

**FEDERAL STATE BUDGETARY  
EDUCATIONAL INSTITUTION OF HIGHER EDUCATION  
“AMUR STATE MEDICAL ACADEMY”  
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION**

AGREED

Vice-Rector for Academic Affairs,

N N.V. Loskutova

April 29, 2026

Decision of the CCMC

April 29, 2026

Protocol No. 7

APPROVED

by decision of the Academic Council of the FSBEI  
HE Amur SMA of the Ministry of Health of the  
Russian Federation

May 12, 2026

Protocol No. 15

Acting Rector of the FSBEI HE Amur SMA of the  
Ministry of Health of the Russian Federation

I.V. Zhukovets

May 12, 2026

**EDUCATIONAL PROGRAM**

**discipline «Lean technologies and digital transformation of the  
healthcare system in the context of primary health care»**

**Specialty: 31.05.01 General Medicine**

**Course: 6**

**Semester: 11**

**Total hours: 72 hrs.**

**Total credits: 2 credit units**

**Control form: credit-test, 11 semester**

**Blagoveshchensk 2026**

The educational program of the discipline is designed in accordance with the requirements of the Federal State Educational Standard of Higher Education - specialist in specialty 31.05.01 General Medicine, approved by order of the Ministry of Education and Science of Russia dated 08/12/2020 No. 988, BPEP HE (2021).

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Protocol No. 7 dated april 20, 2026.

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may 10, 2026

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## 1. Explanatory note

### 1.1. Characteristics of the discipline

In recent years, the Russian government's policy has been focused on the priority development and improvement of primary healthcare. Currently, over 80% of the population receives highly qualified medical care in a clinic. Modern clinics offer extensive diagnostic and treatment capabilities, and a wide range of treatments are provided in outpatient settings using hospital-substituting technologies. The specific nature of outpatient physician work requires high efficiency, independent and quick decision-making, and the provision of high-quality medical care in accordance with standards, procedures, and clinical guidelines. Furthermore, Russia's modern healthcare system has significant potential for digitalization and is continuously evolving toward the implementation of lean manufacturing principles, which must be taken into account in the work of physicians providing primary healthcare.

The course "Lean technologies and digital transformation of the healthcare system in the context of primary health care" is one of the disciplines of the elective part of Block 1 "Disciplines (Modules)" (in accordance with the Federal state educational standard of higher education, 2020). It is mandatory and represents a type of educational activity that forms the foundations of clinical thinking of a future specialist, directly focused on both the theoretical and practical training of students.

The program on the discipline "Lean technologies and digital transformation of the healthcare system in the context of primary health care" is implemented in the 6th year of the 11th semester and is designed for 72 hours, of which 14 hours are lectures, 34 hours are clinical practical classes, and 24 hours are independent student work.

Students' learning methods include lectures, clinical practical classes, and independent work (both in and out of class). The form of midterm assessment is a credit test in the 11th semester.

### 1.2. The purpose and objectives of the discipline

The objective of this course is to prepare a highly qualified specialist possessing specific knowledge, skills, and abilities that will enable a graduate in the specialty 31.05.01 General Medicine to systematically improve the work of medical organizations, operate in the context of the digital transformation of healthcare, and conduct professional activities taking into account the principles of lean manufacturing.

Objectives of the course:

- 1) to develop in students an understanding of the key principles of lean manufacturing and their adaptation to the healthcare system;
- 2) ensure the development of the fundamentals of digital transformation of healthcare, including the analysis and application of modern medical information systems, telemedicine technologies, and systems for supporting medical decision-making;
- 3) develop practical skills in optimizing work processes in primary care using digital tools to improve the availability and quality of medical care and efficient resource management;
- 4) to develop an understanding of a patient-centric approach to organizing the treatment and diagnostic process, and to develop communication skills with patients in the context of using digital services.

### 1.3. The place of the discipline in the structure of the main professional educational program of higher education

In accordance with the Federal state educational standard for higher education, the specialist program in specialty 31.05.01 General Medicine (2020) includes the course "Lean technologies and digital transformation of the healthcare system in the context of primary health care" as a mandatory course in the elective section of Block 1 "Disciplines (Modules)". The total workload of this course is 2 credit units (72 hours).

### 1.4. Requirements for students

|                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>For studies disciplines necessary knowledge, skills and skills, formed by previous disciplines:</b>                                                                                                                                                                                                                                                                                                          |
| <b>Latin language</b>                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Knowledge:</b> main medical And pharmaceutical terminology on Latin language.                                                                                                                                                                                                                                                                                                                                |
| <b>Skills :</b> be able to apply knowledge to communication and obtaining information from medical literature, medical documentation (II-III level).                                                                                                                                                                                                                                                            |
| <b>Skills:</b> apply medical and pharmaceutical terminology on in Latin in professional activities.                                                                                                                                                                                                                                                                                                             |
| <b>Story medicine</b>                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Knowledge:</b> outstanding figures in medicine and healthcare, Nobel laureates, outstanding medical discoveries in areas therapy, influence humanistic ideason medicine (II-III level).                                                                                                                                                                                                                      |
| <b>Skills :</b> competently and on one's own to expound and analyze the contribution domestic scientists in development immunology.                                                                                                                                                                                                                                                                             |
| <b>Skills:</b> on one's own search and analyze educational information, be able to actively participate in discussions, do correct conclusions, defend your own opinion.                                                                                                                                                                                                                                        |
| <b>Philosophy</b>                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Knowledge:</b> Methods and techniques of philosophical analysis problems; forms and methods of scientific knowledge, their evolution; main patterns and trends development world historical process; laws dialectical materialism in medicine (II-III level).                                                                                                                                                |
| <b>Skills :</b> competently and on one's own to expound, analyze forms and methods scientific knowledge And laws dialectical materialism in medicine.                                                                                                                                                                                                                                                           |
| <b>Skills:</b> conduct discussions; have the skill of written argumentation of one's own presentation points vision.                                                                                                                                                                                                                                                                                            |
| <b>Bioethics</b>                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Knowledge:</b> moral and ethical norms, rules and principles of professional medical conduct, the rights of the patient and the doctor, main ethical documents regulating activity doctor (II-III level).                                                                                                                                                                                                    |
| <b>Skills :</b> build and maintain working relationships with patients, other members team.                                                                                                                                                                                                                                                                                                                     |
| <b>Skills:</b> to perceive and analyze special texts that have ethical and legal implications content; apply techniques conduct discussions And controversy; public speeches And written reasoned presentation his own points vision By current bioethical issues; evaluate and analyze various trends, facts And phenomena V system health care; techniques communication With sick and relatives sick people. |
| <b>Histology</b>                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Knowledge:</b> embryogenesis, histological structure fabrics And systems (II-III level)                                                                                                                                                                                                                                                                                                                      |
| <b>Skills:</b> determine age-related patterns of development of organs and systems ; analyze results histophysiological research.                                                                                                                                                                                                                                                                               |
| <b>Skills:</b> microscopic examination of histological preparations using a light microscope, identify organs, their fabrics, cells And non-cellular structures on light-optical level.                                                                                                                                                                                                                         |
| <b>Microbiology, virology</b>                                                                                                                                                                                                                                                                                                                                                                                   |

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| <b>Knowledge:</b> the impact of microbes, viruses, rickettsia, and fungi on the body. Microbiological diagnostics infectious diseases (II level).                                                                                                                                                                                                                                                                                                                                       |
| <b>Skills:</b> analyze the results of microbiological diagnostics of infectious diseases.                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Skills:</b> collect pathological material from patients with infectious pathology, evaluate results bacteriological and serological examinations, install etiological diagnosis, assign specific treatment sick with suspicion on infectious pathology.                                                                                                                                                                                                                              |
| <b>Physics, mathematics. Medical informatics. Medical biophysics</b>                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Knowledge:</b> mathematical methods for solving intellectual problems and their application in medicine; theoretical basics computer science, collection, storage, search, processing, transformation and dissemination of information in medical and biological systems, use of information computer systems in medicine and healthcare; principles work and devices equipment, used medicine, basics physical and mathematical laws, receiving display in medicine (II-III level). |
| <b>Skills:</b> be able to use educational, scientific, popular science literature, network Internet For professional activities, work With equipment With taking into account technical rules security .                                                                                                                                                                                                                                                                                |
| <b>Skills:</b> own computer literacy V volume, provided secondary program schools.                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Chemistry</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Knowledge:</b> chemical and biological essence processes, happening V alive in the body molecular And cellular levels (II-III level).                                                                                                                                                                                                                                                                                                                                                |
| <b>Skills:</b> analyze the contribution of chemical processes to the functioning of the cardiovascular system, respiratory, digestive, urinary, hematopoietic systems.                                                                                                                                                                                                                                                                                                                  |
| <b>Biochemistry</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Knowledge :</b> compound blood, biochemical constants blood, hormones, buffer systems, factors oxygenation hemoglobin, metabolism red blood cells (II-III level).                                                                                                                                                                                                                                                                                                                    |
| <b>Skills:</b> analyze the contribution of biochemical processes to the functioning of organs and cardiovascular, respiratory, digestive, urinary, hematopoietic systems, interpret the results of the most common laboratory methods diagnostics For identification violations at diseases internal organs and professional diseases.                                                                                                                                                  |
| <b>Skills:</b> independent work with biochemical literature, news search necessary information, transform read means for solutions biochemical, and in further professional tasks; job in chemical laboratory with reagents, chemical dishes, measuring equipment.                                                                                                                                                                                                                      |
| <b>Biology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Knowledge:</b> laws genetics her meaning for medicine; patterns heredity and variability in individual development how basics understanding of pathogenesis and etiology of hereditary and multifactorial diseases; biosphere and ecology, the phenomenon of parasitism and bioecological diseases (II-III level).                                                                                                                                                                   |
| <b>Skills:</b> analyze patterns heredity and variability in development of diseases internal organs And professional diseases.                                                                                                                                                                                                                                                                                                                                                          |
| <b>Skills:</b> use theoretical and applied knowledge about the patterns of implementation of hereditary information in order to prevent hereditary diseases diseases.                                                                                                                                                                                                                                                                                                                   |
| <b>Anatomy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Knowledge:</b> anatomical and physiological features of the respiratory, cardiovascular, digestive, hematopoietic systems (II-III level).                                                                                                                                                                                                                                                                                                                                            |
| <b>Skills :</b> analyze age-gender peculiarities buildings organs and systems.                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Skills:</b> on one's own work with educational literature on paper and electronic media, Internet resources by anatomy person.                                                                                                                                                                                                                                                                                                                                                       |
| <b>Normal physiology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Knowledge :</b> reflex arc, conditional and unconditional reflexes, physiology cardiovascular, digestive, urinary, respiratory and norm hematopoietic systems (II-III level).                                                                                                                                                                                                                                                                                                        |

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| <b>Skills:</b> to analyze the importance of regulation of biological processes in the human body on the functioning of the cardiovascular, digestive, urinary, respiratory, hematopoietic systems.                                                                                                                                                                                                                                                                                                                                                             |
| <b>Skills:</b> determine group blood and rhesus accessories blood; hemoglobin in blood by salivary method; evaluate the results of a complete blood count; evaluate clotting time blood and bleeding; count red blood cells and leukocytes; palpate frequency pulse; measure arterial pressure; analyze main elements electrocardiograms; auscultate tones hearts; fulfill spirometry; dynamometry; determine visual acuity; perform perimetry; conduct auditory samples weber and rinne; research binocular hearing; research reaction pupils into the light. |
| <b>Topographical anatomy, operational surgery</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Knowledge :</b> structure, topography of cells, tissues, organs and systems of the body in interaction With their norm and pathologies function (II level).                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Skills :</b> analyze the functional characteristics of the cardiovascular, respiratory, digestive, urinary, hematopoietic norm and pathologies systems.                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Skills:</b> on one's own work with educational literature on paper and electronic media, internet resources by topographic anatomy and operational surgery person; to work with medical and anatomical conceptual apparatus.                                                                                                                                                                                                                                                                                                                                |
| <b>Safety life activities, medicine disasters</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Knowledge:</b> sharp and chronic diseases from impact ionizing radiation (radiation disease) (II level).                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Skills:</b> analyze the importance of ionizing radiation on the formation of professional pathologies.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Skills:</b> right news medical documentation, to own main medical diagnostics and medicinal events By provision first medical assistance with urgent And threatening life states victims foci defeats at various emergency situations; fulfill medical and tactical characteristics foci defeats; own main technical means individual and medical protection                                                                                                                                                                                                |
| <b>Pathophysiology, clinical pathophysiology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Knowledge:</b> morphological changes fabrics organism at pathologies cordially-vascular, respiratory, digestive, urinary systems and blood systems (II level).                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Skills:</b> determine the contribution of pathophysiological processes to the development of internal diseases organs.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Skills:</b> analyze clinical syndromes from the point of view of pathophysiology, justify pathogenetic methods (principles) diagnostics, treatment, rehabilitation and prevention diseases.                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Immunology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Knowledge :</b> types immunity, regulation immune answer, reasons immunopathological conditions, clinical manifestations of immunopathology, main methods assessments immune status and principles his assessments, testimony to use of immunotropic therapy (II level).                                                                                                                                                                                                                                                                                    |
| <b>Skills:</b> identify syndromes And symptoms diseases, related With violations immune systems, assign clinical and immunological examination, formulate immunological diagnosis, appoint immunocorrective preventive therapy events For warnings diseases immune systems.                                                                                                                                                                                                                                                                                    |
| <b>Skills:</b> gather immunological and allergological anamnesis, install preliminary immunological diagnosis with subsequent direction To to the doctor allergist-immunologist; work with mono- and binocular microscope, to count quantity immunocompetent cells in microslides, make up immunological plan examinations patient.                                                                                                                                                                                                                            |
| <b>Pharmacology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Knowledge :</b> pharmacokinetics, pharmacodynamics, side effects of various drugs drugs on organism (II- III level).                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Skills :</b> write prescriptions for prescribed medications, know the indications and contraindications To their appointment.                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| <b>Skills:</b> interpret results clinical, laboratory and instrumentalexaminations, formulate clinical diagnosis, assign plan examinations and treatment                                                                                                                                                                                                      |
| <b>Propaedeutics internal diseases</b>                                                                                                                                                                                                                                                                                                                        |
| <b>Knowledge:</b> collection complaints, anamnesis , objective methods examinations sick (palpation, percussion, auscultation (II- III level).                                                                                                                                                                                                                |
| <b>Skills :</b> conduct anamnestic and physical examination, highlight main syndromes and symptoms diseases internal organs.                                                                                                                                                                                                                                  |
| <b>Skills:</b> examine sick with taking into account basics clinical thinking, medical ethics and deontology, interpret the results of additional research methods .                                                                                                                                                                                          |
| <b>Public health And healthcare, economy healthcare</b>                                                                                                                                                                                                                                                                                                       |
| <b>Knowledge:</b> fundamentals of the legislation of the Russian Federation on public health protection, main regulatory and technical documents; population health indicators, factors, formative health person, (ecological, professional, natural and climatic, endemic, social, epidemiological, psycho-emotional, professional, genetic) (II-III level). |
| <b>Skills:</b> plan, analyze and evaluate the quality of medical care, the health status of the population and the impact of environmental factors on itproduction environment; count on indicators medical statistics.                                                                                                                                       |
| <b>Skills:</b> own methodology calculation indicators public health; analysis methodology And assessments indicators health population.                                                                                                                                                                                                                       |
| <b>Pathological anatomy, clinical pathological anatomy</b>                                                                                                                                                                                                                                                                                                    |
| <b>Knowledge:</b> etiology, pathogenesis, morphogenesis, pathomorphosis diseases, principles classifications diseases; structural and functional basics diseases and pathological processes; reasons, mechanisms development and outcomes typical pathological processes.                                                                                     |
| <b>Skills:</b> visually evaluate and record changes of organs and tissues corpse, to substantiate character pathological process And his clinical manifestations; give conclusion reason death and formulate pathological diagnosis;                                                                                                                          |
| <b>Skills:</b> master macroscopic and microscopic (histological) diagnostics pathological processes; skills clinical and anatomical analysis.                                                                                                                                                                                                                 |
| <b>Urgent states V therapy</b>                                                                                                                                                                                                                                                                                                                                |
| <b>Knowledge:</b> etiology, pathogenesis, classification, clinical manifestations, complications, diagnostics, treatment and prevention urgent states in therapy(II-III level).                                                                                                                                                                               |
| <b>Skills:</b> diagnose an urgent condition in the main therapeutic conditions, formulate and justify a clinical diagnosis, conduct differential diagnostics and provide urgent help.                                                                                                                                                                         |
| <b>Skills:</b> render first medical help at urgent and threatening lifeconditions; use medications in treatment, rehabilitation and prevention various diseases and pathological states.                                                                                                                                                                      |
| <b>Faculty therapy</b>                                                                                                                                                                                                                                                                                                                                        |
| <b>Knowledge:</b> etiology, pathogenesis, classifications, clinical manifestations, complications, diagnostics, treatment and prevention main diseases respiratory, cardiovascular, digestive, urinary hematopoietic system (II- III level).                                                                                                                  |
| <b>Skills:</b> formulate and justify a clinical diagnosis, prescribe a treatment planexaminations And treatment at main therapeutic diseases, diagnose an emergency state and provide urgent help.                                                                                                                                                            |
| <b>Skills:</b> evaluate results clinical laboratory, instrumental methods examinations, install clinical diagnosis, make up plan examinations and treatment sick with therapeutic pathology, render urgent help in urgent cases states, to formalize educational history diseases.                                                                            |
| <b>Hospital therapy</b>                                                                                                                                                                                                                                                                                                                                       |
| <b>Knowledge:</b> etiology, pathogenesis, classifications, clinical manifestations, complications, diagnostics, treatment and prevention main diseases respiratory, cardiovascular, digestive, urinary hematopoietic system (II- III level).                                                                                                                  |
| <b>Skills:</b> formulate and justify a clinical diagnosis, prescribe an examination plan and treatment at main therapeutic diseases                                                                                                                                                                                                                           |

