

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION

PENZA STATE UNIVERSITY

MEDICAL INSTITUTE



WORKING PROGRAM OF DISCIPLINE

C 1.1.24 Public Health and Healthcare. Healthcare Economics

Specialty: 31.05.01. General Medicine

Qualification (degree) of the graduate: Medical doctor

Study format – full-time

Penza, 2018

1. Subject mastering goals

Main goals of mastering “Public health and healthcare. Healthcare economics” are studying organization of medical staff work in medical and preventive treatment facilities, accounting-and-reporting medical records, quality control of medical and preventive healthcare services.

Objectives of mastering the discipline are: to study methods of researching public health, organization of medical and preventive services for the public; to study methods of evaluating quality and events for increasing quality and efficiency of medical and preventive services; to study the basics of management, economics, marketing, planning and financing healthcare; to study innovative processes in healthcare, legal and ethical aspects of medical activity.

2. Subject's place in specialist MPEP's structure

The discipline “Public health and healthcare. Healthcare economics” refers to the base section of C1 part of the discipline.

Public health and healthcare is one of the basic disciplines which is correlated with the following disciplines: history of medicine, economics, legal studies, hygiene.

The main points of “Public health and healthcare” are necessary for studying clinical disciplines: operative surgery, therapy, obstetrics & gynecology, pediatrics, neurology, otorhinolaryngology, ophthalmology, urology, traumatology and orthopedics.

3. Student competences developed as a result of subject (module) mastering “Public health and healthcare. Healthcare economics”

Studying of the subject is intended to develop elements of the following competences according to FSESHE in the given field:

| Competence code | Title of competence | Structural elements of competence (having mastered the subject students should have knowledge, skills, working abilities) |
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| 1 | 2 | 3 |
| PC-1 | be able to perform the scope of measures aimed at protecting and promoting the health and safety of the public, including fostering healthy lifestyle, prevention of the diseases and their treatment, early diagnostic of medical conditions, their causes and conditions of their development, elimination of harmful environmental factors | Knowledge: <ol style="list-style-type: none">1. Methods of researching adults' health aimed at health protection, promotion and rehabilitation.2. Methods of identifying the impact of environmental factors on public health or health of individual groups.3. Forms and methods of organizing hygienic education of the public.4. Main issues and areas of modern public healthcare and international policy in this sphere.5. Principles of organizing prevention programmes. Preventive medical examination of the public.6. Specific features of primary, secondary and tertiary prevention of chronic infectious diseases. |
| | | Skills: <ol style="list-style-type: none">1. Use information on adults and children's health in the work of medical dental |

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| | | <p>institutions.</p> <ol style="list-style-type: none"> Analyze information on the health condition of the public. Make a list of events aimed at increasing the quality and efficiency of preventive help to the public and fostering healthy lifestyle. |
| | | <p>Working abilities:</p> <ol style="list-style-type: none"> Methods of researching public health aimed at health protection and promotion. Methods of identifying the impact of environmental factors on public health or health of individual groups. Methods of organizing hygienic education of the public. Methods of forming and implementing prevention programmes. |
| PC-4 | be ready to apply methods of public health monitoring and methods of medical statistical analysis of public health data | <p>Knowledge:</p> <ol style="list-style-type: none"> Methods of researching public health aimed at health protection and promotion. Methods of collecting, statistical processing and analyzing data on public health. Main medical and demographic indicators characterizing public health, definition and level in dynamics. Morbidity level and structure of causes of death. Indicators of disease and disability incidence, definition, characteristic features, level and structure. Main indicators of medical institution work. Methods of identifying the impact of environmental factors on public health or health of individual groups. <p>Skills:</p> <ol style="list-style-type: none"> Calculate and evaluate the main types of statistical values, correlation and standardization coefficients. Evaluate the validity of average and relative values. Make a plan and a programme of medical and statistical research. Calculate and evaluate the main medical and demographic indicators characterizing public health condition. Calculate and evaluate the level and structure of disease incidence and morbidity. |

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| | | <ol style="list-style-type: none"> Calculate and evaluate indicators characterizing disease incidence with temporary disability. Calculate and evaluate indicators characterizing medical institutions work. |
| | | <p>Working abilities:</p> <ol style="list-style-type: none"> Methods of researching public health. Methods of collecting, statistical processing and analyzing data on public health. Skills of making plans and programmes of medical and statistical research, defining representative volume of set sample. Skills of calculating and evaluating the main demographic indicators characterizing public health condition. Skills of calculating and evaluating the level and structure of disease incidence and morbidity. Skills of calculating and evaluating indicators characterizing disease incidence with temporary disability. Skills of calculating and evaluating indicators characterizing medical institutions work. |
| PC-17 | be ready to apply the standards of healthcare management in medical institutions of various levels | <p>Knowledge:</p> <ol style="list-style-type: none"> Healthcare systems (state, insurance, private). Standards of organizing primary, specialized, first aid and emergency medical aid. Structure of outpatient-polyclinic and inpatient medical institutions. International experience of healthcare organization and management. Methods of analyzing healthcare services quality control. Issues of organizing expert evaluation of temporary and persistent disability. Systems of organizing and managing work in medical institutions. Standards of organizing pharmacological support. <p>Skills:</p> <ol style="list-style-type: none"> Organize expert evaluation of healthcare services quality at the medical institution level. Conduct expert evaluation of temporary and persistent disability. Analyze the results of medical institution |

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| | | <p>work.</p> <p>4. Organize work of a medical institution and its departments according to the current legislature.</p> |
| | | <p>Working abilities:</p> <ol style="list-style-type: none"> 1. Methods of conducting expert evaluation of healthcare services quality at the level of medical institution or its department. 2. Algorithm of conducting expert evaluation of temporary and persistent disability. 3. Algorithm of organizing dispensary observation of decreed groups of people and patients with chronic diseases. |
| PC-18 | be ready to assist in evaluating the quality healthcare services with the use of medical statistical indicators and data | <p>Knowledge:</p> <ol style="list-style-type: none"> 1. Methods of analyzing work (organization, quality and efficiency) of medical institutions. 2. Methods of evaluating healthcare services quality in medical institutions and medical staff work. 3. Issues of organizing expert evaluation of temporary and persistent disability. |
| | | <p>Skills:</p> <ol style="list-style-type: none"> 1. Evaluate the results of a medical institution work based on medical and statistical indicators. 2. Evaluate healthcare services quality at the level of medical institution, its department. 3. Apply basic theoretical provisions, methodological approaches to analyzing and evaluating healthcare services quality in order to make relevant management decisions. 4. Apply knowledge in legal, financial, resource, methodological quality assurance of healthcare services when solving case problems. 5. Analyze and evaluate healthcare services quality on the example of case problems. 6. Apply standards for evaluating and improving healthcare services quality. |
| | | <p>Working abilities:</p> <ol style="list-style-type: none"> 1. Methods of evaluating healthcare services quality. |

4. Structure and contents of subject (module) “Public health and healthcare. Healthcare economics”

4.1. Subject’s (module’s) structure

General workload of the subject totals 6 credit units, 216 hours.

