (leukocytes) - 8.4x109/l, E - 1%, P - 4%, C - 66%, L - 24%, M - 5%, ESR - 40 mm/h, CRP - 20 mg/l; α 2-globulins up to 15%.

Questions:

- 1. What is your preliminary diagnosis?
- 2. What would you like to examine in the patient for the final verification of the diagnosis, what are the expected results of these studies.
- 3. Justify the differentiated therapy and tactics of patient management. Discuss the key issues of examination of working capacity, its loss (temporary or permanent) in this patient.

Task No. 2. A 32-year-old patient until recently felt satisfactory, worked. During the year after significant physical exertion, she noted palpitations, shortness of breath. Twice short-term loss of consciousness. She contacted the clinic at her place of residence. Objectively, upon examination: the condition is satisfactory. The skin is pale. Pulsation of the neck vessels. Percussion reveals that the boundaries of relative cardiac dullness are shifted to the left. Upon auscultation of the heart, the rhythm is regular, a rough, intense systolic murmur is in the 2nd intercostal space to the right of the sternum, at Botkin's point, and is transmitted to the neck vessels on both sides. BP

is 110/95 mm Hg.

According to the electrocardiogram: a high R wave in I, aVL, V5, V6, the transition zone is shifted to the right chest leads (V2 - V3), QRS 0.12 h.

Questions.

- 1. Formulate and justify the preliminary diagnosis.
- 2. Determine the scope of the patient's examination in an outpatient setting in order to clarify the diagnosis and further management tactics.
- 3. Determine the indications for referral to the Medical and Social Expertise Commission after surgical treatment.
- 4. Conduct an examination of temporary disability.
- 5. Decide on the possibility of spa treatment for this patient.

Task No. 3. Patient M., 20 years old, fell ill acutely. Headache, severe chills, temperature of 39.5°, severe weakness, dry, hacking cough, night sweats appeared. History: suffered from left-sided primary tuberculosis complex, giardiasis cholecystitis.

Upon admission to the hospital, the condition is severe, acrocyanosis, hyperhidrosis, dyspnea up to 46 per minute, tachycardia. Percussion reveals a box-like pulmonary sound, auscultation reveals rare, scattered fine-bubble rales against the background of harsh breathing. The abdomen is soft, slightly painful in the right hypochondrium. The liver is palpated 3 cm below the costal arch. Blood test: L—13*109/l, p-8%, c-57%, e-4%, b-1%, l-18%, m-12%, ESR—50 mm/h.

Urine — no pathology. In sputum, simple bacterioscopy did not reveal AFB.

X-ray examination of the chest organs did not reveal any pathology. Mantoux reaction with 2 TE — negative. On the plain radiograph 10 days after the disease, bilateral uniform multiple small focal shadows of low intensity with fuzzy boundaries are determined totally over all lung fields. In the left lung, there is a Ghon focus and calcification in the left root.

Ouestions.

- 1. Make a diagnosis and give its justification.
- 2. Conduct an examination of temporary disability.
- 3. Decide on the possibility of spa treatment for this patient.

Task № 4. A 50-year-old man developed severe pain throughout his abdomen when coughing. At the same time, a tumor-like formation in the right inguinal region, which had existed for about 10 years, slightly increased in size and became painful. There was one vomiting and scanty stool, after which the passage of feces and gases stopped. You examine the patient at home one hour after the onset of the disease. His condition is satisfactory, pulse is 74 beats per minute, satisfactory filling. Blood pressure is 130/75 mm Hg. The tongue is coated, moist,

the abdomen is not distended. Palpation reveals diffuse pain, more significant in the right lower quadrant. Shchetkin-Blumberg symptom is negative. In the right inguinal region, a tumor-like formation of an oval shape, 8 by 6 cm, of a tight elastic consistency, painful on palpation is determined. Questions. 1. Make a diagnosis and justify it.

- 2. Conduct an examination of temporary disability.
- 3. Decide on the possibility of spa treatment for this patient.