**Skills:** work with regulating materials, set out v standards specialized medical care within the nosological forms studied; fulfill complete clinical examination patients, conduct syndromic differential diagnostics

### **1.5. Requirements for the results of mastering the discipline**

The study of the discipline "Lean technologies and digital transformation of the healthcare system in the context of primary health care" is aimed at the formation and improvement of the following universal competencies (UC), general professional competencies (GPC) and professional competencies (PC): **UC** -1, 3, 6, **GPC** -1, 2, 4, 9, 10, **PC** -2, 3, 4, 9, 10, 11, 12.

| Item No.                    | Code and name of competence                                                                                                | Code and name of the competency achievement indicator (AI)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | As a result of studying the course "Lean technologies and digital transformation of the healthcare system in the context of primary health care" the student should:                                                                                                                                                       |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                               |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Know                                                                                                                                                                                                                                                                                                                       | Be able to                                                                                                                                                                                                             | To own                                                                                                                                                                                                                                                                        |
| Universal competencies (UC) |                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                               |
| 1                           | <b>UC-1</b> . Capable of critical analysis. Problematic situations based on systems approach, develop a strategy of action | <b>AI UC-1.1</b> . Analyzes a problematic situation as a system, identifying its components and the connections between them.<br><b>AI UC-1.2</b> . Identifies gaps in information needed to resolve problematic situations and designs processes to address them.<br><b>AI UC-1.3</b> . Applies systems analysis to resolve problematic situations in the professional sphere.<br><b>AI UC-1.5</b> . Critically evaluates the reliability of information sources and works with conflicting information from different sources.                                                                                                                 | Regulatory and legal aspects and principles of organizing and providing primary health care, the role of lean technologies in the modern healthcare system, strategies for the prevention of chronic non-communicable diseases in the Russian Federation, and features of the digital transformation of primary healthcare | Assess and analyze various trends, facts, and phenomena in the modern healthcare system in the world and the Russian Federation                                                                                        | The ability to independently work with educational, scientific, reference, and medical information literature, including on the Internet, the ability to critically approach the information received and analyze the obtained data from the standpoint of a systems approach |
| 2                           | <b>UC-3</b> . Capable organize and manage the work of the team, developing team strategy for achievements set goal         | <b>AI UC-3.1</b> . Establishes and develops professional contacts in accordance with the needs of joint activities, including information exchange and the development of a unified strategy; works in a tolerant manner within a team, accepting social, ethnic, religious, and cultural differences.<br><b>AI UC 3.2</b> . Plans and adjusts the team's work taking into account the interests, behavioral characteristics, and opinions of team members, distributes tasks, and delegates authority to team members.<br><b>AI UC-3.3</b> . Selects constructive methods for resolving conflicts and contradictions in business communication. | Mechanisms for forming a team and collective in primary healthcare, the basics of conflictology and conflict management in a team, and the specifics of project management                                                                                                                                                 | Organize a team to work on projects and develop a unified strategy for the team's activities, plan, analyze, and adjust the team's activities to achieve strategically and tactically significant goals and objectives | Skills for effective communication within a team, methods for resolving conflicts between medical workers and patients, as well as within the work team, skills for conducting discussions in a pluralistic environment opinions                                              |
| 3                           | <b>UC-6</b> . Able to identify and implement priorities.                                                                   | <b>AI UC-6.1</b> . Assesses personal, situational, and time resources and utilizes them optimally to complete assigned tasks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Methods and tools for self-assessment of one's                                                                                                                                                                                                                                                                             | Manage your workload, prioritize your activities                                                                                                                                                                       | Time management and planning skills, quality                                                                                                                                                                                                                                  |

|                                                |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                      |                                                                                                                                               |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                                                | own activities and ways to improve them based on self-assessment and lifelong learning                                                                                                                      | <p><b>AI UC-6.2</b> . Plans his activities within the framework of professional tasks.</p> <p><b>AI UC-6.3</b> . Conducts critical self-analysis of the results of one's own activities.</p> <p><b>AI UC-6.4</b> . Defines priorities for professional growth and ways to improve one's own performance based on self-assessment according to selected criteria.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   | own professional activity, principles of a lean approach to activity, features of continuous learning and self-education, basic approaches to self-education in medical practice                 | by analyzing the importance and urgency of tasks                                                                                                                                                                                                                     | improvement technologies, and data analysis methods                                                                                           |
| <b>General professional competencies (GPC)</b> |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                      |                                                                                                                                               |
| 4                                              | <b>GPC-1.</b> Capable of implementing moral and legal norms, ethical and deontological principles in professional activities.                                                                               | <p><b>AI GPC -1.1.</b> Carries out professional activities in accordance with ethical standards and moral principles.</p> <p><b>AI GPC -1.2.</b> Organizes professional activities, guided by healthcare legislation, knowledge of medical ethics, and deontology.</p> <p><b>AI GPC -1.3.</b> Skills in expressing an independent point of view, analytical and logical thinking, public speaking, moral and ethical argumentation, conducting discussions and roundtables, and the principles of medical deontology and medical ethics.</p>                                                                                                                                                                                                                                           | Principles of medical ethics and deontological duties of a physician, the legal framework governing the activities of a physician in providing primary health care                               | Recognize and discuss ethical issues that arise in medical practice, present an independent point of view in a reasoned manner, and apply knowledge of the law to specific cases in medical practice                                                                 | Skills for effective communication with patients and colleagues, methods of conflict management taking into account ethical and legal aspects |
| 5                                              | <b>GPC-2</b> . Capable of conducting and implementing control the effectiveness of measures for prevention and the formation of a healthy lifestyle life and sanitation hygiene education of the population | <p><b>AI GPC-2.1.</b> Uses preventive medicine methods aimed at improving public health.</p> <p><b>AI GPC-2.2.</b> Promotes a healthy lifestyle aimed at improving sanitary culture and disease prevention among patients (the population); organizes events for sanitary and hygiene education and the development of healthy lifestyle skills.</p> <p><b>AI GPC-2.4.</b> Ranks public health risk factors and selects and justifies optimal measures to minimize and eliminate health risks.</p> <p><b>AI OPC-2.7.</b> Assesses the need for the use of drug and non-drug prophylaxis, natural healing factors, and other methods aimed at preventing the occurrence of infectious and non-infectious diseases and eliminating the factors that contribute to their development.</p> | Regulatory and legal documentation in the field of preventive medicine, hygienic norms and rules concerning public health, risk factors for the development of chronic non-communicable diseases | Apply the principles, methods and means of health education of the population, use primary and secondary methods in medical activities prevention, establish causality causal relationships between changes in health status and the impact of environmental factors | Skills in assessing the effectiveness of preventive measures, skills in conducting sanitary and educational events                            |

|   |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                          |                                                                                                                                                                                |
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| 6 | <b>GPC-4.</b> Capable of using medical devices stipulated by the procedure for providing medical care, as well as conducting patient examinations for the purpose of establishing a diagnosis. | <p><b>AI GPC-4.1.</b> Uses modern medical technologies, specialized equipment and medical devices, disinfectants, medications, including immunobiological and other substances and their combinations, to solve professional problems from an evidence-based medicine perspective.</p> <p><b>AI GPC-4.2.</b> Understands the indications and contraindications for instrumental, functional, and laboratory examination methods, potential complications during examination, emergency care, and their prevention.</p> <p><b>AI GPC-4.3.</b> Interprets the results of the most common methods of instrumental, laboratory and functional diagnostics, thermometry to identify pathological processes.</p> <p><b>AI GPC-4.4.</b> Proficient in methods of general clinical examination of patients of various ages.</p> <p><b>AI GPC-4.5.</b> Formulates a preliminary diagnosis and a clinical diagnosis in accordance with the International classification of diseases (ICD).</p> | Methods of use and principles of application of general clinical, modern laboratory and instrumental methods, indications and contraindications for the use of instrumental, functional and laboratory examination methods for diseases, stages of formulating a clinical diagnosis                                                                                  | Determine the scope of additional studies, in accordance with standards and clinical guidelines, to clarify the diagnosis, interpret the results of the most common methods of instrumental, laboratory and functional diagnostics       | Skill in interpreting physical examination data, results of laboratory, instrumental, and functional diagnostic methods                                                        |
| 7 | <b>GPC-9.</b> Capable of implementing quality management principles in professional activities.                                                                                                | <p><b>AI GPC-9.1.</b> Analyzes and critically evaluates the quality of professional activity based on specified indicators.</p> <p><b>AI GPC-9.2.</b> Develops a plan of organizational and methodological measures to achieve the appropriate level of quality of professional activity.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Principles and standards of quality management in healthcare, methods for assessing and improving the quality of medical services, legal norms and ethical principles governing medical activities and the quality of medical services, the basic principles of lean manufacturing, the concepts of value and waste, and stages of implementing a lean manufacturing | Conduct an analysis of quality indicators of medical services, conduct surveys and collect data on the level of satisfaction of patients and employees of a medical organization, use applied and analytical tools of lean manufacturing | Programs for monitoring and analyzing the quality of medical services, methods for effective interaction with other team members, and lean manufacturing methods in healthcare |

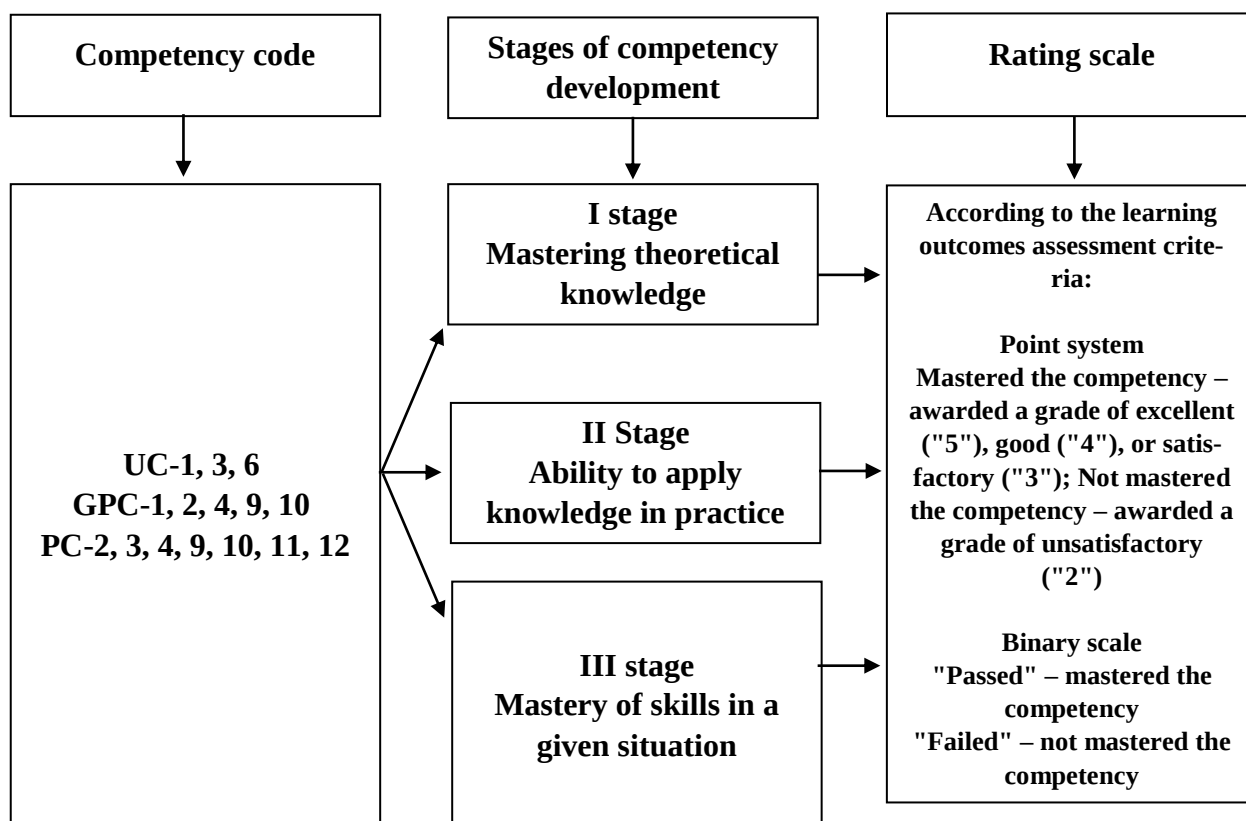
|                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                          |
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|                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | project in a medical organization                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                          |
| 8                                     | <b>GPC-10.</b> Capable of solving standard professional tasks using information and bibliographic resources, medical and biological terminology, and information and communication technologies, taking into account basic information security requirements. | <b>AI GPC-10.1.</b> Maintains confidentiality when working with information databases and personal data of citizens.<br><b>AI GPC-10.2.</b> Provides effective search for information necessary for solving professional problems, using legal reference systems and professional pharmaceutical databases.<br><b>AI GPC-10.4.</b> Applies automated information systems to the internal processes of a medical organization, as well as to organize interactions between medical personnel and patients of medical organizations.                                                                                                                                                                                                    | Bibliographic and medical information resources for medical workers with reliable information, regulatory legal acts on information security in healthcare, principles and standards of information security related to working with medical data, legal requirements for the protection of patients' personal data           | Use medical databases to search for scientific articles and recommendations on health issues, evaluate the quality of the information found, distinguish scientific sources from popular ones, extract and summarize the necessary data for making clinical decisions | Skills in working with electronic medical systems and specialized programs for managing medical information, skills in oral and written communication on medical topics, skills in critically evaluating information from various sources and drawing conclusions based on evidence                                                      |
| <b>Professional competencies (PC)</b> |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                          |
| 9                                     | <b>PC-2 .</b> Capable of collecting and analyzing complaints, life history, and medical history of the patient in order to establish a diagnosis.                                                                                                             | <b>AI PC-2.1.</b> Establishes contact with the patient.<br><b>AI PC-2.2.</b> Collects complaints, categorizes them, and identifies primary and secondary ones.<br><b>AI PC-2.3.</b> Collects and analyzes information about the onset of the disease, the presence of risk factors, the dynamics of symptom development, and the course of the disease.<br><b>AI PC-2.4.</b> Analyzes the timing of initial and repeat visits to medical care, the extent of therapy administered, and its effectiveness.<br><b>AI PC-2.5.</b> Collects and evaluates information about the patient's medical history, including data on past illnesses, injuries, and surgeries, as well as hereditary, professional, and epidemiological histories. | Models of communication between a doctor and a patient, the concept of emotional intelligence and methods of its development, the clinical picture, features of the course and possible complications of the most frequently encountered diseases in the practice of a general practitioner in various age groups of patients | Use verbal and non-verbal means of communication with the patient, determine the patient's status: collect anamnesis, conduct a survey of the patient with a specific somatic disease                                                                                 | The skill of establishing contact with the patient, the skill of collecting complaints and anamnesis, medical consultation within the framework of the Calgary-Cambridge communication model, the skill of drawing up a standard operating procedure for communication between the doctor and the patient in various clinical situations |
| 10                                    | <b>PC-3 .</b> Capable of conducting a physical examination of a patient                                                                                                                                                                                       | <b>AI PC-3.1 .</b> Conducts a complete physical examination of the patient (inspection, palpation, percussion, auscultation) and interprets the results.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Methods of physical examination of the patient, modern methods of la-                                                                                                                                                                                                                                                         | Conduct a physical examination (inspection, palpation, auscultation,                                                                                                                                                                                                  | Skills in physical examination of patients, including conducting an examination to identify                                                                                                                                                                                                                                              |