| № | Subject's (module's) sections and topics | Semester | Semester's weeks | Types of learning, including students' out-of-class work and workload (in hours) | | | | | | | | | Current progress monitoring types(<i>by semester's weeks</i>) | | | | | | | |
|--|--|----------|------------------|--|---------|----------|-----------------|-------------------|--------------------------|---------------------|-----------------------|---------------------|---|-------------|--------------|--------------------|---------------|--|-----------------------|-------|
| | | | | Work in class | | | | Out-of-class work | | | | | | | | | | | | |
| | | | | Total | Lecture | Practice | Laboratory work | Total | Preparing for class work | Papers, essays etc. | Course work (project) | Preparing for exams | Interview | Spoken test | Test marking | Check work marking | Paper marking | Marking of essays and other creative works | Course work (project) | other |
| I. Public health and healthcare | | | | | | | | | | | | | | | | | | | | |
| 1. | Section 1. <i>Theoretical basis of the discipline “Public health and healthcare”. Policy in the sphere of public health protection.</i> | 6 | | 2 | 2 | | | | | | | | | | | | | | | |
| 1.1. | Basics of “Public health and healthcare” as academic and scientific discipline. Policy in the sphere of public health protection. History of healthcare. | 6 | | 2 | 2 | | | | | | | | | | | | | | | |
| 2. | Section 2. <i>Basics of medical statistics and organization of statistic research. Statistical analysis.</i> | | | 12 | | 12 | | 6 | 6 | | | | | | | | | | | |
| 2.1. | Basics of medical statistics and organization of statistic research. Statistical methods of processing results of medical and biological research. | 6 | 1 | 2 | | 2 | | 1 | 1 | | | | 1 | | 1 | | | 1 | 1 | |

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|------|---|---|---|-----------|----------|----------|--|----------|----------|----------|----------|--|---|--|---|---|---|--|---|
| | Demonstrative practice in healthcare. Organization of public health studies. Stages of statistic research | | | | | | | | | | | | | | | | | | |
| 2.2. | Statistical series | 6 | 1 | 2 | | 2 | | 1 | 1 | | | | 1 | | 1 | | | | 1 |
| 2.3. | Average values. Applying average values for evaluating public health condition. Evaluating validity of research results. | 6 | 2 | 2 | | 2 | | 1 | 1 | | | | 2 | | 2 | | 2 | | 2 |
| 2.4. | Parametric techniques of evaluating relations between phenomena (correlation, dispersion). | 6 | 3 | 2 | | 2 | | 0,5 | 0,5 | | | | 3 | | 3 | | 3 | | 3 |
| 2.5. | Non-parametric techniques of evaluating relations between phenomena. | 6 | 3 | 2 | | 2 | | 0,5 | 0,5 | | | | 3 | | 3 | | 3 | | 3 |
| 2.6. | Test | 6 | 4 | 2 | | 2 | | 2 | 2 | | | | 4 | | 4 | | | | 4 |
| 3. | Section 3. <i>Public health and its determining factors</i> | | | 10 | 2 | 8 | | 4 | 4 | | | | | | | | | | |
| 3.1. | Medical and social aspects of demographic processes. Methods of studying and analysis of medical and demographic indicators | 6 | 5 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 5 | | 5 | | 5 | | 5 |
| 3.2. | Disease incidence. Methods of studying disease incidence. | 6 | 5 | 2 | | 2 | | 0,5 | 0,5 | | | | 5 | | 5 | | 5 | | 5 |
| 3.3. | Methods of calculating standardized coefficients when studying public disease incidence. | 6 | 6 | 2 | | 2 | | 1 | 1 | | | | 6 | | 6 | | 6 | | 6 |
| 3.4. | Test | 6 | 7 | 2 | | 2 | | 2 | 2 | | | | 8 | | 8 | | | | 8 |
| 4. | Section 4. <i>Promoting public health. Modern prevention issues</i> | | | 2 | 2 | | | 2 | | 2 | | | | | | | | | |
| 4.1. | Promotion of public health. Modern issues of prevention. Medical and social aspects of healthy lifestyle. Hygienic education of the public. | 6 | | 2 | 2 | | | 2 | | 2 | | | | | | 7 | | | |
| 5. | <i>The most important non-infectious and</i> | | | 6 | 6 | | | 7 | | 6 | 1 | | | | | | | | |

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|------|--|---|----|-----------|----------|-----------|--|-----------|-----------|---|---|--|----|--|----|---|----|---|----|
| | <i>infectious diseases as a medical and social problem: epidemiology, organization of medical and social aid, prevention</i> | | | | | | | | | | | | | | | | | | |
| 5.1. | Medical and social aspects of the most important non-infectious diseases (Circulatory, respiratory diseases, oncology) | 6 | | 2 | 2 | | | 2 | | 2 | | | | | | 7 | | | |
| 5.2. | Neuropsychic diseases, alcohol addiction, drug addiction, toxic substances addiction as a medical and social problem | 6 | | 2 | 2 | | | 3 | | 2 | 1 | | | | | 7 | | 7 | |
| 5.3. | Traumatism as a medical and social problem. Disability and rehabilitation as a medical and social problem. | 6 | | 2 | 2 | | | 2 | | 2 | | | | | | 7 | | | |
| 6. | Section 6. <i>Public health protection</i> | | | 34 | 4 | 30 | | 10 | 10 | | | | | | | | | | |
| 6.1. | Organizing primary healthcare services for the public | 6 | 7 | 2 | | 2 | | 0,5 | 0,5 | | | | 7 | | 7 | | 7 | | |
| 6.2. | Organizing in-patient care | 6 | 8 | 2 | | 2 | | 0,5 | 0,5 | | | | 8 | | 8 | | | | |
| 6.3. | Organizing first medical aid | | 9 | 2 | | 2 | | 0,5 | 0,5 | | | | 9 | | 9 | | | | |
| 6.4. | Organizing healthcare services for factory workers | 6 | 9 | 2 | | 2 | | 0,5 | 0,5 | | | | 9 | | 9 | | | | |
| 6.5. | Organizing healthcare services for rural population | 6 | 10 | 2 | | 2 | | 0,5 | 0,5 | | | | 10 | | 10 | | | | |
| 6.6. | Organizing outpatient care for women | 6 | 11 | 2 | | 2 | | 0,5 | 0,5 | | | | 11 | | 11 | | 11 | | 11 |
| 6.7. | Organizing inpatient care for women | 6 | 11 | 2 | | 2 | | 0,5 | 0,5 | | | | 11 | | 11 | | 11 | | 11 |
| 6.8. | Organizing outpatient care for children | 6 | 12 | 2 | | 2 | | 0,5 | 0,5 | | | | 12 | | 12 | | 12 | | 12 |
| 6.9. | Organizing inpatient care for children | 6 | 13 | 2 | | 2 | | 0,5 | 0,5 | | | | 13 | | 13 | | | | |
| 6.10 | Analyzing medical and preventive treatment facilities work and evaluating the quality of medical and preventive services on the example of an out-patient department | 6 | 13 | 2 | | 2 | | 0,5 | 0,5 | | | | 13 | | | | 13 | | 13 |