Task №. 5. A 29-year-old patient consulted a phthisiatrician with complaints of weakness, cough, and sweating. She had infiltrative tuberculosis of the upper lobe of the left lung, MBT-, I GDN about 4 years ago. She received a course of controlled treatment with first-line anti-tuberculosis drugs for 8 months, 2 years ago she was transferred to the III group of dispensary observation, and did not attend the anti-tuberculosis office for examination. 6 months ago, she gave birth at term. In the postpartum period, she noted an increase in temperature to 37.8 °, sweating at night. Over the past month, she has been constantly bothered by an unproductive cough, and notes an evening subfebrile temperature. Chest X-ray: on the left in the upper field there is a 3x3 cm cystic formation with thin walls surrounded by foci of different sizes. Sputum microscopy: AFB 1+.

Hospitalized in the tuberculosis dispensary. Objectively: the general condition is satisfactory. Auscultation reveals isolated moist rales in the interscapular region on the left. There are no pathological abnormalities in the cardiovascular system. The abdominal organs are normal. In the general blood test: Hb 130 g/l, leukocytes 9.0*109/l, ESR 20 mm/h. In the general urine test - normal.

In sputum: AFB microscopy 1+; PCR detected MBT DNA, mutation of the rpoB gene (a marker of resistance to rifampicin).

Computed tomography in the II segment of the left lung reveals a subpleural cavity measuring $2.5 \times 3 \times 3$ cm, with thin walls; nearby, a few soft focal shadows; a group of small hypodense foci in the middle lobe of the right lung; the remaining parts of the lung are normal.

Questions.

- 1. Suggest the most likely diagnosis.
- 2. Justify your diagnosis.
- 3. Specify what additional examination methods should be used to examine the patient. Justify your choice.
- 4. Specify what anti-tuberculosis drugs should be included in the patient's treatment regimen. Justify your choice, give further recommendations.
 - 5. What is your further treatment strategy? Justify your choice.

Task № 6. Citizen K., a man, 27 years old, applied to a private medical

organization for a medical examination. I learned about the fact that medical examination of the adult population is carried out in the Russian Federation from a text message I received from an insurance company. He receives primary health care at the State Budgetary Healthcare Institution "City Polyclinic No. 1". He insists on a free medical examination under the compulsory medical insurance policy and a mandatory CT scan of the spine, because he wants to "get checked". Citizen K. was denied a medical examination due to the fact that this private medical organization does not participate in the implementation of the State Guarantees Program for Free Medical Care. Citizen K. filed a complaint with the governing body in the field of healthcare.

Questions:

- 1. What is a medical examination of the population?
- 2. What regulatory document governs issues related to the conduct of preventive medical examinations and medical examinations of the following groups of the adult population aged 18 years and older in medical organizations?
 - 3. What is the frequency of medical examinations of the adult population?
- 4. What regulatory document determines the scope of the medical examination at the first stage of the medical examination?
- 5. Where do citizens undergo medical examination and what document must be signed as a prerequisite for it to be carried out?
- 6. Which document provides/does not provide for a CT scan for citizen K. at the first stage of the medical examination?
 - 7. Is the patient's complaint justified?

Task № 7. A grandmother with a 7-year-old child came to the vaccination room of a children's clinic for a flu shot. The pediatrician wrote out a referral for vaccination 2 weeks ago. However, the child's parents were against the vaccination and did not bring the child for vaccination. Currently, the child has obvious signs of an infectious disease: runny nose, watery eyes, and dry cough. In this situation, after the child was examined by the local pediatrician, the child was denied vaccination. The grandmother insists on it, since at home the child's mother and father are sick with what she believes is the flu.

Questions:

- 1. What types of prevention do you know?
- 2. What type of prevention does vaccination belong to?
- 3. What is a mandatory condition before vaccinating a minor child and can parents or legal representatives of a minor child refuse preventive vaccination?
- 4. Who can be a legal representative of a child under 15 years of age living in a

complete family?

- 5. Under what conditions is it permitted to vaccinate a child and what contraindication is the presence of an acute infectious disease in a child?
- 6. What should be the vaccination coverage of the population from risk groups against influenza?

Task №8.

A mother with a 2.5-year-old child at a pediatrician's appointment. The mother complains of her son's rapid fatigue, weakness, shortness of breath with minimal physical exertion, palpitations, and pain in the heart area.

The boy is from the third pregnancy, which proceeded with an exacerbation of chronic pyelonephritis at 4-6 weeks. Delivery at 38 weeks, cesarean section. Body weight 3100 g, length 50 cm.