|    |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|    | and analyzing the results of additional examination methods in order to establish a diagnosis.                                                      | <p><b>AI PC-3.2</b> . Justifies the necessity, scope, and sequence of diagnostic procedures (laboratory, instrumental) and referrals for patient consultations with specialist doctors.</p> <p><b>AI PC-3.3</b> . Analyzes the results of the patient's examination, and, if necessary, justifies and plans the scope of additional research.</p> <p><b>AI PC-3.4</b> . Interprets and analyzes the results of collecting information about the patient's disease, data obtained during laboratory and instrumental examinations and during consultations with specialist physicians, and, if necessary, justifies and plans the scope of additional research.</p> <p><b>AI PC-3.5</b> . Performs early diagnosis of internal organ diseases. Diagnosis is made in accordance with the current ICD.</p> <p><b>AI PC-3.6</b> . Conducts differential diagnostics of internal organ diseases from other diseases.</p> | laboratory and instrumental examination (including endoscopic, radiological, morphological, ultrasound methods), stages of differential diagnosis for diseases most frequently encountered in the practice of a local general practitioner, principles of establishing a diagnosis taking into account the ICD. | blood pressure measurement, etc.); assess the patient's condition to decide on the need for medical care; determine the scope of additional studies in accordance with the disease prognosis, formulate a clinical diagnosis, conduct a differential diagnosis for the main syndromes in the clinical setting of diseases of the cardiovascular, urinary, digestive, and respiratory systems. | visual and other localizations of oncological diseases as part of a preventive medical examination and medical screening; skill in developing a plan for additional examination methods for the patient, including as part of preventive measures; skill in integrating physical examination data and the results of additional studies to formulate a diagnosis, an algorithm for establishing a preliminary diagnosis, a detailed clinical diagnosis and formulating them taking into account the ICD, an algorithm for differential diagnosis for the main syndromes in the clinic of internal diseases |
| 11 | <b>PC-4</b> . Capable of determining indications for hospitalization, indications for emergency care, including specialized emergency medical care. | <p><b>AI PC-4.1</b> . Defines medical indications for emergency medical care, including specialized emergency medical care.</p> <p><b>AI PC-4.2</b> . Refers patients for specialized medical care in an inpatient setting or in a day hospital setting if medically indicated, in accordance with current medical care procedures and clinical guidelines (treatment protocols) for providing medical care, taking into account medical care standards.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Indications for emergency and planned hospitalization for the most common diseases of the cardiovascular, urinary, digestive, and respiratory systems                                                                                                                                                           | Establish priorities for resolving patient health issues: urgent condition, urgent or planned medical care                                                                                                                                                                                                                                                                                    | Algorithm for emergency and planned hospitalization of a patient, the skill of issuing a referral for the provision of medical care                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|    |                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                        |
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| 12 | <p><b>PC-9</b> . Capable of conducting preventive medical examinations, medical examinations, and carrying out outpatient monitoring of patients with chronic diseases.</p> | <p><b>AI PC-9.1</b> . Organizes and conducts medical examinations taking into account age, health status, and profession in accordance with current regulatory legal acts and other documents.</p> <p><b>AI PC-9.2</b> . Conducts medical examinations of the adult population for the early detection of chronic non-communicable diseases and the main risk factors for their development.</p> <p><b>AI PC-9.3</b> . Conducts outpatient observation of patients with identified chronic non-communicable diseases.</p> <p><b>AI PC-9.4</b> . Determines medical indications for referral to specialist doctors and additional testing based on the results of a medical examination.</p> | <p>Strategies aimed at developing a healthy lifestyle among the population of Russia, concepts of chronic non-communicable diseases and risk factors for their development, regulatory framework for organizing and conducting medical examinations, preventive medical examinations and dispensary observation of adult patients, stages and features of implementing preventive measures, including within the framework of lean manufacturing in a medical organization, health groups of the adult population</p> | <p>Create an algorithm for patient routing during preventive medical examinations, medical check-ups and dispensary observation</p>                                                                                                                               | <p>Skill in conducting activities of the first and second stages of medical examination, identifying chronic non-communicable diseases and risk factors for their development, drawing up an algorithm for conducting classes in a health school and their implementation</p>          |
| 13 | <p><b>PC-10</b> . Capable of conducting and monitoring the effectiveness of preventative measures and promoting a healthy lifestyle.</p>                                    | <p><b>AI PC-10.1</b> . Prescribes preventive measures to patients taking into account risk factors for the prevention and early detection of diseases, including socially significant ones.</p> <p><b>AI PC-10.2</b> . Develops and implements healthy lifestyle programs, including programs to reduce alcohol and tobacco consumption and prevent and combat the non-medicinal use of narcotic drugs and psychotropic substances.</p>                                                                                                                                                                                                                                                     | <p>Aspects of physical, mental and social health, principles and methods of primary, secondary and tertiary prevention, risk factors for chronic non-communicable diseases and their impact on public health, methods for monitoring the effectiveness of preventive measures in primary health care</p>                                                                                                                                                                                                              | <p>Develop preventive programs targeted at specific population groups, taking into account lean manufacturing methods; evaluate the effectiveness of preventive measures and adapt programs depending on the specific needs and conditions of the population.</p> | <p>Skills in implementing measures to promote a healthy lifestyle among adults, developing information materials for the population on healthy lifestyles and the prevention of chronic non-communicable diseases, and modern information technologies used in preventive medicine</p> |

|                                                         |                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14                                                      | <b>PC-11</b> . Able to apply the basic principles of organization and management in the field of adult health care, in medical organizations and their structural divisions. | <p><b>AI PC 11.1</b> . Organizes medical care in medical organizations providing outpatient medical care, including at home when a medical worker is called.</p> <p><b>AI PC 11.2</b> . Monitors the performance of job responsibilities by the district nurse and other available medical workers.</p> <p><b>AI PC 11.3</b> . Uses methods and means of visual presentation of activity results</p> <p><b>AI PC 11.4</b> . Prepares a work plan and a report on the work of the district physician in accordance with established requirements.</p> <p><b>AI PC 11.5</b>. Ensures internal quality control and safety of medical activities within the scope of job responsibilities</p> <p><b>AI PC 11.6</b> . Uses information systems and the Internet in professional activities.</p> | The structure and functions of medical organizations, laws and regulations governing the field of healthcare, lean manufacturing concepts in medicine                                                                                                                                       | Ensure internal quality control and safety of medical activities within the scope of their job responsibilities, effectively interact with various specialists and employees of medical institutions, plan and organize work processes using lean manufacturing principles | Methodologies for optimizing processes in medical organizations providing medical care in outpatient settings using applied and analytical tools of lean manufacturing                                                                                                                      |
| 15                                                      | <b>PC-12</b> . Ready for maintaining medical records, including in electronic form.                                                                                          | <p><b>AI PC-12.1</b> . Completes medical documentation, including electronically.</p> <p><b>AI PC-12.2</b> . Works with patients' personal data and information constituting a medical secret.</p> <p><b>AI PC-12.3</b> . Prepares documents when referring patients for hospitalization, consultation, spa treatment, and medical and social examination.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             | The regulatory framework for the preparation of medical documentation, the main forms of medical documentation used in the practice of a district general practitioner, the rules for filling it out, the main directions of digital transformation of healthcare in the Russian Federation | Fill out the basic medical documentation forms used in the practice of a local general practitioner, and apply ethical and safety rules in digital healthcare systems                                                                                                      | Skills in the correct completion and maintenance of medical documentation, including in electronic form, skills in working with medical information systems, skills in working with regulatory materials set out in standards, procedures for the provision of care and clinical guidelines |
| <b>Total number of competencies being developed: 15</b> |                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |

### 1.6. Stages of competence formation and scale descriptions assessments



### 1.7. Forms of training organization and types of control

#### Forms of training organization:

- lectures;
- clinical practical classes;
- interactive forms of training organization (interactive test control, discussion, conference, role-playing and business games, process factories, educational training).

**Types of control:** input, current (initial, output), final (interim certification).

| No.                        | Type of control            | Control methods                                                                                                                                                                                                                                                         |
|----------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Incoming inspection</b> |                            |                                                                                                                                                                                                                                                                         |
| 1                          | Input                      | <ul style="list-style-type: none"> <li>• test control</li> </ul>                                                                                                                                                                                                        |
| <b>Current control</b>     |                            |                                                                                                                                                                                                                                                                         |
| 2                          | Original                   | <ul style="list-style-type: none"> <li>• test control;</li> <li>• oral control (individual and frontal questioning);</li> <li>• written test (test)</li> </ul>                                                                                                          |
| 3                          | Day off                    | <ul style="list-style-type: none"> <li>• oral control (solving situational problems, discussing the results of independent work);</li> <li>• written assessment (solving situational problems, checking the presentation of the results of independent work)</li> </ul> |
| <b>Final control</b>       |                            |                                                                                                                                                                                                                                                                         |
| 4                          | Intermediate certification | <ul style="list-style-type: none"> <li>• test control;</li> <li>• credit</li> </ul>                                                                                                                                                                                     |

**The entrance control** is carried out during the first clinical practical lesson, is designed to determine the level of preparedness of students and is carried out using testing on issues covered in previously completed disciplines.

**Initial and final assessments** are carried out at each clinical practical lesson and include an assessment of the theoretical knowledge and practical skills developed by students during the lesson.

**The midterm assessment** assesses the final theoretical and practical achievements of students who have mastered the course and includes a test and assessment. **The assessment** consists of *a practical component* (completing medical accounting and reporting forms, analyzing the results of applying applied and analytical lean manufacturing tools (standard operating charts, standard operating procedures, checklists, value stream maps, spaghetti diagrams, flow operation time-sheets, etc.) and *a theoretical component* (oral answering of a two-question paper).

## 2. Structure and content of the discipline

### 2.1. Scope of the discipline and types of educational activities

| Types of educational work             | Total hours | Semesters |
|---------------------------------------|-------------|-----------|
|                                       |             | 11        |
| Lectures                              | 14          | 14        |
| Clinical practical classes            | 34          | 34        |
| Independent work of students          | 24          | 24        |
| <b>Total labor intensity in hours</b> | 72          | 72        |
| <b>Total workload in credit units</b> | 2           | 2         |