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| 6.11 | Analyzing medical and preventive treatment facilities work and evaluating the quality of medical and preventive services on the example of an inpatient department | 6 | 14 | 2 | | 2 | | 1 | 1 | | | | 14 | | | | | 14 | | 14 |
| 6.12 | Expert evaluation of temporary and persistent disability | 6 | 15 | 2 | | 2 | | 1 | 1 | | | | 15 | | 15 | | | 15 | | 15 |
| 6.13 | Organizing state sanitary and epidemiological service | 6 | 15 | | | 2 | | 0,5 | 0,5 | | | | 15 | | 15 | | | | | |
| 6.14 | Pharmacological help for the public. Provision of medical institutions with medical equipment and tools. Medical staff training. | 6 | | 2 | 2 | | | | | | | | | | | | | | | |
| 6.15 | Medical insurance | 6 | 16 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 16 | | 16 | | | | | |
| 7. | Section 7. <i>Healthcare abroad. The World Health Organization.</i> | | | 6 | 2 | 4 | | 7 | 4 | 2 | 1 | | | | | | | | | |
| 7.1. | Healthcare system in different countries. The World Health Organization. | 6 | | 2 | 2 | | | 3 | | 2 | 1 | | | | | | 1 7 | | 17 | |
| 7.2 | <i>Seminar</i> | 6 | 17, 18 | 4 | | 4 | | 4 | 4 | | | | 18 | | | | | | | 18 |
| II. Healthcare economics | | | | | | | | | | | | | | | | | | | | |
| 8 | Section 8. <i>Basics of healthcare planning, marketing, management, economics and financing</i> | 7 | | 57 | 19 | 38 | | 15 | 10,5 | | 4,5 | | | | | | | | | |
| 8.1 | <i>Healthcare planning: definition, principles, objectives and main areas.</i> | 7 | | 9 | 3 | 6 | | 1,5 | 1,5 | | | | | | | | | | | |
| 8.1.1 | Main methods of planning. Programme- and goal-oriented planning and functional and sectoral planning | 7 | 1 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 1 | | 1 | | | | | |
| 8.1.2 | Definition of public demand for healthcare services | 7 | 2 | 2 | | 2 | | 0,5 | 0,5 | | | | 2 | | 2 | | | 2 | | 2 |
| 8.1.3 | Healthcare plans. Parts of healthcare plans, their correlation | 7 | 3 | 3 | 1 | 2 | | 0,5 | 0,5 | | | | 3 | | 3 | | | | | |

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| 8.2 | <i>Basics of marketing</i> | 7 | | 8 | 4 | 4 | | 2,5 | 1 | | 1,5 | | | | | | | | |
| 8.2.1 | System of marketing research. Marketing information. | 7 | 4 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 4 | | 4 | | | | |
| 8.2.2 | Marketing of services and non-profit marketing | 7 | 5 | 4 | 2 | 2 | | 2 | 0,5 | | 1,5 | | 5 | | 5 | | 5 | | |
| 8.3 | <i>Basics of healthcare management</i> | 7 | | 10 | 4 | 6 | | 3 | 1,5 | | 1,5 | | | | | | | | |
| 8.3.1 | Methodic and methodological basics of clinical management | 7 | 6 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 6 | | 6 | | | | |
| 8.3.2 | Management of clinical healthcare quality. Healthcare services quality control. | 7 | 7 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 7 | | 7 | | | | |
| 8.3.3 | Information support of clinical management system. Management accounting in a medical institution. | 7 | 8 | 2 | | 2 | | 2 | 0,5 | | 1,5 | | 8 | | 8 | | 8 | | 8 |
| 8.4 | <i>Basics of healthcare economics</i> | 7 | | 14 | 4 | 10 | | 4 | 2,5 | | 1,5 | | | | | | | | |
| 8.4.1 | Application of the main economic laws and consumers' behavior on the medical and pharmacological markets | 7 | 9 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 9 | | 9 | | | | |
| 8.4.2 | Pricing policy of medical and pharmacological institutions. Pricing strategies and pricing methods. | 7 | 10 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 10 | | 10 | | | | |
| 8.4.3 | Planning the main economic indicators: goods turnover, goods resources management | 7 | 11 | 2 | | 2 | | 0,5 | 0,5 | | | | 11 | | 11 | | | | |
| 8.4.4 | Planning costs and profits of an organization | 7 | 12 | 2 | | 2 | | 0,5 | 0,5 | | | | 12 | | 12 | | | | |
| 8.4.5 | Business-planning | 7 | 13 | 2 | | 2 | | 2 | 0,5 | | 1,5 | | 13 | | 13 | | | | 13 |
| 8.5 | <i>Basics of healthcare financing</i> | 7 | | 16 | 4 | 12 | | 4 | 4 | | | | | | | | | | |
| 8.5.1 | Sources of financing in healthcare: consolidated budget and non-budget funds. Financial plan of an organization. | 7 | 14 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 14 | | 14 | | | | |
| 8.5. | Basics of municipal order to a medical | 7 | 15 | 4 | 2 | 2 | | 0,5 | 0,5 | | | | 15 | | 15 | | | | |

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| 2 | institution | | | | | | | | | | | | | | | | | | |
| 8.5.3 | Techniques of paying for healthcare services. Payment for medical staff work. | 7 | 16 | 2 | | 2 | | 0,5 | 0,5 | | | | 16 | | 16 | | | | |
| 8.5.4 | Paid healthcare services. | 7 | 17 | 2 | | 2 | | 0,5 | 0,5 | | | | 17 | | 17 | | | 17 | 17 |
| 8.5.3 | Seminar | 7 | 18,19 | 4 | | 4 | | 2 | 2 | | | | 17 | | | | | | 17 |
| 9 | <i>Preparing for examination</i> | | | | | | | | | | | 36 | | | | | | | |
| | General workload, in hours | | | 129 | 37 | 92 | | 87 | 34,5 | 10 | 6,5 | 36 | Interim attestation | | | | | | |
| | | | | | | | | | | | | | Type | | Semester | | | | |
| | | | | | | | | | | | | | Test | | 6 | | | | |
| | | | | | | | | | | | | | Exam | | 7 | | | | |

4.2. Subject's (module's) contents

Section 1. THEORETICAL BASICS OF THE DISCIPLINE "PUBLIC HEALTH AND HEALTHCARE". POLICY IN THE SPHERE OF PUBLIC HEALTH PROTECTION

Public health and healthcare as a scientific discipline about regularities in public health, impact of social conditions, environmental factors and lifestyle of health, ways of its protection and improvement. Correlation of social and biological in medicine. Main theoretical concepts of medicine and healthcare.

Place of the discipline "Public health and healthcare" among medical, hygienic and social sciences in the system of medical education.

Role of the discipline "Public health and healthcare" in practical work of a doctor, medical institutions and departments, in planning, managing and organizing work in healthcare.

Main methods of research in the discipline "Public health and healthcare": statistical, historical, experimental, sociological, economic and mathematical, method of modelling, expert evaluation method, epidemiological, etc.

Origin and development of social hygiene, organization of healthcare (public medicine) in other countries (A.Grotyan, A.Fischer, etc.). Origin and development of social hygiene, organization of healthcare in Russia (N.A. Semashko, Z.P. Solovyov, A.V. Molkov, M.F. Vladimirsky, G.N. Kaminsky, Z.G. Frenkel, G.A. Batkis, S.V. Kurashov, N.A. Vinogradov, M.D. Kovrigina, I.D. Bogatyrev, A.F. Serenko, A.M. Merkov, E.A. Sadvokasova, E.N. Shigan, etc.)

Problems of social policy in the country. Basics of national healthcare policy. Legal basis for the sphere. Problems of healthcare in the most important socio-political state documents (RF Constitution, legal acts, resolutions, regulations, etc.).

Healthcare as a systems of events for keeping, promoting and improving public health.

Main principles of national healthcare on different stages of its development.

Main areas of healthcare reform.

Theoretical aspects of medical ethics and medical deontology. Ethical and deontological traditions of Russian medicine.

Bioethics in doctors' work: way of applying new methods of prevention, diagnosis and treatment, conducting biomedical research, etc.

Physician's Oath. Physician-patient privilege. Patient's rights. Rights and social protection of medical workers.

Medical malpractice. Iatrogeny.

Section 2. BASICS OF MEDICAL STATISTICS AND ORGANIZATION OF STATISTICAL RESEARCH. STATISTICAL ANALYSIS.

Definition of statistics, its theoretical basics (theory of probability, law of large numbers). Application of statistics in medico-biological and medico-social research.