Past illnesses - frequent acute respiratory viral infections, pneumonia at 6 months and 1.5 years.

From 6 months, there was a blue face, lethargy, anxiety during feeding. The boy began to gain weight poorly.

At 8 months, an episode of noisy deep breathing first appeared, the child turned blue. Then these attacks began to recur 1-2 times a month.

At the age of 2, the child lost consciousness several times during attacks of dyspnea and cyanosis, and developed convulsions.

Weight 12.5 kg, height 102 cm. Skin is pale-cyanotic. Subcutaneous fat layer is reduced. Oral mucosa is pale-cyanotic. Teeth are carious. Fingers are in the form of "drumsticks", nails resemble "watch glasses". Heart rate is 102 beats per minute. Heart borders: right 1 cm outward from the right parasternal line, upper - the upper edge of the 3rd rib, left - 1 cm outward from the midclavicular line. On auscultation, the 1st heart sound is loud, a rough systolic murmur is heard in the 2nd intercostal space on the right, radiating to the back. The 2nd heart sound in the 2nd intercostal space on the left is weakened. Blood pressure in the arms is 90/55 mm Hg. BP in the legs is 100/60 mm Hg. Percussion of the lungs reveals a box-like sound. RR is 26 per minute. No edema.

In the general blood test: erythrocytes - 5.7×1012 / l; Hb - 158 g / l; leukocytes - 4.11×109 / l; eosinophils - 3%; band - 3%; segmented - 48%; monocytes - 9%; lymphocytes - 37%; ESR - 12 mm / h.

QUESTIONS

- 1. Suggest the most likely diagnosis.
- 2. Justify your diagnosis.
- 3. Make a plan for additional examination of the patient, name the changes

revealed by instrumental diagnostic methods

- 4. Name the components of the identified congenital heart defect.
- 5. Determine the pediatrician's tactics for stopping a dyspnea-cyanotic attack. Name the drugs that are contraindicated

Task № 9.

A mother with a 1-month-old child came from a rural area to a regional center to visit relatives who called a local pediatrician because they were sure that the child was sick.

Anamnesis of life: the child is from the 1st pregnancy, which proceeded with toxicosis in the 1st trimester; at 24-26 weeks of gestation, an increase in temperature was noted without catarrhal phenomena, did not undergo treatment.

Labor at 38 weeks of gestation: 1st period - 8 hours, 2nd - 25 minutes, anhydrous interval - 9 hours, amniotic fluid is clear. Body weight at birth 3350 g, length 51 cm. Discharged from the maternity ward of the central district hospital on the 7th day of life. The child is breastfed, sucks weakly, sleeps almost all the time. The mother is 17 years old, considers herself healthy; the marriage is not registered, she is raising the child alone.

On examination: the child's condition is serious. Lethargic, reacts to examination with a weak cry. Body weight is 3550 g; during the control feeding, he sucked out about 70 ml of milk. The skin is pale pink, dry, clean. The child is undernourished, the subcutaneous fat layer is thinned on the chest and abdomen. The head is hydrocephalic. Head circumference is 40 cm, chest 34 cm, the sagittal suture is open by 1 cm, the coronal suture is open by 0.2 cm. The large fontanelle is 4×4 cm, done; small fontanelle 0.5×0.5 cm. In the lungs, breathing is weakened vesicular, no wheezing, respiratory rate 36 /min. Heart sounds are clear and rhythmic. HR 130 beats / min. The abdomen is soft, painless. The liver protrudes 2.5 cm from under the costal arch. The spleen is 1 cm below the costal arch. Graefe's symptom is expressed, horizontal nystagmus. Muscle hypotonia.

Questions:

- 1. What is the presumptive diagnosis?
- 2. What screening tests should have been performed on the child in the maternity hospital, the results of which should be clarified?
 - 3. Determine the degree of malnutrition in the child.
 - 4. Determine the daily volume of food for the child
- 5. Make a plan of preventive measures for the 1st year of the child's life. Task $N_{2}10$.

The child is 6 years old. The girl's mother said that the child has had a

decreased appetite for the past two months, she has become irritable, her sleep is restless, and she often complains of itching in the anus. Objectively: the condition is satisfactory, the skin is clean, pale, nutrition is somewhat reduced. There are no pathologies from the internal organs.