## 2.2. Lecture themes and their summary

| Item No. | Lecture topics and their summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Codes of the formed competencies                                                                       | Labor intensity (hours) |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------|
| 1        | <p><b>Organizing primary health care for adults using lean manufacturing. Lean clinic .</b></p> <p>This lecture examines key aspects of primary healthcare for adults: principles of care delivery, forms, types, and conditions of delivery, the priority of prevention in modern Russian healthcare, patient routing algorithms, and the issue of continuity of care. It also explores the rules for organizing outpatient clinic operations, taking into account the implementation of lean technologies, the criteria for a new model of a medical organization providing primary healthcare, and organizational factors influencing patient satisfaction with medical care. The role of clinical guidelines, procedures, and standards for medical care in the work of primary healthcare workers is also highlighted.</p> | <p>UC-1, UC -3, UC -6</p> <p>GPC-1, GPC -2, GPC -9, GPC -10</p> <p>PC-4, PC-9, PC-10, PC-11, PC-12</p> | 2                       |
| 2        | <p><b>The role of lean technologies in modern healthcare. Basic principles of lean manufacturing.</b></p> <p>The lecture covers the fundamental principles of lean manufacturing, the concepts of value and waste, the Kaizen strategy, the Shewhart-Deming cycle, lean manufacturing methods (the 5S system , value stream mapping, total equipment maintenance, etc.), and applied and analytical tools (kanban, spaghetti diagram, Ishikawa diagram, the "five whys," etc.). It also covers the principles of implementing lean technologies in primary healthcare, the concept of "out-of-the-box solutions" and "best practices" in healthcare.</p>                                                                                                                                                                        | <p>UC-1, UC-3, UC-6</p> <p>GPC-1, GPC-9</p> <p>PC-10, PC-11, PC-12</p>                                 | 2                       |
| 3        | <p><b>Effective communication in medical practice: psychological foundations, barriers and ways to overcome them .</b></p> <p>The lecture examines the fundamentals of psychological aspects of communication and the elements of communication. It also covers communication barriers in the doctor-patient relationship, ways to overcome them, and strategies for effective communication. Conflicts: causes, types decisions and behavior patterns.</p>                                                                                                                                                                                                                                                                                                                                                                     | <p>UC-1, UC-3, UC-6</p> <p>GPC-1</p> <p>PC-2, PC-12</p>                                                | 2                       |
| 4        | <p><b>Methods and strategies for the prevention of chronic non-communicable diseases: the role of medical examinations and preventive medical examinations of the adult population in lean production conditions.</b></p> <p>The lecture covers the main areas and strategies in the field of prevention of chronic non-communicable diseases and risk factors for their development, classification of risk factors (modifiable, non-modifiable), their essence and methods for identifying them in patients during screening or diagnosis, the concept and types of screening, the regulatory framework for preventive measures in the Russian Federation, the role and tasks of medical prevention offices and departments, measures of the first and second stages of medical</p>                                           | <p>UC-1, UC-3, UC-6</p> <p>GPC-2, GPC-4, GPC-9</p> <p>PC-2, PC-3, PC-4, PC-9, PC-10, PC-11, PC-12</p>  | 2                       |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                       |           |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------|
|                    | examination, indications for referral to the second stage of medical examination, definition of health groups, routing of patients during preventive measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                       |           |
| 5                  | <p><b>Methods and strategies for the prevention of chronic non-communicable diseases: the role of preventive counseling of the adult population in lean manufacturing conditions.</b></p> <p>The lecture examines the regulatory framework for organizing and conducting preventive counseling, types of preventive counseling, an algorithm for preventive counseling, rules for organizing and conducting health schools for patients with chronic non-communicable diseases, features of preventive counseling for elderly and senile individuals, and the main aspects of preventive counseling for individuals with risk factors for the development of chronic non-communicable diseases (poor nutrition, sedentary lifestyle, smoking, overweight and obesity, hypercholesterolemia).</p> | <p>UC-1, UC-3, UC-6</p> <p>GPC-2, GPC-4, GPC-9</p> <p>PC-2, PC-3, PC-4, PC-9, PC-10, PC-11, PC-12</p> | 2         |
| 6                  | <p><b>Methods and strategies for the prevention of chronic non-communicable diseases: the role of dispensary monitoring of the adult population in lean production conditions.</b></p> <p>The lecture examines the concept and procedure for conducting dispensary observation, the regulatory framework for organizing dispensary observation of adults and its role as a criterion for the quality and accessibility of medical care, plans for dispensary observation of patients by a general practitioner for various nosologies (arterial hypertension, coronary heart disease, chronic lung and gastrointestinal diseases, etc.), indicators for assessing the effectiveness of the measures taken</p>                                                                                    | <p>UC-1, UC-3, UC-6</p> <p>GPC-2, GPC-4, GPC-9</p> <p>PC-2, PC-3, PC-4, PC-9, PC-10, PC-11, PC-12</p> | 2         |
| 7                  | <p><b>Innovations in healthcare: the role of physician digital competencies in the technological era.</b></p> <p>The lecture examines the importance of digital technologies for improving the quality of treatment, the vectors of digital transformation of healthcare in the Russian Federation, the foundations of the federal project "Unified Digital Contour in Healthcare," the role of artificial intelligence in the work of a physician, the fundamentals of ethics and security in digital healthcare, the concept of critical information infrastructure objects, the specifics of working with medical information systems, and the role of telemedicine consultations in physician practice in providing primary health care.</p>                                                 | <p>UC-1, UC-3, UC-6</p> <p>GPC-1, GPC-9, GPC-10</p> <p>PC-2, PC-4, PC-11, PC-12</p>                   | 2         |
| <b>Total hours</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                       | <b>14</b> |

### 2.3. Thematic plan of practical classes and their content

| Item No. | Topic titles clinical practical classes                                                                                                                            | Contents of clinical practical topics classes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Codes of the developed competencies and indicators of their achievement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Types control | Labor intensity (hours) |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------|
| 1        | Organization of primary health care for the adult population. The role of clinical guidelines, standards, and procedures in assessing the quality of medical care. | <p><b>Theoretical part</b> : modern policy for improving public health in the Russian Federation, basic principles of health protection, regulatory framework for organizing the provision of primary health care, the priority of prevention in modern healthcare in the Russian Federation, the quality of medical care, the role of clinical guidelines, standards and procedures for providing medical care, patient routing algorithms and the issue of continuity of medical care, indicators of public satisfaction with the provision of medical care and strategies for improving it</p> <p><b>Practical part</b> : working with current regulatory documents, acts, clinical guidelines and standards on the topic of the lesson; working with a doctor at an outpatient appointment, filling out documentation (including electronic): a medical record of a patient receiving medical care in an outpatient setting (registration form No. 025/u), issuing a certificate of incapacity for work, a referral for medical care (registration form No. 057/u)</p> | <p>UC-1 (AI UC-1.1, 1.2, 1.3, 1.5).<br/>UC-3 (AI UC-3.1, 3.2, 3.3).<br/>UC-6 (AI UC-6.1, 6.2, 6.3, 6.4).</p> <p>GPC-1 (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).<br/>GPC-2 (AI GPC-2.1, AI GPC-2.2, AI GPC-2.4, AI GPC-2.7).<br/>GPC-9 (GPC-9.1, GPC-9.2).<br/>GPC-10 (AI GPC-10.1, AI GPC-10.2, AI GPC-10.4).</p> <p>PC-4 (ID PC-4.1, ID PC-4.2).<br/>PC-9 (AI PC-9.1, AI PC-9.2, AI PC-9.3, AI PC-9.4).<br/>PC-10 (AI PC-10.1, AI PC-10.2).<br/>PC-11 (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br/>PC-12 (AI PC-12.1, AI PC-12.2, AI PC-12.3).</p> | Current       | 3.4                     |
| 2        | Fundamentals of Lean Management in the Work of a District General Practitioner. Principles, Methods, and Tools of Lean Manufacturing                               | <p><b>Theoretical part</b> : basic principles of lean manufacturing, concepts of value and waste, Kaizen strategy, Shewhart-Deming cycle, lean manufacturing methods (5S system, value stream mapping, total equipment maintenance system, etc.), applied and analytical tools (kanban, spaghetti diagram, Ishikawa diagram, five whys, etc.), stages of implementing a lean manufacturing project in a medical organization</p> <p><b>Practical part</b> : working with current regulatory documents, acts, GOST on the topic of the lesson, filling out a checklist for assessing the compliance of a workplace with the 5S system ( using the example of a local general practitioner's office, a general practitioner's office, and a</p>                                                                                                                                                                                                                                                                                                                              | <p>UC -1 (AI UC-1.1, 1.2, 1.3, 1.5).<br/>UC -3 (AI UC-3.1, 3.2, 3.3).<br/>UC -6 (AI UC-6.1, 6.2, 6.3, 6.4).</p> <p>GPC-1 (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).<br/>GPC-9 (GPC-9.1, GPC-9.2).</p> <p>PC-10 (AI PC-10.1, AI PC-10.2).<br/>PC-11 (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).</p>                                                                                                                                                                                                                                                      | Current       | 3.4                     |

|   |                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |     |
|---|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
|   |                                                                                         | specialist's office), drawing up an approximate algorithm for patient routing and subsequent analysis of his client journey, drawing up kanban cards and spaghetti diagrams for processes in a medical organization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |     |
| 3 | The Lean Clinic is a new model of a medical organization providing primary health care. | <p><b>Theoretical part</b> : the project “New model of a medical organization providing primary health care”, levels of compliance with the new model of a medical organization and their criteria, methods for assessing the achievement of target values criteria of the "New Model of Medical Organization, providing primary health care", the basics of informing patients about the organization of medical activities of a medical organization providing primary health care</p> <p><b>Practical part</b> : business game "Standardization of processes in a medical organization providing primary health care", business game "Managing patient flows and quality of space in a medical organization providing primary health care", filling out checklists for achieving target values</p> | <p><b>UC-1</b> (AI UC-1.1, 1.2, 1.3, 1.5).<br/> <b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br/> <b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).</p> <p><b>GPC-1</b> (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).<br/> <b>GPC-4</b> (AI GPC-4.1, AI GPC-4.2, AI GPC-4.3, AI GPC-4.4, AI GPC-4.5).<br/> <b>GPC-9</b> (GPC-9.1, GPC-9.2).<br/> <b>GPC-10</b> (AI GPC-10.1, AI GPC-10.2, AI GPC-10.4).</p> <p><b>PC-4</b> (ID PC-4.1, ID PC-4.2).<br/> <b>PC-10</b> (AI PC-10.1, AI PC-10.2).<br/> <b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br/> <b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3).</p> | Current | 3.4 |
| 4 | Communication skills of a primary care physician. The role of emotional intelligence    | <p><b>Theoretical part</b> : models of communication between a doctor and a patient (Calgary-Cambridge, classification of models by R. Veatch), the role of communication in increasing patient satisfaction with medical care, tactics of delivering bad news, the concept of emotional intelligence and methods of its development, non-verbal means of communication, ethics and deontology in the practice of a district physician</p> <p><b>Practical part</b> : role-playing with practicing the skill of collecting complaints and anamnesis, medical consultation within the framework of the Calgary-Cambridge communication model, drawing up scripts of conversa-</p>                                                                                                                      | <p><b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).<br/> <b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br/> <b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).</p> <p><b>GPC-1</b> (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).</p> <p><b>PC-2</b> (ID PC-2.1, ID PC-2.2, ID PC-2.3, ID PC-2.4, ID PC-2.5).<br/> <b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3)</p>                                                                                                                                                                                                                                                                         | Current | 3.4 |

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|---|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
|   |                                                                                                                                    | tions and standard operating procedures for communication between a doctor and a patient in various clinical situations, participation in outpatient appointments with district physicians, general practitioners, and medical specialists                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |     |
| 5 | Organization of medical examinations and preventive medical examinations of the adult population in the context of lean production | <p><b>Theoretical part</b> : the concept of prevention, strategies aimed at forming a healthy lifestyle among the population of Russia, the regulatory framework for organizing and conducting medical examinations and preventive medical examinations, chronic non-communicable diseases and risk factors for their development, socially significant diseases and their monitoring, the concept and types of screening, activities of the first and second stages of medical examination, indications for referral to the second stage of medical examination, routing of patients during preventive measures, health groups of the adult population, rules for the preparation of medical documentation, organization of medical examinations and preventive medical examinations based on the principles of lean manufacturing</p> <p><b>Practical part</b> : working with current regulatory documents, acts, clinical guidelines and standards on the topic of the lesson, participation in outpatient appointments with district physicians, general practitioners, and medical specialists, drawing up a patient examination plan as part of a preventive medical examination and medical screening, working with the patient's educational medical record (registration form No. 025/u), practicing the skill of analyzing the results of a questionnaire when identifying risk factors for the development of chronic non-communicable diseases, practicing a script for proactively inviting a patient to a preventive event, filling out registration form No. 131/u "Registration card for a preventive medical examination (medical screening)"</p> | <p><b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).<br/> <b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br/> <b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).</p> <p><b>GPC-2</b> (AI GPC-2.1, AI GPC-2.2, AI GPC-2.4, AI GPC-2.7).<br/> <b>GPC-4</b> (AI GPC-4.1, AI GPC-4.2, AI GPC-4.3, AI GPC-4.4, AI GPC-4.5).<br/> <b>GPC-9</b> (GPC-9.1, GPC-9.2).</p> <p><b>PC-2</b> (ID PC-2.1, ID PC-2.2, ID PC-2.3, ID PC-2.4, ID PC-2.5).<br/> <b>PC-3</b> (ID PC-3.1, ID PC-3.2, ID PC-3.3, ID PC-3.4, ID PC-3.5, ID PC-3.6).<br/> <b>PC-4</b> (ID PC-4.1, ID PC-4.2).<br/> <b>PC-9</b> (AI PC-9.1, AI PC-9.2, AI PC-9.3, AI PC-9.4).<br/> <b>PC-10</b> (AI PC-10.1, AI PC-10.2).<br/> <b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br/> <b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3)</p> | Current | 3.4 |
| 6 | Preventive counseling of patients with chronic non-communicable diseases and risk                                                  | <b>Theoretical part</b> : regulatory framework for organizing and conducting preventive counseling, skills and algo-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Current | 3.4 |

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|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
|   | factors for their development in a lean manufacturing environment                                                                                                              | <p>rhythm for preventive counseling, brief and in-depth preventive counseling, motivational counseling, individual and group counseling, rules for organizing and conducting health schools for patients with chronic non-communicable diseases, features of preventive counseling for elderly and senile people</p> <p><b>Practical part</b> : role-playing game with practicing the skill of brief and in-depth preventive counseling for patients with risk factors and identified chronic non-communicable diseases (ischemic heart disease, cerebrovascular diseases, diseases characterized by high blood pressure, frailty, high and very high absolute cardiovascular risk, high relative cardiovascular risk, obesity, hypercholesterolemia, smoking), development of patient information sheets on risk factors for chronic non-communicable diseases</p> | <p><b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br/> <b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).</p> <p><b>GPC-2</b> (AI GPC-2.1, AI GPC-2.2, AI GPC-2.4, AI GPC-2.7).<br/> <b>GPC-4</b> (AI GPC-4.1, AI GPC-4.2, AI GPC-4.3, AI GPC-4.4, AI GPC-4.5).<br/> <b>GPC-9</b> (AI GPC-9.1, AI GPC-9.2).</p> <p><b>PC-2</b> (ID PC-2.1, ID PC-2.2, ID PC-2.3, ID PC-2.4, ID PC-2.5).<br/> <b>PC-3</b> (ID PC-3.1, ID PC-3.2, ID PC-3.3, ID PC-3.4, ID PC-3.5, ID PC-3.6).<br/> <b>PC-4</b> (ID PC-4.1, ID PC-4.2).<br/> <b>PC-9</b> (AI PC-9.1, AI PC-9.2, AI PC-9.3, AI PC-9.4).<br/> <b>PC-10</b> (AI PC-10.1, AI PC-10.2).<br/> <b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br/> <b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3)</p> |         |     |
| 7 | Organization of dispensary observation of the adult population with chronic non-communicable diseases and risk factors for their development in the context of lean production | <p><b>Theoretical part</b> : the concept and procedure for conducting dispensary observation, the regulatory framework for organizing dispensary observation for adults and its role as a criterion for the quality and accessibility of medical care, the contingent subject to dispensary observation, the rules for registering a patient for dispensary observation, indicators for assessing the effectiveness of the measures taken</p> <p><b>Practical part</b> : working with current regulatory documents, acts, clinical guidelines and standards on the topic of the lesson, participation in outpatient appointments with district general practitioners, general practitioners, and medical specialists, drawing up a plan for dispensary</p>                                                                                                          | <p><b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).<br/> <b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br/> <b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).</p> <p><b>GPC-2</b> (AI GPC-2.1, AI GPC-2.2, AI GPC-2.4, AI GPC-2.7).<br/> <b>GPC-4</b> (AI GPC-4.1, AI GPC-4.2, AI GPC-4.3, AI GPC-4.4, AI GPC-4.5).<br/> <b>GPC-9</b> (AI GPC-9.1, AI GPC-9.2).</p>                                                                                                                                                                                                                                                                                                                                                                                                          | Current | 3.4 |