STAGES OF STATISTICAL RESEARCH

Stage 1: aim and objectives of research;

Stage 2: organizational (developing research plan and programme): research object, statistical multitude and its structure, types of statistical multitude (general, sample), observation unit, accounting features (quantitative, attributive, factor, resultative), models of statistical tables, types of statistical research (full, sample); determining sampling population size, ways of gathering material (randomized, mechanical, typical, serial, combined);

Stage 3: information gathering;

Stage 4: information processing, statistical grouping of the material gathered, preparing information for report, statistical summary report, statistical tables, information processing with the use of modern mathematical and statistical methods and calculation tools;

Stage 5: analysis and presentation of statistical research results;

Stage 6: introduction of research results into practice; evaluation of efficiency.

STATISTICAL METHODS OF PROCESSING MEDICAL AND BIOLOGICAL RESEARCH RESULTS

Methods of calculating generalized coefficients characterizing different sides of each programme feature:

- methods of calculating relative values. Concept of relative values, types of relative values – extensive, intensive, correlation, illustration method, their definition, calculation techniques, application area and their characteristics;
- methods of calculating average values. Variation series, types of variation series; values which characterize variation series (mode, median, arithmetical mean, standard deviation, variation coefficient, limit, amplitude), their features and application;
- methods of evaluating validity of relative and average values. General provisions on parametric and non-parametric methods of evaluating validity of results, their significance and practical application. Criteria of parametric evaluation method and ways of calculating them (representation mistake of average and relative values, confidence limits of average and relative values).

Methods of comparing different statistical multitudes (parametrical and non-parametrical methods), their application.

Methods of evaluating factors interaction. Concept of functional and correlation dependence. Correlation coefficient, its evaluation. Parametrical and non-parametrical methods of calculating correlation coefficient, their significance and practical application. Calculation techniques and analysis of standardized indicators.

Methods of analyzing phenomenon dynamics, dynamic series, definition. Types of dynamic series. Indicators of dynamic series, their calculation and practical application. Transformation of dynamic series.

Graphic images in statistics, types of graphic images, their usage for analyzing phenomena.

Section 3. PUBLIC HEALTH AND ITS DETERMINING FACTORS

Individual health: definition, medical and social criteria, complex evaluation, health groups.

Public health: criteria and indicators.

Scheme of studying public health or health of individual groups: the most important factors and conditions determining the level of public health – socio-economic (conditions and lifestyle), ecological and natural-climatic, biological (hereditary background, ethnic features, age, sex), level and organization of healthcare services.

MEDICAL DEMOGRAPHY. MEDICAL AND SOCIAL ASPECTS OF DEMOGRAPHIC PROCESSES

Demography and its medical and social aspects.

Definition of medical demography, its main sections. Significance of demographic data for characterizing public health, analyzing and planning work of healthcare institutions.

Public statics: the most important indicators (number, density of population, age-sex composition, etc.). Population census as a source of information, history, methods of conducting, results. Characteristic of changes in the population number, age-sex composition in the last decade. Types of age-sex structure of population. Population ageing as a modern demographic tendency of developed countries. Medical and social importance of this problem.

Public dynamics, its types. Migration of population: external, internal (urbanization, seasonal, circular). Factors determining migration; major tendencies. Impact of migration of public health; objectives of healthcare institutions.

Reproduction of population (natural course). General and special indicators, methods of calculation, analysis and evaluation. Role of a medical worker in registration of birth and death. Official records of births, deaths and marriages.

Modern condition and major tendencies of demographic processes in the Russian Federation and foreign countries in the last ten years, factors determining features and dynamics of modern

demographic processes. Regional features of population reproduction in different countries according to the level of their social and economic development.

Birth rate and fertility, methods of studying, general and special indicators. Impact of medical and social factors on their level and tendencies: conditions and lifestyle, age-sex structure of population, health condition, level of education and culture, organization of healthcare services, legislature on the issues of marriages and family, etc.

Death rate of population, methods of studying, general and age-sex indicators. Infant and perinatal mortality, their major causes. Factors which influence the level and tendencies of general and special mortality indicators.

Life expectancy at birth and average-expectancy life. Essence and significance of these indicators. Dynamics of life expectancy indicators of the whole population, of men and women in different countries. Factors which influence life expectancy at birth. Impact of some death causes on life expectancy of population.

Infant mortality and life expectancy at birth as integrated indicators of public health and social and economic welfare of society.

Natural population growth, its factors. Unnatural population decline.

Family as an object of demographic policy. Role of family in forming health. Medical and social research of families. Criteria of family health evaluation.

Analysis of theoretical concepts of population. Demographic forecasts. Demographic policy, its major trends in different countries.

Using demographic indicators in medical practitioner's work, their importance for evaluating healthcare institutions' work.

DISEASE INCIDENCE

Definition of disease incidence. Role of state statistics of disease incidence in studying public health condition.

International statistical classification of diseases and health-related problems (МКБ-X), principles and features of its composition.

Role of medical workers in providing full and credible information about disease incidence.

Methods of studying disease incidence and their comparative characteristics.

Epidemiological methods of studying disease incidence.

Types of disease incidence. Accounting-reporting documentation used for gathering, analyzing information on disease incidence. Special kinds of studying disease incidence based on utilisation of services, their specific features: general disease incidence based on the data from polyclinics and outpatient department, hospital, infectious (epidemiological), non-epidemiological, vocational, work traumatism, diseases with temporary disability.

General disease incidence based on utilization of services at polyclinics and outpatient departments. Methods of studying: observation unit, accounting and reporting documents and their content. Indicators of disease incidence: primary, general, collected.

Admission rate (hospital disease incidence). Methods of studying: observation unit, accounting and reporting documents, analysis of indicators (level, structure of disease incidence, etc.).

Infectious disease incidence: observation unit, accounting and reporting documentation, major indicators (incidence, structure, age-sex features, etc.).

The incidence of major non-epidemic diseases: observation unit, accounting and reporting documents, basic indicators.

Vocational disease incidence. Industrial injuries. Methods of studying them: observation units, accounting and reporting documents, indicators (level, structure, etc.).

Disease incidence with temporary disability. Specific features of studying diseases with temporary disability in health units and in an open network. Observation unit, primary accounting documents. Analysis of disease incidence with temporary disability according to 16- BH forms and personal account. Main indicators (number of incidents and days of disability per 100 employees, the cases structure and days of disability at work, average duration of one case of disability, the percentage of patients, the multiplicity of diseases, etc.).

Disease incidence of population according to medical check-ups. Types of medical check-ups (preliminary, periodic, target). Methodology of studying, accounting documents, indicators.

Disease incidence of population according to data on causes of death, methodology of studying, indicators. Single and multiple causes of death, significance of their analysis.

The current state, trends and patterns of disease incidence of the population in the Russian Federation (regional, age-sex, professional, etc.); factors which determine them.

The importance of disease incidence as a fundamental criterion of public health and individual groups for analyzing and planning work of doctors, healthcare bodies and institutions, for evaluating the quality and effectiveness of healthcare services.

DISABILITY

The definition of disability as one of the criteria of public health. Sources of information. The concept of primary disability indicators, incidence of disability (contingents).

Current status and trends in disability caused by major diseases, their defining factors.

The importance of learning disability for analyzing and evaluating the work of healthcare institutions.

PHYSICAL DEVELOPMENT

The definition of the term. Physical development as one of the criteria for evaluating the public health status. Anthropometric, somatometric and physiometric. Physical development indices.

Main indicators of physical development in different age-sex groups, their features and trends.