Questions:

- 1. Formulate a presumptive diagnosis. Justify your answer.
- 2. Name the pathogen, give its characteristics.
- 3. Name the main principles of treatment for this child.
- 4. What studies can you use to confirm the diagnosis?
- 5. Name the main preventive measures to prevent enterobiasis in children.

8 RECOMMENDED REFERENCES FOR PREPARATION FOR THE STATE EXAM

8.1. Main literature:

- 1. **Boehmeke, T.** Pocket atlas of echocardiography / T. Boehmeke, R. Doliva; Boehmeke Thomas; Doliva Ralf. Stuttgart; New York; London: Thieme: Thieme, 2006. 225 p. ISBN 3-13-141241-0.
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9. CRITERIA AND SCALES FOR ASSESSING THE RESULTS OF THE STATE EXAM

The results of the final stage of attestation tests are determined by the grades "excellent", "good", "satisfactory", "unsatisfactory" in accordance with the current Regulation on the bank of assessment tools in the Federal State Budgetary Educational Institution of Higher Education "PRMU" of the Ministry of Health of Russia.

Criteria and scales for assessing the State Final Exam

| Mark | Criteria |
|-------------|---|
| «Excellent» | - The student demonstrates a high level of competence, developed systematic knowledge of the program material, educational and periodical literature, reveals basic concepts and analyzes them based on the positions of various authors, sees interdisciplinary connections. Presents the material professionally, competently, consistently, clearly, formulates reasoned conclusions. - The student demonstrates a high level of skills, successfully and systematically applies skills in the disciplines included in the final state exam in the specialty. Demonstrates the formation of competencies that should be formed as a result of mastering the EP. - The student knows the legislative, regulatory and practical framework within the framework of the requirements for the specialty. - The student answers questions from commission members briefly, reasonably, confidently, to the point. |
| «Good» | The student demonstrates a sufficient level of competence, generally successful, but containing some gaps in knowledge of the lecture material, educational and methodological literature. Confidently and professionally, clearly, distinctly and understandably states |

the state and essence of the question. The answer is constructed logically using informative and illustrative material, but allows some errors when answering.

- The student knows the regulatory and legislative framework, but allows minor errors when answering.
- The student demonstrates a sufficient level of professional skills, applies skills quite successfully, is fluent in concepts, methods of assessing decision-making. Has an idea of interdisciplinary connections, combines knowledge obtained in the study of various disciplines, can analyze practical situations, but allows some errors. Demonstrates the formation of competencies that should be formed as a result of mastering the BEP.
- The questions asked by the members of the examination committee do not cause significant difficulties.

- The student demonstrates sufficient but incomplete knowledge of the educational and lecture material, but the answer lacks the proper connection between analysis, argumentation and conclusions.

- The student answers questions posed by the commission members uncertainly, makes mistakes. Has difficulty answering questions posed by the commission, demonstrates insufficiently deep knowledge.
- The student has generally successful but not systematic skills, professional abilities, uses illustrative material, but feels insecure when analyzing interdisciplinary connections. The answer does not always contain logic, insufficiently compelling arguments are used.
- The student demonstrates generally successful, but with some gaps, formation of competencies that should be formed as a result of mastering the educational program.

«Satisfactory»

- The student demonstrates weak fragmentary knowledge (or lack thereof) of lecture material, educational literature, legislation and practice of its application, a low level of competence, an uncertain presentation of the issue.

- The student demonstrates a weak level (or lack thereof) of professional skills, fragmentary application of skills (or lack thereof), has difficulty analyzing practical situations. The student cannot provide examples from real practice.

- The student presents the material uncertainly and logically inconsistently. The student answers questions posed by the commission members incorrectly or finds it difficult to answer.

- The student demonstrates fragmentary or lack of formation of competencies that students should master as a result of mastering the BEP (according to the list of competencies);

«Unsatisfactory»

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- MD, Head of the Department of Obstetrics and Gynecology.

10. Change Sheet

| Date | Date and № of the | Contents of the change | Signature |
|--------------|---------------------|------------------------|-----------|
| of the | protocol meeting of | | |
| modification | the Academic | | |
| | Council of the | | |
| | Faculty of General | | |
| | Medicine | | |
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