|   |                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |     |
|---|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
|   |                                                                                                       | observation of patients by a general practitioner for various nosologies (arterial hypertension, coronary heart disease, chronic lung and gastrointestinal diseases, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>PC-2</b> (ID PC-2.1, ID PC-2.2, ID PC-2.3, ID PC-2.4, ID PC-2.5).<br><b>PC-3</b> (ID PC-3.1, ID PC-3.2, ID PC-3.3, ID PC-3.4, ID PC-3.5, ID PC-3.6).<br><b>PC-4</b> (ID PC-4.1, ID PC-4.2).<br><b>PK-9</b> (AI PC-9.1, AI PC-9.2, AI PC-9.3, AI PC-9.4).<br><b>PK-10</b> (AI PC-10.1, AI PC-10.2).<br><b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br><b>PK-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3)                                                                                                              |         |     |
| 8 | Digital Transformation of Healthcare. Digital Competencies of the District General Practitioner       | <p><b>Theoretical section</b> : the importance of digital technologies for improving the quality of treatment, vectors of digital transformation of healthcare in the Russian Federation, the fundamentals of the federal project "Unified Digital Contour in Healthcare", the role of artificial intelligence in the work of a doctor, the fundamentals of ethics and security in digital healthcare, the concept of critical information infrastructure objects, the specifics of working with medical information systems, the role of telemedicine consultations in the practice of a doctor in providing primary health care.</p> <p><b>Practical part</b> : working with current regulatory documents and acts on the topic of the lesson; working with a doctor at an outpatient appointment, filling out documentation in electronic form: a medical record of a patient receiving medical care on an outpatient basis (registration form No. 025/u), issuing a certificate of incapacity for work, a referral for medical care (registration form No. 057/u), writing prescriptions</p> | <b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).<br><b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br><b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).<br><br><b>GPC-1</b> (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).<br><b>GPC-9</b> (AI GPC-9.1, AI GPC-9.2).<br><b>GPC-10</b> (AI GPC-10.1, AI GPC-10.2, AI GPC-10.4).<br><br><b>PC-2</b> (ID PC-2.1, ID PC-2.2, ID PC-2.3, ID PC-2.4, ID PC-2.5).<br><b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br><b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3) | Current | 3.4 |
| 9 | Design in a healthcare organization providing primary health care in a lean manufacturing environment | <b>Theoretical part</b> : fundamentals of social design, concepts of improvement projects, proposals for improvement, best practices, out-of-the-box solutions, models for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).<br><b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br><b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).                                                                                                                                                                                                                                                                                                                                                                                          | Current | 3.4 |

|    |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |     |
|----|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|
|    |               | <p>creating and stages of implementing best practices, priority areas for developing best practices in a medical organization, the concept of replicating best practices</p> <p><b>Practical part</b> : building a pyramid of problems, conducting process factories / "hedgehog fairs" using value stream mapping and the "6-3-5" method according to scenarios describing the routine processes of a medical organization providing primary health care (undergoing a medical examination, establishing a "5S" system at the workplace of a district physician, patient feedback, etc.)</p> | <p><b>GPC-1</b> (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).<br/> <b>GPC-4</b> (AI GPC-4.1, AI GPC-4.2, AI GPC-4.3, AI GPC-4.4, AI GPC-4.5).<br/> <b>GPC-9</b> (AI GPC-9.1, AI GPC-9.2).<br/> <b>GPC-10</b> (AI GPC-10.1, AI GPC-10.2, AI GPC-10.4).<br/> <b>PC-9</b> (AI PC-9.1, AI PC-9.2, AI PC-9.3, AI PC-9.4).<br/> <b>PC-10</b> (AI PC-10.1, AI PC-10.2).<br/> <b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br/> <b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3)</p>                                                                   |       |     |
| 10 | Credit lesson | <p><b>Theoretical part</b> : assessment of the student's theoretical knowledge on the issues of the discipline being studied</p> <p><b>Practical part</b> : filling out forms for accounting and reporting medical documentation, analysis of the results of using applied and analytical tools of lean manufacturing</p>                                                                                                                                                                                                                                                                     | <p><b>UC-1</b> (AI UC-1.1, AI UC-1.2, AI UC-1.3, AI UC-1.5).<br/> <b>UC-3</b> (AI UC-3.1, AI UC 3.2, AI UC-3.3).<br/> <b>UC-6</b> (AI UC-6.1, AI UC-6.2, AI UC-6.3, AI UC-6.4).<br/> <b>GPC-1</b> (AI GPC-1.1, AI GPC-1.2, AI GPC-1.3).<br/> <b>GPC-2</b> (AI GPC-2.1, AI GPC-2.2, AI GPC-2.4, AI GPC-2.7).<br/> <b>GPC-4</b> (AI GPC-4.1, AI GPC-4.2, AI GPC-4.3, AI GPC-4.4, AI GPC-4.5).<br/> <b>GPC-9</b> (AI GPC-9.1, AI GPC-9.2).<br/> <b>GPC-10</b> (AI GPC-10.1, AI GPC-10.2, AI GPC-10.4).<br/> <b>PC-2</b> (ID PC-2.1, ID PC-2.2, ID PC-2.3, ID PC-2.4, ID PC-2.5).</p> | Final | 3.4 |

|                    |  |  |                                                                                                                                                                                                                                                                                                                                                                              |  |           |
|--------------------|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------|
|                    |  |  | <b>PC-3</b> (ID PC-3.1, ID PC-3.2, ID PC-3.3, ID PC-3.4, ID PC-3.5, ID PC-3.6).<br><b>PC-4</b> (ID PC-4.1, ID PC-4.2).<br><b>PC-9</b> (AI PC-9.1, AI PC-9.2, AI PC-9.3, AI PC-9.4).<br><b>PC-10</b> (AI PC-10.1, AI PC-10.2).<br><b>PC-11</b> (AI PC 11.1, AI PC 11.2, AI PC 11.3, AI PC 11.4, AI PC 11.5, AI PC 11.6).<br><b>PC-12</b> (AI PC-12.1, AI PC-12.2, AI PC-12.3) |  |           |
| <b>Total hours</b> |  |  |                                                                                                                                                                                                                                                                                                                                                                              |  | <b>34</b> |

## 2.4 Interactive forms of learning

In order to enhance students' cognitive activity in clinical practical classes, interactive forms of training organization are widely used (interactive test control, discussion, conference, role-playing and business games, process factories, educational training).

| No. | Clinical topic practical lesson                                                                                                                                                    | Labor intensity in hours | Interactive form training | Labor intensity in hours, as a percentage of the lesson |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------|---------------------------------------------------------|
| 1   | Organization of primary health care provision to the adult population.<br>The role of clinical guidelines, standards, and procedures in assessing the quality of medical care help | 3.4                      | interactive test control  | 20 minutes<br>(0.33 hours) / 13%                        |
| 2   | Fundamentals of lean management in the work of a district general practitioner. Principles, methods, and tools of lean manufacturing                                               | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |
|     |                                                                                                                                                                                    |                          | educational training      | 40 minutes<br>(0.67 hours) / 26%                        |
| 3   | The lean clinic is a new model of a medical organization providing primary health care.                                                                                            | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |
|     |                                                                                                                                                                                    |                          | business game             | 60 minutes<br>(1 hour) / 39%                            |
| 4   | Communication skills of a district general practitioner.<br>The role of emotional intelligence                                                                                     | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |
|     |                                                                                                                                                                                    |                          | role-playing game         | 60 minutes<br>(1 hour) / 39%                            |
| 5   | Organization of medical examinations and preventive medical examinations of the adult population in the conditions lean manufacturing                                              | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |
|     |                                                                                                                                                                                    |                          | conference                | 40 minutes<br>(0.67 hours) / 26%                        |
| 6   | Preventive counseling of patients with chronic non-communicable diseases and risk factors for their development in a lean environment production                                   | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |
|     |                                                                                                                                                                                    |                          | role-playing game         | 60 minutes<br>(1 hour) / 39%                            |
| 7   | Organization of dispensary observation of the adult population with chronic non-communicable diseases and risk factors for their development in a lean environment production      | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |
|     |                                                                                                                                                                                    |                          | discussion                | 20 minutes<br>(0.33 hours) / 13%                        |
| 8   |                                                                                                                                                                                    | 3.4                      | interactive test control  | 10 minutes<br>(0.17 hours) / 6.5%                       |

|    |                                                                                                              |     |                          |                                |
|----|--------------------------------------------------------------------------------------------------------------|-----|--------------------------|--------------------------------|
|    | Digital transformation of healthcare: digital competencies for general practitioners district police officer |     | educational training     | 40 minutes (0.67 hours) / 26%  |
| 9  | Design in a healthcare organization providing primary health care in a lean manufacturing environment        | 3.4 | interactive test control | 10 minutes (0.17 hours) / 6.5% |
|    |                                                                                                              |     | factory processes        | 60 minutes (1 hour) / 39%      |
| 10 | Credit lesson                                                                                                | 3.4 | interactive test control | 60 minutes (1 hour) / 39%      |

## 2.5. Criteria for assessing students' knowledge

The basis for determining the level of knowledge, skills, and abilities are the assessment criteria:

- completeness and correctness;
- correct, precise answer;
- correct but incomplete or imprecise answer;
- incorrect answer;
- no answer.

When assigning marks, the classification of errors and their quality are taken into account:

- gross errors;
- similar errors;
- minor errors;
- shortcomings.

Students' success in mastering the course "Lean technologies and digital transformation of the healthcare system in the context of primary health care" is determined by the quality of their acquisition of knowledge, skills, and practical abilities. Grading is based on a five-point scale: "5" for excellent, "4" for good, "3" for satisfactory, and "2" for unsatisfactory.

The conversion of a grade into a point scale is carried out according to the following scheme:

| Success rate<br>(quality of development) | Rating on a five-point scale |
|------------------------------------------|------------------------------|
| 90-100%                                  | «5»                          |
| 80-89%                                   | «4»                          |
| 70-79%                                   | «3»                          |
| Below 70%                                | «2»                          |

### *Entrance knowledge control*

The entrance control is carried out during the first clinical practical lesson, is designed to determine the level of preparedness of students and is carried out using testing on issues covered in previously completed disciplines.

Criteria for assessing the results of the entrance knowledge assessment:

| <b>Percentage of correct answers<br/>based on the test results</b> | <b>Rating on a five-point scale</b> |
|--------------------------------------------------------------------|-------------------------------------|
| 90-100%                                                            | «5»                                 |
| 80-89%                                                             | «4»                                 |
| 70-79%                                                             | «3»                                 |
| Below 70%                                                          | «2»                                 |

### ***Current knowledge control***

Ongoing assessment includes initial and final knowledge assessments. Initial and final assessments are conducted at each clinical practical lesson and include an assessment of the students' theoretical knowledge and practical skills developed during the lesson.

Initial knowledge control can be carried out using test control, oral control (individual and frontal questioning), written control (test paper).

Final knowledge assessment can be carried out using oral assessment (solving situational problems, discussing the results of independent work), written assessment (solving situational problems, checking the presentation of the results of independent work).

Distribution of grades in clinical practical classes:

| <b>Item No.</b> | <b>Clinical topic practical lesson</b>                                                                                                                                             | <b>Theoretical Part</b> | <b>Practical Part</b> | <b>General grade</b> |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------|----------------------|
| 1               | Organization of primary health care provision to the adult population.<br>The role of clinical guidelines, standards, and procedures in assessing the quality of medical care help | 2-5                     | 2-5                   | 2-5                  |
| 2               | Fundamentals of Lean Management in the Work of a District General Practitioner. Principles, Methods, and Tools of Lean Manufacturing                                               | 2-5                     | 2-5                   | 2-5                  |
| 3               | The Lean Clinic is a new model of a medical organization providing primary health care.                                                                                            | 2-5                     | 2-5                   | 2-5                  |
| 4               | Communication skills of a district general practitioner.<br>The role of emotional intelligence                                                                                     | 2-5                     | 2-5                   | 2-5                  |
| 5               | Organization of medical examinations and preventive medical examinations of the adult population in the conditions lean manufacturing                                              | 2-5                     | 2-5                   | 2-5                  |
| 6               | Preventive counseling of patients with chronic non-communicable diseases and risk factors for their development in a lean environment production                                   | 2-5                     | 2-5                   | 2-5                  |
| 7               | Organization of dispensary observation of the adult population with chronic non-communicable diseases and risk factors for their development in a lean environment production      | 2-5                     | 2-5                   | 2-5                  |

|                      |                                                                                                                 |            |     |     |
|----------------------|-----------------------------------------------------------------------------------------------------------------|------------|-----|-----|
| 8                    | Digital Transformation of Healthcare: Digital Competencies for General Practitioners<br>district police officer | 2-5        | 2-5 | 2-5 |
| 9                    | Design in a healthcare organization providing primary health care in a lean manufacturing environment           | 2-5        | 2-5 | 2-5 |
| 10                   | Credit lesson                                                                                                   | 2-5        | 2-5 | 2-5 |
| <b>Average score</b> |                                                                                                                 | <b>2-5</b> |     |     |

The overall assessment during the current knowledge assessment is given on the day of the lesson, as the arithmetic mean result for all types of activities provided for in the given lesson of the discipline's work program.

Assessment criteria for current knowledge control:

| <b>Rating on a five-point scale</b> | <b>Evaluation criteria</b>                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Theoretical part</b>             |                                                                                                                                                                                                                                                                                                                                                                                               |
| 5                                   | The student has thoroughly and thoroughly mastered all the program material, presents it comprehensively, consistently, competently, and logically, has no difficulty responding to modified assignments, correctly justifies decisions, and is able to independently summarize and present the material without making errors. During testing, the percentage of correct answers is 90-100%. |
| 4                                   | The student has a solid knowledge of the program material, presents it clearly and to the point, and avoids significant inaccuracies in answering questions. However, the content and format of the answer may contain some inaccuracies. During testing, the percentage of correct answers is 80-89%.                                                                                        |
| 3                                   | The student has mastered the basic material but lacks certain details, makes inaccuracies, uses inaccurate wording, is unsequential in presenting the program material, and is unable to express and justify their opinions. During testing, the percentage of correct answers is 70-79%.                                                                                                     |
| 2                                   | The student has fragmented and unsystematic knowledge of the course material, fails to distinguish between essential and non-essential concepts, makes errors in defining concepts, distorts their meaning, and presents the material in a disorderly and uncertain manner. The percentage of correct answers during testing is less than 70%.                                                |
| <b>Practical part</b>               |                                                                                                                                                                                                                                                                                                                                                                                               |
| 5                                   | the student has fully mastered the practical skills provided by the program and can easily complete tasks and practical assignments                                                                                                                                                                                                                                                           |
| 4                                   | the student can apply theoretical principles in practice and has the necessary skills and abilities when completing practical tasks, but makes some inaccuracies when completing them                                                                                                                                                                                                         |
| 3                                   | the student has only some practical skills and has difficulty completing practical tasks                                                                                                                                                                                                                                                                                                      |

|   |                                                                                                            |
|---|------------------------------------------------------------------------------------------------------------|
| 2 | the student does not complete practical assignments, tasks or completes them with difficulty rude mistakes |
|---|------------------------------------------------------------------------------------------------------------|

### **Working off outstanding disciplinary debts :**

1) If a student misses a class for a valid reason, they have the right to make up the missed class and receive the maximum grade allowed for that class as stipulated by the course curriculum. The valid reason must be documented;

2) If a student misses a class without a valid excuse or receives a "2" grade for all activities during the class, they are required to make up the missed class. The grade received for all activities is multiplied by 0.8.