Factors affecting the dynamics of physical development.

Section 4. PROMOTING PUBLIC HEALTH. MODERN ISSUES OF PREVENTION

Prevention as one of the priority areas of public health protection. Prevention issues in legislation.

The goal of prevention; its objectives, levels (State, collective, individual, family) and types: social, socio-medical (health-social), medical.

Stages of prevention: primary, secondary, and tertiary. Criteria for evaluating the effectiveness of prevention.

Risk and "anti-risk" factors, definition of risk factors. Classification of risk factors and their practical importance. Risk factors assessment methods applied at the individual, group and population levels.

Prevention strategies (population, high-risk strategy), their usage to solve the tasks of promoting and keeping health.

Screening: definition, purpose, types. Risk groups: definition, stages of formation.

The concept of comprehensive integrated prevention.

The role of medical staff in the implementation of preventive measures.

Lifestyle: definition, categories. The influence of lifestyle on individual and public health (physical development, disease incidence, demographic indicators, disability).

Healthy lifestyle: definition, mechanisms of its formation. Healthy lifestyle as a tool of implementing prevention programmes at the individual, group and population levels. The role of doctors in the formation of healthy lifestyle.

The concept of medical activity, its parameters. Medical activity as a necessary element of healthy lifestyle.

Hygienic education of the population, objectives, principles, methods, forms and tools. Sequence of actions of medical workers when they choose methods and means of hygiene education of the population depending on the particular medico-social and economic conditions.

Hygiene education is a comprehensive multifaceted educational activity to preserve, promote and restore public health, bringing together the work of the family, healthcare and other governmental, public, industrial institutions, associations and organizations. Evaluating the effectiveness of this activity.

Section 5. THE MOST IMPORTANT NON-INFECTIOUS AND INFECTIOUS DISEASES AS A MEDICAL AND SOCIAL PROBLEM: EPIDEMIOLOGY, ORGANIZATION OF MEDICAL AND SOCIAL AID, PREVENTION

Medico-social problem: definition, criteria of significance (primary incidence, prevalence, disability, mortality, economic damage; organization of specialized medical aid, etc.).

Diseases of the circulatory system as a medical and social problem in Russia and abroad. Primary and general morbidity, mortality, age-sex and regional characteristics: level, dynamics, structure. Temporary disability, disability. Risk factors and prevention strategy, high risk strategy for illnesses of the circulatory system.

Organization of medical aid for diseases of the circulatory system. Types of specialized aid, structure and functions of cardiologic and rheumatic institutions.

Malignant neoplasms as a medical and social problem. Primary incidence and prevalence of malignant neoplasms in Russia and foreign countries.

Level, dynamics, structure of primary incidence and prevalence of malignant neoplasms, mortality caused by them. Age-sex, vocational and regional characteristics.

Organization of medical aid for cancer: clinic, oncology center, specialized departments of multidisciplinary hospitals, specialized centres. Departments of palliative care. Hospices.

The role of epidemiological studies in improving the fight against cancer. Risk factors of origin, course and outcomes of malignant neoplasms. Cancer register. Clinical examination of high-risk groups and cancer patients, role of healthy lifestyle in prevention of malignant neoplasms.

Respiratory diseases as a medical and social problem. Level, structure, dynamics of morbidity, place of respiratory diseases in the structure of total and infant mortality. Temporary disability, disability; economic losses due to respiratory diseases.

Chronic nonspecific lung diseases, their place in the structure of respiratory disease incidence, mortality from them. Risk factors of chronic nonspecific lung diseases.

Primary, secondary and tertiary prevention of respiratory diseases.

Organization of medical aid. Specialized medical aid.

Tuberculosis as a medical and social problem. Morbidity of population with tuberculosis (primary, prevalence). Disability. Mortality from tuberculosis.

The reasons for the increase of tuberculosis in the Russian Federation, the impact of socioeconomic factors on incidence. Regional characteristics of tuberculosis prevalence.

The system of measures to fight tuberculosis. TB dispensary, its functions.

Prevention of tuberculosis. The Federal program to fight tuberculosis.

Neuropsychic diseases as medical and social problem. The prevalence of neuropsychic diseases in Russia and foreign countries. The influence of environment and lifestyle on neuropsychic diseases incidence. Disability. The problem of social rehabilitation in case of neuropsychic diseases.

Organization of psychological and neurological health care in the Russian Federation (psycho-neurological hospital, psychiatric and neuropsychiatric hospitals, psychosomatic departments of multidisciplinary clinics, psychotherapy rooms in hospitals).

Alcoholism, drug addiction, substance abuse as a medical and social problem. The dynamics of prevalence, age-sex and regional characteristics, medical and social consequences. Measures to fight alcoholism, drug addiction and substance abuse in Russia.

Injuries as a medical and social problem, types of injuries. Level, structure, dynamics of injuries, regional peculiarities of epidemiology. Temporary disability, disability, mortality caused by accidents, poisonings, injuries. Causes of injury. Injury prevention. Organization of trauma care in the Russian Federation.

Infectious diseases as a medical and social problem. Prevalence and structure of infectious pathology, regional peculiarities of epidemiology. Quarantine diseases. HIV-infection. The importance of social, biological and environmental factors in the spread of infectious diseases. Medical and social prevention of infectious diseases, the federal programme "vaccination prevention". Institutions engaged in reduction and prevention of infectious diseases: infectious cabinets (branches) of outpatient clinics, infectious hospitals, Central Sanitary and Hygienic Control, continuity and interconnection in their work.

Sexually transmitted diseases (STDs) as a medical and social problem. Prevalence, structure and dynamics of STDs. Factors influencing their frequency in different population groups. Age-sex and regional characteristics.

Epidemiological studies of STDs, their importance for the development of specialized medical care. Institutions to reduce and prevent STDs. Measures to reduce STDs, role of hygiene education of the population in prevention of this group of diseases.

Section 6. PUBLIC HEALTH PROTECTION

The definition of "public health protection". Principles of health protection of the Russian Federation citizens: respect for human rights in the field of healthcare; priority of preventive measures in the field of health care; availability of medical and social aid; social protection of citizens in case of health loss; the responsibility of the authorities to respect human rights in the field of health, the programme of State guarantees to the population.

Structure (basic elements) of public health protection systems: public (state and municipal) and private healthcare; service of the state sanitary-and-epidemiologic supervision system, sanatorium-and-resort treatment and rehabilitation; the health insurance system; drug supply system, etc.

The nomenclature of health institutions.

ORGANIZATION OF MEDICAL AND PREVENTIVE AID FOR THE PUBLIC

Medical and preventive aid as the main type of medical service to the public.

Definition of medical and preventive institution (MPI). MPI of public (state and municipal) and private healthcare. Types of MPIs: polyclinic, inpatient department, maternity welfare center, birth centre, children hospital, primary healthcare unit, dispensary, etc.

Major MPI activities: medical, diagnostic, preventive, anti-epidemic, educational, keeping and analyzing accounting operation documentation, etc.

Continuity and interconnection between different medical and preventive institutions: organization forms and significance.

Primary healthcare

Primary healthcare (PHC) is the first step in a continuous process of public health protection. Conference Declaration on primary healthcare (Alma-Ata, 1978). PHC principles: fairness and equality in the distribution and availability of health services; active participation in the development of healthcare, etc.

The main areas of PHC (elements): hygienic education of the population, promotion of a balanced diet, healthy water, immunization, etc.

Evaluation criteria of PHC (percentage of GDP spent on health, infant mortality and life expectancy, availability of PHC, etc.). PHC issues at "Fundamentals of Russian legislation on public health protection (1993)". Prospects for development and improvement of PHC.