3) If a student is excused from a class at the request of the dean's office (participation in sports, cultural and other events), then he is given a grade of "5" for this class, provided that he submits a report on the completion of mandatory extracurricular independent work on the topic of the missed class.

### **Interim assessment**

The midterm assessment identifies the final results of the theoretical and practical training of students who have mastered the discipline and includes:

- conducting test control;
- credit (consists of a practical part and a theoretical part).

Assessment criteria for the midterm assessment:

| <b>Stages of interim certification</b> | <b>Rating on a five-point scale</b> | <b>Evaluation criteria</b>                                                                                                                                                                                                                                                                                                         |
|----------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test control                           | 5                                   | the proportion of correct answers is 90-100%                                                                                                                                                                                                                                                                                       |
|                                        | 4                                   | the proportion of correct answers is 80-89%                                                                                                                                                                                                                                                                                        |
|                                        | 3                                   | the proportion of correct answers is 70-79%                                                                                                                                                                                                                                                                                        |
|                                        | 2                                   | the proportion of correct answers is less than 70%                                                                                                                                                                                                                                                                                 |
| Theoretical part of the test           | 5                                   | the student has thoroughly and firmly mastered all the program material, presents it exhaustively, consistently, competently and logically, has no difficulty in answering when the task is modified, correctly justifies the decisions made, is able to independently generalize and present the material without making mistakes |
|                                        | 4                                   | the student has a firm grasp of the program material, presents it competently and to the point, without allowing significant inaccuracies in the answer to the question, however, the content and form of the answer contains some inaccuracies                                                                                    |
|                                        | 3                                   | the student has mastered the basic material, but does not know certain details, makes inaccuracies, uses insufficiently correct wording, disrupts the sequence in the presentation of the program material, and is unable to express and justify his/her opinions                                                                  |

|                |   |                                                                                                                                                                                                                                                                             |
|----------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | 2 | the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and the secondary, makes mistakes in defining concepts, distorts their meaning, and presents the material in a disorderly and uncertain manner |
| Practical part | 5 | the student has fully mastered the practical skills provided by the program and can easily complete tasks and practical assignments                                                                                                                                         |
|                | 4 | the student can apply theoretical principles in practice and has the necessary skills and abilities when completing practical tasks, but makes some inaccuracies when completing them                                                                                       |
|                | 3 | the student has only some practical skills and has difficulty completing practical tasks                                                                                                                                                                                    |
|                | 2 | the student does not complete practical assignments, tasks or completes them with difficulty<br>rude mistakes                                                                                                                                                               |

Based on the results of the assessment of the three stages of the midterm assessment, an average grade is given in favor of the student.

A student may be eligible for an automatic "excellent" grade if they have won a prize in a disciplinary or interdisciplinary Olympiad (university or regional) and have an average grade point average of at least 4.8 points based on their current academic performance. A student may decline the automatic grade and take the midterm assessment as usual.

Based on the results of the midterm assessment, the average grade is converted into a binary scale.

The conversion of the assessment into a binary scale is carried out according to the following scheme:

| Rating on a five-point scale | Binary scale |
|------------------------------|--------------|
| 5                            | passed       |
| 4                            | passed       |
| 3                            | passed       |
| 2                            | not credited |

## 2.6. Independent work of students: in the classroom, extracurricular

### *Independent classroom work of students*

Students' independent classroom work accounts for at least 25% of the class time. Students' independent classroom work is organized using methodological guidelines for students. This includes: testing as part of the initial and ongoing knowledge assessment, familiarization with the department's teaching aids, tables, and diagrams, solving situational problems, completing medical records, practicing lean manufacturing methods and tools, exploring digital tools used in primary healthcare, preparing for business/role-playing games, and completing individual assignments. The instructor provides consultations and assistance as needed, while simultaneously monitoring the quality of students' knowledge and their ability to apply this knowledge to solve assigned problems.

### ***Students' independent extracurricular work***

Students' independent extracurricular work is organized using methodological guidelines for students. The main forms of independent extracurricular work include: preparation of theoretical topics (lectures, primary and secondary literature, methodological guidelines, abstracting, compiling notes, diagrams, and algorithms), solving tests, working in an online classroom, preparing oral presentations (reports), and writing essays.

| Item No. | Topic of the clinical practical lesson                                                                                                                                          | Time for a student to prepare for a lesson | Forms of independent extracurricular work                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                  |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                                                                                                                                 |                                            | Compulsory and the same for all students                                                                                                                                                                                             | At the student's choice                                                                                                                                                                                                                                                                          |
| 1        | Organization of primary health care provision to the adult population. The role of clinical guidelines, standards, and procedures in assessing the quality of medical care help | 2                                          | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, reviewing, drawing up notes, diagrams, algorithms), solving a test task, working in an online classroom        | Report " Clinical guidelines as a tool for improving the quality of primary health care : application and evaluation of effectiveness "<br><br>Abstract: "Assessment of the quality of medical care in primary health care: modern methods and approaches"                                       |
| 2        | Fundamentals of lean management in the work of a district general practitioner. Principles, methods, and tools of lean manufacturing                                            | 2                                          | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom | Presentation: "Client Focus and Lean Management in the Work of a District Physician: How to Improve the Quality of Medical Services"<br><br>Abstract: "Application of Lean Management Principles in the Organization of the Work of a District Physician: Analysis and Improvement of Processes" |
| 3        | The Lean Clinic is a new model of a medical organization providing primary health care.                                                                                         | 2                                          | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a                                                 | Report "A patient-centered approach as the basis for a lean clinic"<br><br>Abstract: "The Role of Digital Technologies in                                                                                                                                                                        |

|   |                                                                                                                                                     |   |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                           |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                                                                                                                     |   | test assignment, working in an online classroom                                                                                                                                                                                      | Creating a Lean Clinic"                                                                                                                                                                                                                                                   |
| 4 | Communication skills of a primary care physician. The role of emotional intelligence                                                                | 2 | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom | Report: "Conflicts in Medical Practice: How Emotional Intelligence Helps Resolve Them"<br><br>Abstract: "Communication as a key element in establishing trusting relationships with patients "                                                                            |
| 5 | Organization of medical examinations and preventive medical examinations of the adult population in the conditions lean manufacturing               | 2 | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom | Report "Implementation of Lean Manufacturing Principles in the Organization of Medical Screening: Opportunities and Prospects"<br><br>Abstract: "Analysis of the effectiveness of medical examination of the adult population: evaluation methods and optimization paths" |
| 6 | Preventive counseling of patients with chronic non-communicable diseases and risk factors for their development in a lean manufacturing environment | 2 | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom | Report "Approaches to Preventive Counseling of Patients with Chronic Diseases: The Role of a Healthcare Professional"<br><br>Abstract: "The influence of social factors on the development of chronic non-communicable diseases: strategic approaches to prevention"      |
| 7 | Organization of dispensary observation of the adult population with chronic non-communicable diseases and                                           | 2 | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommenda-                                                                                                                     | Report "Using modern information technologies to organize dispensary observation"                                                                                                                                                                                         |

|                                       |                                                                                                       |           |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                          |
|---------------------------------------|-------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                       | risk factors for their development in the context of lean production                                  |           | tions, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom                                                                                                                | Abstract: "Models of dispensary observation of patients with chronic non-communicable diseases "                                                                                                                         |
| 8                                     | Digital Transformation of Healthcare. Digital Competencies of the District General Practitioner       | 2         | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom | Report "The Impact of Telemedicine on the Organization of the Work of a District General Practitioner: Opportunities and Challenges"<br><br>Abstract: "Electronic Medical Records: Benefits for Physicians and Patients" |
| 9                                     | Design in a healthcare organization providing primary health care in a lean manufacturing environment | 2         | preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, compiling notes, diagrams, algorithms), solving a test assignment, working in an online classroom | Report: "Stages of Designing Improvements. Identifying Typical "Bottlenecks" in Clinic Operations and How to Eliminate Them"<br><br>Abstract: "Lean Manufacturing Tools in Clinic Infrastructure Management"             |
| 10                                    | Credit lesson                                                                                         | 2         | Preparation for the test (lectures, primary and secondary literature), solving the test task, drawing up a plan for answering the question questions                                                                                 |                                                                                                                                                                                                                          |
| <b>Labor intensity in hours</b>       |                                                                                                       | <b>20</b> | <b>20</b>                                                                                                                                                                                                                            | <b>4</b>                                                                                                                                                                                                                 |
| <b>Total labor intensity in hours</b> |                                                                                                       |           | <b>24</b>                                                                                                                                                                                                                            |                                                                                                                                                                                                                          |

## 2.7. Research (project) work

Student research (project) work is a mandatory part of the course and is aimed at comprehensively developing students' universal, general, and professional competencies. Research (project) work involves studying specialized literature and other scientific and technical information on the achievements of domestic and international science and technology in the relevant field of study, participating in scientific research, and more. Students determine the topic independently or in consultation with the instructor.

**List of recommended topics for research (project) work:**

- 1) application of lean technologies in the organization of primary health care: analysis of successful examples;
- 2) the impact of clinical guidelines on the quality of medical care: implementation experience;
- 3) methods for assessing the effectiveness of lean management in the practice of a district general practitioner;
- 4) emotional intelligence of a physician and its impact on the quality of interaction with patients;
- 5) the impact of feedback monitoring on the quality of medical services in primary health care;
- 6) teamwork in primary healthcare: application of lean manufacturing principles;
- 7) analysis of the practice of introducing lean technologies into the quality management system of medical care;
- 8) The impact of telemedicine on access to primary health care: a local level study;
- 9) modern tools for assessing patient satisfaction with primary health care;
- 10) clinical pathways as a tool for optimizing the work of a district therapist: implementation and results;
- 11) social aspects of the implementation of lean technologies in healthcare: research into the opinions of employees of a medical organization;
- 12) prospects for using artificial intelligence in primary health care: challenges and opportunities.

**Criteria for assessing students' research (project) work:**

| Binary scale | Evaluation criteria                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Passed       | The research results in the report are presented in detail, the specialized literature is well-researched, and scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is studied.                                 |
| Not accepted | The material on the research results in the report is not presented accurately enough, the specialized literature is poorly studied, and scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is poorly studied |

### 3. Educational, methodological, material and technical and information support for the discipline

#### 3.1. Main literature

- 1) Medical prevention: textbook / Amlaev K. R. - Moscow: GEOTAR-Media, 2021. - 184 p. - ISBN 978-5-9704-6129-7. - Text: electronic // EBS "Student Consultant": [site]. - URL: <https://www.studentlibrary.ru/book/ISBN9785970461297.html> . - Access mode: by subscription.
- 2) Dvoynikov, S. I. Carrying out preventive measures: a tutorial / S. I. Dvoynikov, Yu. A. Tarasova, I. A. Fomushkina, E. O. Kostyukov; edited by S. I. Dvoynikov. - 2nd ed., revised and enlarged. - Moscow: GEOTAR-Media, 2023. - 480 p. - ISBN 978-5-9704-7345-0. - Text: electronic // EBS "Student Consultant": [site]. - URL: <https://www.studentlibrary.ru/book/ISBN9785970473450.html> . - Access mode: by subscription.
- 3) Amlaeva, K. R. General and specific issues of medical prevention: monograph / edited by K. R. Amlaeva, V. N. Muravyova - Moscow: GEOTAR-Media, 2018. - 512 p. - ISBN 978-5-9704-4575-4. - Text: electronic // EBS "Student Consultant": [site]. - URL: <https://www.studentlibrary.ru/book/ISBN9785970445754.html> . - Access mode: by subscription.
- 4) Obrezan, A. G. Socially significant diseases in therapeutic practice. Standards of early detection and prevention: a guide for doctors / A. G. Obrezan, E. K. Serezhina, A. A. Obrezan. - Moscow: GEOTAR-Media, 2023. -- 544 p. - ISBN 978-5-9704-7557-7, DOI: 10.33029/9704-7557-7-2023-1-544. - The electronic version is available on the website of the electronic library system "Student Consultant": [site]. URL: <https://www.studentlibrary.ru/book/ISBN9785970475577.html> . - Access mode: by subscription. - Text: electronic.
- 5) Larina, V.N. Polyclinic therapy : textbook / ed. Larina V.N. - Moscow: GEOTAR-Media, 2022. - 648 p. - ISBN 978-5-9704-6528-8. - Text: electronic // EBS "Student Consultant": [website]. - URL: <https://www.studentlibrary.ru/book/ISBN9785970465288.html> . - Access mode: by subscription.

#### 3.2. Further reading

- 1) Karakulina E. V., Shchegolev P. E., Khodyreva I. N., Kroshka D. V., Trefilov R. N., Bakulin P. S., Minigulov S. R., Kurmangulov A. A., Drapkina O. M., Shepel R. N. A new model of a medical organization providing primary health care (4th edition with additions and clarifications). Methodological recommendations. Moscow: ROPNIZ, OOO SILICEA-POLYGRAPH 2024. - 240 p. ISBN: 978-5-6052598-7-9. doi: 10.15829/ROPNIZ-k10-2024. EDN VZHFKA.
- 2) Organization of the process of supplying medicines, medical devices and other materials in a medical organization providing primary health care based on the pull principle. Methodological recommendations. Karakulina E. V., Vvedensky G. G., Khodyreva I. N., Kroshka D. V. [et al.] - M.: Federal State Budgetary Institution "NMITs TPM" of the Ministry of Health of the Russian Federation, 2023, 58 p. doi: 10.15829/FPPMSP-JIT-2023. EDN LPIIJN. ISBN 978-5-6051340-8-4.
- 3) Methodological recommendations for heads of primary health care organizations. Methodological recommendations / O. M. Drapkina, A. V. Kontsevaya, E. S. Ivanova, R. N. Shepel, L. Yu. Ogneva, I. M. Son, A. P. Fisenko, A. G. Timofeeva, S. R. Konova, S. I. Aprosimova, M. I. Ivardava, T. V. Shirokova, R. I. Abayhanov - M.: Federal State Budgetary Institution "NMITs TPM" of the Ministry of Health of the Russian Federation, 2021. -- 130 p. ISBN 978-5-6046966-0-6.
- 4) Organization of the workspace in the conditions of lean production according to "5 S": a tutorial / O.V. Ushakov, E.E. Mozhaev, E.N. Zakabunina. - Moscow: Direct-Media, 2022. - 56 p. ISBN 978-5-4499-3075-0.

5) Russian National Standard R 56407-2015. National standard of the Russian Federation. Lean manufacturing. Basic methods and tools.

6) Russian National Standard R 56906-2016. National standard of the Russian Federation. Lean manufacturing. Organization of the workspace (5 S ).

7) Russian National Standard R 56907-2016. National standard of the Russian Federation. Lean manufacturing. Visualization.

8) Russian National Standard R 56908-2016. National standard of the Russian Federation. Lean manufacturing. Standardization of work.

9) Russian National Standard R 57524-2017. National standard of the Russian Federation. Lean manufacturing. Value stream.