Organization of outpatient care for the public.

Major institutions: general (dispensary, out-patient department of the joint city hospital) and specialized (hospital clinical diagnostic center, specialized polyclinic); structure, tasks, activities.

Clinic, its role in the organization of medical aid to the population and the study of its health. Functions and organizational structure of the clinic. Organization of the work of the clinics in terms of health insurance.

Accepting patients for therapeutic, diagnostic, preventive purposes. Registry, its purpose.

District outpatient services principle, its importance and implementation in modern conditions. Functions of district doctors and nurses.

Organization of emergency medical care.

Therapeutic and diagnostic activities. The work of district doctors and medical specialists. Relationship and continuity with other medical and preventive institutions (hospitals, dispensaries, etc.). Improvement of outpatient care. Primary health care reform on the principle of a general practitioner. Types of general practice (solo, partnership, group). *General practitioner (family doctor)*: definition, organization of work, interaction with specialist doctors.

Medical-diagnostic support units (clinical and biochemical laboratories, office of functional diagnostics, X-ray room, department of restorative treatment, etc.) and their importance in providing medical and preventive aid for the population.

Prevention work of the clinics. Dispensary method in the work of the clinics, its elements: active identification of patients, especially at the early stages of the disease; dispensary register of the healthy and the sick, as well as people with risk factors for diseases; their dynamic observation; a set of therapeutic measures to improve and restore health of those in dispensary, prevention of new infections, sustainable employment, social and labour rehabilitation, etc.

Preventive check-ups (preliminary, periodic, target) is the main form of dispensary observation. Organization and carrying out, the use of automated systems with the use of computers in conducting preventive check-ups. Prevention department. Role of clinic in promoting a healthy lifestyle.

Sanitary and epidemiological work of polyclinics. Infectious department of polyclinics (functions, work organization). Relationship of the polyclinic with sanitary-and-epidemiologic supervision centre and other sanitary preventive institutions.

Specialized institutions of outpatient care. Specialized clinics (dental, homeopathic, etc.). Diagnostic centers, their functions, organization of work.

Dispensaries (TB, dermato-venereology, oncology, psychiatry, addiction, etc.); functions and organization of work.

First medical aid organization.

First medical aid: definition, principles of service.

Stages of first medical aid: prehospital (stations, substations, brigades) and hospital (emergency hospitals). The main tasks of institutions of first medical aid. Factors that determine the level of demand of the population for first medical aid.

Continuity and linkages in the work of first medical aid institutions with other hospitals.

Organization of activities of centre for state sanitary-epidemiological supervision (CSSES).

The role of CSSES in the organization of first medical aid. Participation in carrying out sanitary and anti-epidemic measures, water supply and nutrition, immunization against the major infectious diseases, medical the prevention of major diseases, hygienic education, promoting healthy lifestyle, etc.

Organization of inpatient care

Medical and preventive institutions providing inpatient care: hospitals, independent and joint with policlinics, inpatient departments of dispensaries, hospitals in the system of medical education, ministry of internal affairs and other offices, clinics of research institutes and medical universities, etc.).

Types of inpatient institutions: multi-field hospitals, specialized hospitals (first aid, infectious, TB, psychiatric, oncology, etc.).

Joint city hospital. Advantages and disadvantages of joint institutions. Continuity in the work of outpatient and inpatient departments.

Inpatient department: function, organizational structure. Admission and release of patients. Admission department: structure, organization of work. Main departments of inpatient unit, functions and organization of work of doctors, nurses and other medical staff. Clinical and diagnostic, laboratory and other services of inpatient department. Organization of anatomic-pathological service. Economic department of inpatient unit.

Sanitary and anti-epidemic regime. Activities to fight nosocomial infections, specific requirements to the organization of staff work, infectious, maternity and pediatric departments.

Features of organizing the work of the inpatient department in terms of health insurance.

Development of inpatient care in the context of health care reform. *Alternative forms of inpatient care:* day hospitals, hospitals home care, outpatient surgery centers. Differentiation of inpatient care according to the degree of intensity of treatment and care: hospitals (departments) of intensive treatment, follow-up care, rehabilitation, medical rehabilitation, medical and social aid; hospital (home, branch) of nursing care. Hospices.

Organization of healthcare for workers of industrial enterprises, construction and transport

Features and basic forms of medical care for people working at the industrial enterprises, construction organizations and enterprises of transport.

Primary healthcare unit, first aid facilities: their tasks, structure and functions. Factory's sectional working principle. The main functions of the factory's sectorial doctor, their role in the reduction of morbidity with temporary disability.

Organizing and conducting medical check-ups of workers under the influence of impurities and other professional decreed groups.

Dispensary follow-up of different working groups, interaction with dispensaries. Organization of primary health care (pre-medical, medical). Sanitary and epidemiological treatment in enterprises. *Prevention of industrial injuries and vocational diseases*, interaction with prevention institutions, bodies of on-the-job safety. Interaction of primary healthcare unit with the administration and public organizations of the enterprises. Comprehensive plan for recreational activities on industrial enterprise.

Peculiarities of medical care at the industrial enterprises of different forms of ownership.

Organization of medical aid for rural population

Some specific features of medical aid for rural population due to specific character of organizing agricultural work and settlements in rural areas. Stages in organizing medical aid for rural population.

Rural medical station: its structure and functions. *Hospital of medical district:* organization of outpatient and inpatient care. *Medical outpatient department. Feldsher-midwife station.*

Specific features of protecting maternity and childhood in rural areas.

District medical institutions: numbered hospitals, central regional hospital.

Central regional hospital: its tasks, structure and functions. The role of central regional hospital in providing specialized aid to rural population. Regional specialists. Dispensaries, their interaction with the central regional hospital and outpatient medical stations. *Interdistrict specialized hospitals, dispensaries and departments.* First aid organization. *Mobile forms of first aid:* medical outpatient units, clinical-diagnostic laboratories, fluorography, dental and other units.

Central regional hospital as an organizational and methodological centre for managing medical institutions of the district, forms and methods of work.

Sanitary and epidemiological treatment work in the rural area, interaction of medical institutions with the district center of sanitary-and-epidemiologic supervision.

Regional medical institutions. Regional hospital. Regional dispensaries, provincial sanitary prevention institutions. Their role in providing highly qualified medical aid to rural population. *Air medical service.* The interaction of the republican, regional hospitals with other medical institutions.

Relationship of rural health institutions with territorial administrative bodies and public organizations.

Main areas of improving medical care for the rural population.

Mother child health protection system

The system of mother and child health protection: purpose, objectives, main stages.

Obstetric-gynecologic institutions: maternity welfare centre, gynecological hospitals and departments, etc. *Maternity welfare centres:* types, structure, tasks, special features and organization of work. Sectional principle in the work of maternity welfare centres. Formation of obstetric-gynecologic stations, functions of district obstetrician-gynecologists. Dispensary method in women's consultation: peculiarities of the dispensary observation of various contingents of women (pregnancy, infertility, gynecologic diseases), preventive check-ups of healthy women of certain age groups.

Birthing centre: its tasks and structure, the benefits of combining maternity welfare centres with birthing centres.

Reproductive losses. Prevention measures against maternal and perinatal mortality, morbidity among the newborn. Prevention and disease control measures in obstetric hospitals. Specialized

obstetric and gynecological care. Perinatal centers. Continuity in the work of maternity welfare centres, birthing centres and child health clinics.

The gynecological hospital (department).

The main types of treatment and prevention institutions providing medical care for children: children's hospital, children's polyclinic or multidisciplinary hospital department, organization of work.

Children's hospital: its objectives, special features of organizing out-patient aid for children, children's polyclinic structure. Sectional principle and dispensary method in the organization of medical aid for children.

Formation of pediatric sections, functions of pediatricians and organization of their work. Prenatal patronage, patronage of infants and toddlers. Organization of preventive visits of parents and their children, work of office for a healthy child. Anti-epidemic work of children's clinics: organization of admission of healthy and sick children, treatment of sick children at home, work of filter, organization of vaccinations. Treatment of sick children in the hospital and at home, home-based hospital, day hospital. Organization of first and emergency aid for children.

Organization of inpatient care for children: types of hospitals, their objectives, structure, special features. Organization of work. Organization of admission department, prevention of nosocomial infections, health-epidemiological and medical protective mode. The provision of childcare and educational work.

Organization of specialized aid to children in clinics and hospitals. Organization of children rehabilitation.

Preparing children for admission to kindergartens and schools. *The main types of pre-school and school institutions*, depending on age, health status and characteristics of the child's family. The main sections of the medical workers' activities in preschool institutions. Anti-epidemic work, interaction with sanitary institutions. Orphanages and children's asylums, children contingents, admission of children, health care for children, the involvement of medical workers in educational work.

Medical care for children at schools, the content and organization of work of the school physician and school nurse. School-preschool children's polyclinics department: its tasks, organization of work. Involvement of doctors in summertime health-promoting campaign.

Specialized institutions for children with disabilities in health, impaired mental and physical development, special features of the work of medical staff of specialized children's institutions.

The concept of "safe motherhood". Target complex programmes in maternal and child health protection. Medico-social aspects of fatherhood. Andrological centres.

Legislation on marriage and the family.

ANALYZING THE WORK OF MEDICAL AND PREVENTIVE INSTITUTION. EVALUATING QUALITY OF MEDICAL AND PREVENTIVE CARE

Elements of medical-diagnostic process: organization of patient's admission, examination, medical history, consultations and concilium, diagnosing major and concomitant diseases, treatment, rehabilitation, disability expert evaluation, forecast, recommendation statement, continuity at the hospital, and post-hospital stages. *Organization of medical-diagnostic process, medical technology* in community-acquired and hospital establishments of various types, day hospitals, hospices, sanatoria, sanatoriums-preventorium, etc. Basic concepts of *clinical management*.

Main indicators of outpatient clinics: staff, part-time coverage ratio and frequency of regular medical check-up, the average duration of treatment, primary disability, frequency of differences between medical and clinical diagnoses, etc.

Main indicators of activity of the inpatient unit: the average bed occupancy, average length of patient stay, hospital mortality, percentage of postoperative complications, percentage of differences between clinical and pathologist diagnoses, etc.

The quality of medical care, definition, basic concepts (medical technology, professional standard, supply of treatment-and-prophylactic process with resources, etc.).

Components of quality assurance: the execution of professional duties, use of resources, monitoring of the risk degree of medical intervention, the patient's satisfaction with medical care. Continuous improvement of medical care quality. Quality control is a fundamental component of a strategy for continuous improvement of the medical care quality.

Methods of evaluating the quality of medical care: structural, procedural and outcome components of quality analysis. Evaluation of the medical care quality at different levels - doctor, department, institution as a whole, the territorial body of health management (method of expert estimations, based on State statistical reporting, etc.).

Standardization in medicine and health care. Standards of medical care (resource, organizational and technological).

Corporate and departmental quality control of medical care, its levels and participants, the main legislative documents relating to its organization and execution.

Analysis of medical care quality as an essential element of work of health authorities, insurance, professional and social organizations on licensing and accreditation of medical institutions, certification of medical staff.

Factors influencing inpatient and outpatient institutions work: age-sex structure of population, disease incidence, level of sanitary culture of population, availability of medical and pharmacological care, etc.

MEDICAL EXPERT EVALUATION

Concept of disability (temporary, persistent). Expert evaluation of disability: definition, stages of performing. Types of temporary disability. Major documents proving temporary disability. *Temporary disability leave and its significance.* Procedures on giving out temporary disability leaves in cases of different types of disability. Performing expert evaluation of temporary disability in medical and preventive institutions. Responsibilities of medical workers for breaking rules of conducting expert evaluation of temporary disability (disciplinary, financial, criminal).

Major mistakes connected with issuing documents proving temporary disability.

Interaction between clinical expert commissions of medical and preventive institutions with institutions of medical and social expert evaluation of social welfare bodies.

Medical and social expert evaluation. Medical and social expert evaluation as one of the types of social welfare. Main terms used when conducting medical and social expert evaluation: disabled, disability, health impairments, life's activity (main categories), limitation of life's activity, degree of manifestation of life's activity limitation, social handicap.

Medical and social expert commissions: levels (office, main office), composition, functions

Sending people to medical and social expert evaluation. Conducting medical and social expert evaluation. Appeal of decisions made by office of medical and social expert evaluation.

Causes of disability. *Disability groups*, criteria to identify them, terms of re-examination. Rehabilitation of the disabled: definition, types. Employment of the disabled.

ORGANIZATION OF STATE SANITARY AND EPIDEMIOLOGICAL SERVICE

Sanitary and epidemiological welfare of population, definition. Place and role of sanitary and epidemiological service in the system of public health protection, in solving tasks of prevention, in providing sanitary and epidemiological welfare of population. Sanitary and hygiene monitoring.

Structure, functions, objectives of sanitary and epidemiological service. System of management.

State sanitary and epidemiological supervision, production control. Sanitary and epidemiological measures (quarantine, etc.).

Government officials of state sanitary and epidemiological service, their rights, responsibilities and duties.

Structure, functions, accounting and reporting documentation of Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing.

Major legislative acts and regulations on state sanitary and epidemiological service activities in the country. Individual administrative acts.

Breaching sanitary legislature, types of responsibility.

Interaction of state sanitary and epidemiological service institutions with local authorities, enterprises, institutions, organizations, public bodies.

Main areas of developing and improving state sanitary and epidemiological service in the Russian Federation.

ORGANIZATION OF SANATORIUM-RESORT CARE

Sanatorium-resort care as one of the most important stages in the system of medical and preventive and rehabilitation measures.

Role of doctors and medical institutions in the right selection of patients for sanatorium-resort treatment. *Sanatoriums, health care centres, recreation centres, holiday centres, tourist stations* and other institutions for treatment and rest of workers, their tasks, organization of work. Sanatorium-resort care for children and teenagers.

Interaction of medical and preventive, sanitary and epidemiological and sanatorium-resort institutions.

Rehabilitation medicine.

TRAINING OF MEDICAL STAFF

Role of medical staff in healthcare. Availability of doctors and nurses for population.

System of training, post-graduate training and specialization of doctors and nurses. Idea of the system of ongoing education and professional development of medical staff (internship, residency, post-graduate course, courses of professional development and specialization).

Specific features of training of general practitioner (family doctor), specialists in medical and social work, teaching and administrative medical staff.

Certification and performance review of medical staff.

Specific features of training medical staff abroad.

Main areas of development and improvement of training and retraining of medical staff.

PHARMACOLOGICAL AID FOR POPULATION. PROVISION OF HEALTHCARE INSTITUTIONS WITH MEDICAL EQUIPMENT AND TOOLS

Pharmacological provision of population, its organization and specific features in terms of market economy.

System of pharmacological provision of population. Production and control of medicines (Russian and imported). Pharmacies: state and private, territorial and those at medical and preventive institutions. Interaction of pharmacological and medical and preventive institutions.