### 3.3. Educational and methodological support for the discipline, prepared by the department staff

| Item No.                               | Name                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Certified textbooks, monographs</b> |                                                                                                                                                                                                                                                                                                                                                                                      |
| 1                                      | Features of carrying out preventive measures and forming a healthy lifestyle in the provision of primary health care: a tutorial / A.A. Bakina, V.I. Pavlenko - Blagoveshchensk: FGBOU VO Amur State Medical Academy of the Ministry of Health of the Russian Federation, 2025. - 165 p. ISBN 978-5-6056322-0-7. URL : <a href="https://educ-amursma.ru">https://educ-amursma.ru</a> |
| 2                                      | Organization of primary health care for the adult population in a polyclinic: a tutorial / V.I. Pavlenko, O.M. Goncharova - Blagoveshchensk, 2023. - 151 p. URL : <a href="https://educ-amursma.ru">https://educ-amursma.ru</a>                                                                                                                                                      |
| <b>Other materials</b>                 |                                                                                                                                                                                                                                                                                                                                                                                      |
| 1                                      | Preventive medical examination and medical screening of the adult population in diagrams and tables: a tutorial / V.I. Pavlenko, A.A. Bakina - Blagoveshchensk: FGBOU VO Amur State Medical Academy of the Ministry of Health of the Russian Federation, 2025. - 17 p. URL : <a href="https://educ-amursma.ru">https://educ-amursma.ru</a>                                           |
| 2                                      | Educational video "OARS – motivational counseling skills" (A.A. Bakina, V.I. Pavlenko)                                                                                                                                                                                                                                                                                               |
| 3                                      | Educational video "Collecting complaints and anamnesis from a patient with suspected community-acquired pneumonia" (A.A. Bakina, V.I. Pavlenko)                                                                                                                                                                                                                                      |

### 3.4. Equipment used for the educational process

Based on 2 classrooms:

| Item No. | Name         | Quantity |
|----------|--------------|----------|
| 1        | School board | 2        |
| 2        | Table        | 15       |
| 3        | Chairs       | 32       |
| 4        | Laptop       | 1        |

### 3.5. Professional databases, information and reference systems, electronic educational resources

| No. p/p                           | Resource name                                             | Resource Description                                                                                                                                                                                                                                                                                              | Access                                                        | Resource address                                                                              |
|-----------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Electronic library systems</b> |                                                           |                                                                                                                                                                                                                                                                                                                   |                                                               |                                                                                               |
| 1                                 | Student Consultant. Medical University Electronic Library | For students and faculty of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids, and periodicals.                                                                                                                                                         | Remote access after registration under the university profile | <a href="https://www.studentlibrary.ru/">https://www.studentlibrary.ru/</a>                   |
| 2                                 | Reference and information system "MedBaseGeotar".         | The MedBaseGeotar reference and information system is designed for practicing medical specialists, researchers, teachers, postgraduate students, residents, senior students, and healthcare managers to quickly search, select, and read the medical literature they need for their work in a single data source. | Remote access after registration under the university profile | <a href="https://mbasegeotar.ru/pages/index.html">https://mbasegeotar.ru/pages/index.html</a> |
| 3                                 | Electronic Library System "Bookup"                        | A large medical library is an information and educational platform for the shared use of electronic educational and methodological publications from medical universities in Russia and the CIS countries.                                                                                                        | Remote access after registration under the university profile | <a href="https://www.books-up.ru/">https://www.books-up.ru/</a>                               |
| 4                                 | Electronic Block System "Lan"                             | The Network Electronic Library of Medical Universities is an electronic database of educational and scientific works on medical topics, created for the purpose of implementing network forms of professional educational programs, open access to educational materials for partner universities.                | Remote access after registration under the university profile | <a href="https://elanbook.com/">https://elanbook.com/</a>                                     |
| 5                                 | Scientific Electronic Library "CyberLeninka"              | CyberLeninka is a scientific electronic library built on the Open Science paradigm. Its main goals are the popularization of science and scientific activity, public oversight of the quality of scien-                                                                                                           | free access                                                   | <a href="https://cyberleninka.ru/">https://cyberleninka.ru/</a>                               |

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|                            |                                           | tific publications, the development of interdisciplinary research, a modern institution of scientific review, increasing the citation rate of Russian science, and building a knowledge infrastructure. It contains over 2.3 million scientific articles.             |                                  |                                                                                           |
| 6                          | Human Biology Knowledge Base              | Reference information on physiology , cell biology , genetics , biochemistry , immunology , pathology                                                                                                                                                                 | free access                      | <a href="http://humbio.ru/">http://humbio.ru/</a>                                         |
| 7                          | State Register of Medicines               | The State Register of Medicines website contains information on medications: indications, contraindications, mechanism of action, side effects, dosages, and methods of administration.                                                                               | free access                      | <a href="https://grls.rosminzdrav.ru/GRLS.aspx">https://grls.rosminzdrav.ru/GRLS.aspx</a> |
| <b>Information systems</b> |                                           |                                                                                                                                                                                                                                                                       |                                  |                                                                                           |
| 8                          | Clinical Guidelines Index                 | A resource of the Russian Ministry of Health that contains clinical guidelines developed and approved by medical professional non-profit organizations of the Russian Federation, as well as methodological guidelines, nomenclatures, and other reference materials. | Link to download the application | <a href="https://cr.minzdrav.gov.ru/#/">https://cr.minzdrav.gov.ru/#/</a>                 |
| 9                          | Federal Electronic Medical Library (FEMB) | The Federal Electronic Medical Library is part of the unified state information system in the field of healthcare as a reference system . The FEMB was created on the basis of the collections of the I.M. Sechenov Central Scientific Medical Library.               | free access                      | <a href="https://femb.ru/">https://femb.ru/</a>                                           |
| 10                         | Russian State Library (RSL)               | Collection size: approximately 3 million titles<br>Period covered: from the 11th century to the present<br>The Russian State Library's Electronic Library is a collection of electronic copies of valuable and frequently requested publications                      | Registration on the website      | <a href="https://www.rsl.ru/">https://www.rsl.ru/</a>                                     |

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|                                |                                                                    | from the Russian State Library's collections, from external sources, as well as documents originally created in electronic form.                                                                                                                                                                                       |             |                                                                           |
| 11                             | Russian Medical Association                                        | A professional online resource. Purpose: to facilitate the effective professional activities of medical personnel. Contains the charter, personnel, structure, membership rules, and information about the Russian Medical Union.                                                                                      | free access | <a href="http://www.rmass.ru/">http://www.rmass.ru/</a>                   |
| 12                             | Web medicine                                                       | The website provides a directory of professional medical resources, including links to the most authoritative subject-specific websites, journals, societies, as well as useful documents and programs. The website is intended for physicians, students, and staff of medical universities and research institutions. | free access | <a href="http://web-med.irkutsk.ru/">http://web-med.irkutsk.ru/</a>       |
| <b>Databases</b>               |                                                                    |                                                                                                                                                                                                                                                                                                                        |             |                                                                           |
| 13                             | World Health Organization                                          | The site contains news, statistics on countries that are members of the World Health Organization, fact sheets, reports, WHO publications, and much more.                                                                                                                                                              | free access | <a href="http://www.who.int/ru/">http://www.who.int/ru/</a>               |
| 14                             | Ministry of Science and Higher Education of the Russian Federation | The website of the Ministry of Science and Higher Education of the Russian Federation contains news, newsletters, reports, publications, and much more.                                                                                                                                                                | free access | <a href="http://www.minobrnauki.gov.ru">http://www.minobrnauki.gov.ru</a> |
| 15                             | Ministry of Education of the Russian Federation                    | The website of the Ministry of Education of the Russian Federation contains news, newsletters, reports, publications, and much more.                                                                                                                                                                                   | free access | <a href="https://edu.gov.ru/">https://edu.gov.ru/</a>                     |
| 16                             | Polpred.com                                                        | Electronic library system Business media.<br>Media review                                                                                                                                                                                                                                                              | free access | <a href="https://polpred.com/news">https://polpred.com/news</a>           |
| <b>Bibliographic databases</b> |                                                                    |                                                                                                                                                                                                                                                                                                                        |             |                                                                           |
| 17                             | Database "Russian Medicine"                                        | Created at the Central Scientific and Methodological Library, it                                                                                                                                                                                                                                                       | free access | <a href="https://rucml.ru/">https://rucml.ru/</a>                         |

|    |                                     |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                 |                                                                                             |
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|    |                                     | covers the entire collection since 1988. The database contains bibliographic descriptions of articles from Russian journals and collections, dissertations and their abstracts, as well as Russian and foreign books, institute proceedings, conference materials, etc. Thematically, the database covers all areas of medicine and related fields of biology, biophysics, biochemistry, psychology, etc. |                                                                 |                                                                                             |
| 18 | PubMed                              | A text database of medical and biological publications in English. PubMed is an electronic search engine with free access to 30 million publications from 4,800 indexed medical journals. The database contains articles published from 1960 to the present, including information from MEDLINE, PreMEDLINE, and NLM. Each year, the portal is updated with more than 500,000 new papers.                 | free access                                                     | <a href="https://pubmed.ncbi.nlm.nih.gov/">https://pubmed.ncbi.nlm.nih.gov/</a>             |
| 19 | eLIBRARY.RU                         | A Russian information portal in science, technology, medicine, and education, containing abstracts and full texts of over 13 million scientific articles and publications. The eLIBRARY.RU platform offers electronic versions of over 2,000 Russian scientific and technical journals, including over 1,000 open-access journals.                                                                        | Full functionality of the site is available after registration. | <a href="http://elibrary.ru/defaultx.asp">http://elibrary.ru/defaultx.asp</a>               |
| 20 | Electronic library of dissertations | Currently, the Electronic Library of Dissertations of the Russian State Library contains more than 919,000 full texts of dissertations and abstracts.                                                                                                                                                                                                                                                     | free access                                                     | <a href="http://diss.rsl.ru/?menu=diss-catalog/">http://diss.rsl.ru/?menu=diss-catalog/</a> |
| 21 | Medline.ru                          | Biomedical portal for specialists. Biomedical journal                                                                                                                                                                                                                                                                                                                                                     | free access                                                     | <a href="https://journal.scbm.ru/journal/index">https://journal.scbm.ru/journal/index</a>   |

|    |                                               |                                                                    |             |                                                         |
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| 22 | Official Internet portal of legal information | The single official state information and legal resource in Russia | free access | <a href="http://pravo.gov.ru/">http://pravo.gov.ru/</a> |
|----|-----------------------------------------------|--------------------------------------------------------------------|-------------|---------------------------------------------------------|

### 3.6. Licensed and freely distributed software used in the educational process

List of software (commercial software products)

| No. p/p | List of software (commercial software products)                                                                    | Details of supporting documents                                             |
|---------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1       | MS operating system Windows 7 Pro                                                                                  | License number 48381779                                                     |
| 2       | MS operating system Windows 10 Pro                                                                                 | CONTRACT No. UT-368 from September 21, 2021                                 |
| 3       | MS Office                                                                                                          | License numbers: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919 |
| 4       | Kaspersky Endpoint Security for Business – Standard Russian Edition. 50-99 Node 1-year Educational Renewal License | Agreement No. 7 AA dated 02/07/2025                                         |
| 5       | 1C Accounting and 1C Salary                                                                                        | LICENSE AGREEMENT 612/L dated 02.02.2022 (additional licenses)              |
| 6       | 1C: PROF University                                                                                                | LICENSE AGREEMENT No. KrTsB-004537 dated December 19, 2023                  |
| 7       | 1C: PROF Library                                                                                                   | LICENSE AGREEMENT No. 2281 dated November 11, 2020                          |
| 8       | Consultant Plus                                                                                                    | Contract No. 41AA dated December 27, 2024                                   |
| 9       | Kontur.Tolk                                                                                                        | Agreement No. K213753/24 dated August 13, 2024                              |
| 10      | 3KL e-learning environment (Russian Moodle)                                                                        | Agreement No. 1362.5 dated November 20, 2024                                |
| 11      | Astra Linux Common Edition                                                                                         | Agreement No. 142 A dated September 21, 2021                                |
| 12      | Information system "Plans"                                                                                         | Agreement No. 2873-24 dated June 28, 2024                                   |
| 13      | 1C: Document Management                                                                                            | Agreement No. 2191 dated 10/15/2020                                         |
| 14      | R7-Office                                                                                                          | Agreement No. 2 KS dated 12/18/2020                                         |
| 15      | License for the "ROSA CHROME OS Workstation"                                                                       | Agreement No. 88A dated 08/22/2024                                          |
| 16      | Alt Virtualization Server 10 (for secondary and higher vocational education)                                       | Agreement No. 14AK dated September 27, 2024                                 |
| 17      | Dr.Web Desktop Security Suite Comprehensive Protection + Control Center for 12 months                              | Agreement No. 8 dated October 21, 2024                                      |

|    |                                                 |                                       |
|----|-------------------------------------------------|---------------------------------------|
| 18 | Schedule software for educational institutions" | Agreement No. 82A dated July 30, 2024 |
|----|-------------------------------------------------|---------------------------------------|

#### List of freely distributed software

| No . p/p | List of freely distributed software | Links to the license agreement                                                                                                                                                                                                                                                                                                           |
|----------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Yandex Browser                      | <i>Freely distributed</i><br>License Agreement for the Use of Yandex Browser Software<br><a href="https://yandex.ru/legal/browser_agreement/">https://yandex.ru/legal/browser_agreement/</a>                                                                                                                                             |
| 2        | Yandex.Telemost                     | <i>Freely distributed</i><br>License Agreement for the Use of Software<br><a href="https://yandex.ru/legal/telemost_mobile_agreement/">https://yandex.ru/legal/telemost_mobile_agreement/</a>                                                                                                                                            |
| 3        | Dr.Web CureIt!                      | <i>Freely distributed</i><br>License Agreement: <a href="https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf">https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf</a>                                                                                                                                            |
| 4        | OpenOffice                          | <i>Freely distributed</i><br>License: <a href="http://www.gnu.org/copyleft/lesser.html">http://www.gnu.org/copyleft/lesser.html</a>                                                                                                                                                                                                      |
| 5        | LibreOffice                         | <i>Freely distributed</i><br>License: <a href="https://ru.libreoffice.org/about-us/license/">https://ru.libreoffice.org/about-us/license/</a>                                                                                                                                                                                            |
| 6        | VK Calls                            | <i>Freely distributed</i><br><a href="https://vk.com/licence">https://vk.com/licence</a>                                                                                                                                                                                                                                                 |
| 7        | Kaspersky Free Antivirus            | <i>Freely distributed</i><br><a href="https://products.s.kaspersky-labs.com/homeuser/Kaspersky4Win2021/21.16.6.467/english-0.207.0/3830343439337c44454c7c4e554c4c/kis_eula-en-in.txt">https://products.s.kaspersky-labs.com/homeuser/Kaspersky4Win2021/21.16.6.467/english-0.207.0/3830343439337c44454c7c4e554c4c/kis_eula-en-in.txt</a> |

### 3.7. Information and telecommunications network resources "Internet"

1) Official website of the Ministry of Health of the Russian Federation. URL : <https://minzdrav.gov.ru/ru> .

2) Official website of the Federal State Budgetary Institution “National Medical Research Center for Therapeutic and Preventive Medicine” of the Ministry of Health of the Russian Federation. URL : <https://gnicpm.ru/> .

3) Official website of the Federal Service for Surveillance in Healthcare URL : <https://roszdravnadzor.gov.ru/> .

4) Clinical Guidelines Index (resource of the Russian Ministry of Health). URL : <https://cr.minzdrav.gov.ru/> .

5) Standards for the provision of primary health care (resource of the Ministry of Health of Russia). URL : <https://minzdrav.gov.ru/ministry/61/22/stranitsa-979/stranitsa-983/1-standarty-pervichnoy-mediko-sanitarnoy-pomoschi> .

6) Portal for operational interaction of participants of the Unified State Health Information System. URL : <https://portal.egisz.rosminzdrav.ru/> .

7) Scientific and practical journal "Preventive Medicine". URL : <https://gnicpm.ru/speczialistam/journals/profilakticheskaya-mediczina.html> .

8) Scientific and practical journal "Primary Health Care". URL : <https://gnicpm.ru/speczialistam/journals/nauchno-prakticheskij-zhurnal-pervichnaya-mediko-sanitarnaya-pomoshh.html>.

#### 4. Assessment Fund

##### 4.1. Current test control, final

Testing as part of the entrance control, ongoing control (initial testing), final control (during midterm assessment) is carried out in the electronic educational environment in the Moodle system (e-mail address: <https://educ-amursma.ru> ).

The total number of test questions for the entrance testing is 30, for the initial testing – 180, for the final testing – 180.

Testing is carried out by randomly generating an individual version from a general bank of questions, containing 10 questions for entrance testing, 10 questions for initial testing according to the topic of a specific lesson, and 60 questions for final testing.

##### *Examples of entrance control test questions*

Test assignments are located in the Moodle system (email address: <https://educ-amursma.ru> ).

1. MAIN ETIOLOGICAL FACTOR RHEUMATIC DISEASESIS
  - 1) staphylococcus
  - 2)  $\beta$ -hemolytic streptococcus groups A
  - 3) pneumococcus
  - 4) virus Cocksackie
2. AT MITRAL STENOSIS HYPERTROPHIC
  - 1) left ventricle, left atrium
  - 2) right ventricle, right atrium
  - 3) right ventricle, left atrium
  - 4) left ventricle, right atrium
3. A FORM OF ANGINA IN WHICH PAIN OCCURRES WHEN PHYSICAL LOAD, THIS
  - 1) voltage
  - 2) relaxation
  - 3) atypical
  - 4) variant

Standards of correct answers: 1 - 2, 2 - 3, 3 - 1.

##### *Sample test questions for the initial testing*

Test assignments are located in the Moodle system (email address: <https://educ-amursma.ru> ).

1. ACCORDING TO THE CONCEPT OF LEAN MANUFACTURING, ONE OF THE TYPES OF LOSS IS NOT
  - 1) overproduction
  - 2) unnecessary transportation
  - 3) standardization of processes

## 4) additional processing

2. A system for organizing and rationalizing a workspace in order to ensure safe and efficient performance of work, to improve the quality of a product/service produced by a medical organization, to reduce the number of defects/delivery, to create a comfortable psychological climate, to standardize and standardize workstations, to increase labor productivity by reducing the time spent searching for objects within the workspace.

- 1) 5S system
- 2) system 4A
- 3) spaghetti diagram
- 4) value stream map

3. A set of measures that includes a preventive medical examination and additional methods of examination, carried out for the purpose of assessing the state of health (including the definition of a health group and a dispensary observation group) and carried out in relation to certain groups of the population.

- 1) preventive medical examination
- 2) clinical examination
- 3) dispensary observation
- 4) preliminary medical examination

Standards of correct answers: 1 - 3, 2 - 1, 3 – 2.

***Examples of final test questions***

Test assignments are located in the Moodle system (email address: <https://educ-amursma.ru>).

1. METHODS FOR FINDING ROOT CAUSES OF PROBLEMS DO NOT INCLUDE

- 1) Method 5 "Why?"
- 2) Ishikawa diagram
- 3) building a pyramid of problems
- 4) spaghetti diagram

2. A TOOL THAT ALLOWS YOU TO RANK PROBLEMS IDENTIFIED DURING THE WORK PROCESS DEPENDING ON THE LEVEL AT WHICH THEIR SOLUTION IS LOCATED

- 1) pyramid of problems
- 2) bar chart
- 3) Ishikawa diagram
- 4) multivariate regression analysis

3. RISK FACTORS THAT INCREASE THE LIKELIHOOD OF DEVELOPING CHRONIC NON-INFECTIOUS DISEASES DO NOT INCLUDE

- 1) hypercholesterolemia
- 2) hyperglycemia
- 3) weather dependence
- 4) obesity

Standards of correct answers: 1 - 4, 2 - 1, 3 -3.

## 4.2. Situational tasks

### *Examples of situational problems :*

#### **Situational task No. 1 .**

##### **TERMS OF THE PROBLEM**

A 27-year-old man came to the medical prevention office of the clinic for a medical examination, was examined, and referred for an appointment (examination) by a general practitioner based on the results of the first stage of the medical examination.

At the time of the visit to the general practitioner, the patient has no active complaints, the patient denies the presence of chronic diseases. Hereditary anamnesis: father died of myocardial infarction at the age of 70. The presence of habitual intoxications: smokes cigarettes (20-25 cigarettes per day). On objective examination: the condition is satisfactory, excess body weight (height = 175 cm, weight - 90 kg, BMI =  $29.4 \text{ kg / m}^2$ , waist circumference = 101 cm). The skin and visible mucous membranes are physiologically colored, clean, peripheral lymph nodes are not enlarged, the thyroid gland is not enlarged, it has a homogeneous structure. In the lungs, vesicular breathing is heard, there are no wheezing, the respiratory rate is 16 per minute. Heart sounds are clear, rhythmic, the heart rate is 61 per minute. Blood pressure in both arms was 120 and 70 mmHg. The abdomen was soft and painless in all areas. The liver did not protrude beyond the costal margin. There was no peripheral edema. Stool and urination were normal.

Data from additional examination methods: total blood cholesterol level = 4.0 mmol/l, fasting blood glucose = 4.2 mmol/l.

##### **QUESTIONS FOR SITUATIONAL PROBLEM #1**

1. What medical services are included in the first stage of the medical examination plan for this patient?
2. Calculate the relative cardiovascular risk value for this patient.
3. Should this patient be referred for the second stage of the medical examination? If so, what medical procedures should be performed during the second stage of the medical examination?
4. Establish the patient's health group.

#### **Situational task No. 2 .**

##### **TERMS OF THE PROBLEM**

A 36-year-old woman, who had undergone a medical examination, is currently undergoing a final appointment with a general practitioner. The patient currently has no complaints, except for cervical osteochondrosis, a chronic condition. A questionnaire also revealed that she had previously been diagnosed with elevated cholesterol levels and does not take cholesterol-lowering medications. Family history: her mother died of ischemic stroke at age 50, and her maternal grandmother had a myocardial infarction at age 51. History of habitual intoxications: she does not smoke or drink alcohol. On physical examination: the patient's condition is satisfactory, height = 170 cm, weight - 60 kg, BMI =  $20.8 \text{ kg/m}^2$ , waist circumference = 65 cm. The skin and visible mucous membranes are of physiological color, clean, the peripheral lymph nodes are not enlarged, the thyroid gland is not enlarged, it has a homogeneous structure. In the lungs, breathing is vesicular, there are no wheezing, the respiratory rate is 17 per minute. Heart sounds are clear, rhythmic, the heart rate is 70 per minute. The blood pressure level in both arms was 110 and 70 mmHg. The abdomen is soft on palpation, painless in all sections. The liver does not protrude from under the edge of the costal arch. There is no peripheral edema. Stool and urination are normal.

Additional examination and specialist consultation results: total blood cholesterol = 6.0 mmol/L, fasting blood glucose = 3.8 mmol/L. Chest X-ray – normal. ECG – heart rate = 72 beats per minute, sinus rhythm, normal, electrical axis normal. Cervical cytology – normal. Obstetrician-gynecologist examination – practically healthy.

#### QUESTIONS FOR SITUATIONAL PROBLEM #2

1. What medical services are included in the first stage of the medical examination plan for this patient?
2. Should this patient be referred to the second stage of medical examination?
3. What issues should be emphasized during brief preventive counseling for this patient?
4. Determine the patient's health group.

#### ***Standards of correct answers to situational problems:***

##### **Situational task No. 1 .**

1. Survey (questionnaire), anthropometry (measurement of height, body weight, waist circumference and calculation of body mass index), measurement of blood pressure in peripheral arteries, determination of total cholesterol and fasting blood glucose levels, calculation of relative CVR, conducting a brief individual preventive consultation and an appointment (examination) with a general practitioner based on the results of the first stage of the medical examination.  
2.2%.
3. The patient is subject to referral to the second stage of the medical examination. This second stage of the medical examination should include spirometry, individual or group in-depth preventive counseling in the preventive medical department (office), and an appointment (examination) with a general practitioner based on the results of the second stage of the medical examination.
4. Health group II.

##### **Situational task No. 2 .**

1. Survey (questionnaire); anthropometry (measurement of height, body weight, waist circumference and calculation of body mass index), measurement of blood pressure in peripheral arteries, determination of total cholesterol and fasting blood glucose levels, calculation of relative CVR, chest fluorography, ECG, examination by a paramedic (midwife) or obstetrician-gynecologist, cytological examination of a smear from the cervix, brief individual preventive counseling and an appointment (examination) with a general practitioner based on the results of the first stage of the medical examination.
2. The patient is not subject to referral to the second stage of the medical examination.
3. Given a positive family history, during a brief preventive consultation, focus on measures to prevent atherosclerosis, especially in the presence of clinical manifestations of coronary heart disease and cerebrovascular disease. It is also important to consider the patient's lack of cholesterol-lowering drug therapy despite her history of elevated total cholesterol levels and during this current medical examination.
4. Health group I.

#### **4.3. A list of practical skills that a student should have after mastering the discipline**

Upon completion of the course "Lean Technologies and Digital Transformation of the Healthcare System in the Context of Primary Health Care," students should acquire the following skills:

- 1) establishing contact with the patient, collecting complaints and anamnesis, medical consultation (including within the framework of the Calgary-Cambridge communication model);
- 2) physical examination of the patient, including an examination to identify visual and other localizations of oncological diseases as part of a preventive medical examination and medical check-up;
- 3) drawing up a plan for conducting additional examination methods and patient routing (including as part of preventive medical examinations and screenings, and dispensary monitoring of the adult population);
- 4) interpretation and integration of physical examination data and the results of additional examination methods to formulate a preliminary and detailed clinical diagnosis (including according to ICD);
- 5) development of a differential diagnostic algorithm for the main syndromes in the clinic of internal diseases;
- 6) drawing up a plan of treatment and preventive measures for a specific patient in accordance with the standard and clinical recommendations;
- 7) algorithm for emergency and planned hospitalization of a patient;
- 8) drawing up an algorithm for conducting brief preventive counseling, in-depth individual preventive counseling;
- 9) development of an algorithm for conducting classes in a health school for adult patients and the skills to conduct them;
- 10) filling out the main forms of medical documentation used in the practice of a district general practitioner, including in electronic form using medical information systems (medical records of a patient receiving medical care on an outpatient basis, sick leave certificate, prescription form, referral for medical care, preventive medical examination (dispensary) record card, informed voluntary consent for medical intervention, etc.);
- 11) drawing up a standard operating procedure and a standard operating map for various processes implemented in the provision of primary health care;
- 12) development of information materials for the population on issues of healthy lifestyle and prevention of chronic non-communicable diseases;
- 13) application of lean manufacturing methods (5S system, value stream mapping, total equipment maintenance system, etc.), applied and analytical tools (kanban, spaghetti diagram, Ishikawa diagram, five whys, etc.).

#### **4.4. List of questions for the test**

- 1) Current public health policy in the Russian Federation, the regulatory framework for primary health care. The role of clinical guidelines, standards, and procedures for providing medical care in the practice of a district physician.
- 2) Basic principles of health protection, priority of prevention in modern healthcare of the Russian Federation.
- 3) The concept of prevention. Strategies aimed at promoting a healthy lifestyle among the Russian population. Regulatory framework for organizing and conducting medical screenings and preventive medical examinations.
- 4) Chronic non-communicable diseases and risk factors for their development, socially significant diseases and their monitoring.

- 5) The concept and types of screening, activities of the first stage of medical examination and preventive medical examination.
- 6) Patient routing during preventive medical examinations and screenings. Second-stage screening activities and indications for referral to the second-stage screening.
- 7) Health groups of the adult population: criteria, algorithm for determination and tactics of patient management.
- 8) Brief preventive counseling: implementation algorithm, stages, key skills of motivational counseling.
- 9) In-depth preventive counseling. Guidelines for organizing and conducting health schools for patients with chronic noncommunicable diseases.
- 10) Features of preventive counseling for elderly and senile persons.
- 11) Regulatory framework for organizing outpatient monitoring of adult patients. Procedure for conducting outpatient monitoring of adults. Rules for registering patients for outpatient monitoring.
- 12) A follow-up appointment (examination, consultation) with a general practitioner for an adult patient. Conditions that warrant outpatient observation by a general practitioner for adults.
- 13) Fundamentals of physician-patient communication. Veatch's physician-patient communication models and the role of communication in improving patient satisfaction with medical care.
- 14) The concept of emotional intelligence and methods of its development, non-verbal means of communication, tactics for delivering bad news to a patient.
- 15) The history, foundations, and philosophy of lean manufacturing. The regulatory framework for implementing lean technologies in the modern healthcare system of the Russian Federation.
- 16) The Role of Lean Technologies in Healthcare: Principles and Applications. A Process-Based and Functional Approach to Organizing a Healthcare Organization.
- 17) The concept of waste in lean manufacturing processes. Types of waste. Examples of waste in the organization of medical services.
- 18) Key approaches to social project activities in healthcare from a lean manufacturing perspective. Fundamentals of social project planning: concepts of planning, design, out-of-the-box solutions, and best practices; key elements of a social project; and typical stages of project implementation.
- 19) Goal setting in lean manufacturing. Application of the SMART methodology.
- 20) The Deming Cycle (PDCA cycle) – concept, elements, and tools and methods that support the PDCA cycle.
- 21) Lean manufacturing tools. Classification. Gemba management. Kanban concept.
- 22) Lean manufacturing tools: the 5S system. Concept, key principles of the system, and application in a healthcare organization.
- 23) Lean manufacturing tools: finding the root cause of problems. The essence of the "5 Whys" method and Ishikawa diagram. Their characteristics and application in a healthcare organization.
- 24) Lean manufacturing tools: process timing. Spaghetti diagrams and flow charts. Their specific features and application in a healthcare organization.

- 25) Lean manufacturing tools: value stream mapping. Concept, stages of value stream mapping, and application of the tool in a healthcare organization.
- 26) Factors influencing patient satisfaction with medical care: accessibility of medical care, communication between the patient and the medical organization's staff, and the navigation system of medical organizations.
- 27) The importance of digital technologies in healthcare in the Russian Federation, the foundations of the federal project "Unified Digital Contour in Healthcare".
- 28) The role of artificial intelligence in medical practice, the fundamentals of ethics and security in digital healthcare, and the concept of critical information infrastructure objects.
- 29) Peculiarities of working with medical information systems. The role of telemedicine consultations in physician practice when providing primary health care.
- 30) The project "New Model of a Medical Organization Providing Primary Health Care." Levels of compliance with the new model of a medical organization and their criteria, as well as methods for assessing achievement of target values.