Medical industry. Provision of healthcare institutions with medical equipment, tools and devices (Russian and imported).

Development of pharmacological aid for population and medical and technological supply in terms of medical insurance.

SOCIAL AND MEDICAL INSURANCE

Social protection: definition. Bodies of social welfare, structure, functions. Social aid, social support. Types of social welfare (allowancies, pensions, services, benefits, etc.). Pension fund.

Social insurance. Bodies of social insurance, structure, functions. Budget of social insurance. Social Insurance Fund

State character of social insurance and social protection of population. Legislature on social insurance and social protection of population.

Interaction of healthcare bodies and institutions with institutions of social insurance and social protection.

Medical insurance as a type of social insurance, definition, goals. Brief history of development of medical insurance in the Russian Federation and abroad. Causes of introducing medical insurance in Russia at the current stage.

Legislature on medical insurance in the Russian Federation.

Types, principles of medical insurance. Organization of medical insurance: subjects (direct, indirect), their rights, responsibilities, interaction based on contract relations. Certificate of insurance. *Compulsory and voluntary medical insurance*.

Sources of healthcare finance in terms of medical insurance. Funds of compulsory medical insurance (federal, territorial), their foundation and purposes.

Programme of medical insurance. Basic and territorial programmes of compulsory medical insurance.

Licensing and accreditation as a condition for medical institution activity in the system of medical insurance.

Payment for medical services in medical institutions in the system of medical insurance.

PARTICIPATION OF PUBLIC ORGANIZATION IN PUBLIC HEALTH PROTECTION

Role of labour unions in taking measures for improving labour conditions, life conditions, developing physical culture and sport, organizing leisure and rest for population. Commission on social insurance at enterprises, its functions.

Red Cross Society, areas of its activity. Interaction of public organizations with medical and preventive institutions and sanitary and epidemiological institutions. Vocational medical associations.

Other forms of participation of population and its individual groups in taking healthcare measures in modern conditions.

Section 7. HEALTHCARE IN FOREIGN COUNTRIES. WORLD HEALTHCARE ORGANIZATION

Organization of healthcare in other countries. Modern conditions, main achievements and problems. Healthcare systems (private, insurance, state).

International medical cooperation in research, training and developing staff, practical healthcare issues. International medical organizations, associations, societies.

World Healthcare Organization (WHO), its structure, main areas of activity. Place and importance of WHO in solving different tasks of international healthcare. Participation of our country in the WHO activity and activities of other medical organizations.

Section 8. PRINCIPLES OF HEALTHCARE PLANNING, MARKETING, MANAGEMENT, ECONOMICS AND FINANCING

Healthcare planning: definition, principles, objectives and main areas.

Main methods of planning: analytical, regulatory, etc. Programme-oriented and functional sector planning.

Identifying public demand for inpatient and outpatient care. Federal, regional and local programmes of health promotion and disease prevention.

Healthcare plans: territorial, current and prospective, institutional plans. Sections of institutional plans, their connection.

Marketing principles in healthcare. Marketing research. Business plan.

Role and place of healthcare in economics.

Healthcare economics: definition, aims, objectives, areas (economy and economic efficiency). Economy-wide and intrasectoral problems of healthcare economics.

Types of healthcare efficiency (medical, social, economic), their indicators.

Methods of assessing economic healthcare efficiency (economic damage, prevented economic damage, criteria of economic efficiency).

Methods of economic analysis of activity at medical and preventive institution, cost of major types of medical care, problems of pricing for medical services.

Methods of evaluating efficiency of medical and social programmes and measures in healthcare (reducing the level of disease and trauma incidence, disability, early deaths).

Ways of increasing efficiency in healthcare. Increasing economic efficiency of medical institutions functioning.

Financing of public health protection. Sources of healthcare financing.

Economic healthcare models, specific features of financing state, private and insurance medicine.

Financing healthcare system in terms of medical insurance. Funds of state and municipal healthcare system. Funds of compulsory medical insurance, role of Federal and regional funds of compulsory medical insurance.

Financing of medical institutions in terms of medical insurance: forms of payment for inpatient and outpatient care. Institutional budget. Paid medical services.

Innovative processes in healthcare: definition, causes of introduction. New medical technologies. Organizational and legal aspects of healthcare innovations. Improvement of economic mechanism of healthcare institutions activity.

Economic experiments in healthcare.

Management in healthcare: objectives, principles and methods.

5. Educational technologies

1. Traditional classes with textbooks, documents (regulations, instructions, etc.)
2. Tests
3. Multimedia lectures
4. Case study
5. Written papers (reports on the given or free topic)
6. Students' independent work with literature

5.1. Active methods

Case-study

Research and assessment of public health in the area

Research and assessment of healthcare services quality in the area

Identifying public demand for healthcare services

Business-plan of a medical institution

Organizing outpatient care for adults

Organizing inpatient care for adults

Organizing inpatient care for women

Expert evaluation of temporary disability

Profit rating of paid healthcare service

Calculating financial indicators of medical institution work

In order to implement individual approach to teaching students involved in the education process within the framework of individual working plan, studying the given discipline is based on the following options: out-of-class work with students including the work in electronic educational environment with the use of the relevant software, distant forms of learning, internet resources options, individual consultations, etc.

6. Educational and methodological support of students' out-of-class work.
Assessment means for current progress monitoring, interim attestation of subject mastering results

6.1. Plan of students' independent work

| Week № | Topic | Out-of-class work type (should correspond to one specified in table 4.1) | Task (Learn..., complete..., solve..., make...) | Recommended literature | Amount of hours (should correspond to one specified in table 4.1) |
|-------------------|---|---|--|---|---|
| Semester 6 | | | | | |
| 1 | Basics of medical statistics and organization of statistic research. Statistical methods of processing results of medical and biological research. Demonstrative practice in healthcare. Organization of public health studies. Stages of statistic research. Relative values | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 2 c)1,2,3 see the references | 05 |
| 1 | Statistical series | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 2 c)1,2,3 see the references | 0,5 |
| 2 | Average values. Applying average values for evaluating public health condition. Evaluating validity of research results. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 2 c)1,2,3 see the references | 0,5 |
| 3 | Parametric techniques of evaluating relations between phenomena (correlation, dispersion). | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 2 c)1,2,3 see the references | 0,5 |
| 3 | Non-parametric | Preparing for | Learn theory on | a) 1-3 | 0,5 |

| | | | | | |
|---|--|--------------------------|--|---|-----|
| | techniques of evaluating relations between phenomena. | class work | the theme. Answer the questions for self-control. Learn test questions on the theme. | b) 2 c)1,2,3 see the references | |
| 4 | Test | Preparing for class work | Learn the theory. Answer the questions for the test | a) 1-3 see the references | 1,5 |
| 5 | Medical and social aspects of demographic processes. Methods of studying and analysis of medical and demographic indicators | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 5 | Disease incidence. Methods of studying disease incidence. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 6 | Methods of calculating standardized coefficients when studying public disease incidence. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 1 |
| 7 | Test | Preparing for class work | Learn the theory. Answer the questions for the test | a) 1-3 see the references | 1 |
| | Promotion of public health. Modern issues of prevention. Medical and social aspects of healthy lifestyle. Hygienic education of the public. | Preparing for class work | Learn the literature. Write a report | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 1 |
| | Medical and social aspects of the most | Preparing for class work | Learn the literature. Write a report | a) 1-3 b) 1,2,4 c)1,2,3 | 1 |

| | | | | | |
|---|--|--------------------------|--|---|-----|
| | important non-infectious diseases (Circulatory, respiratory diseases, oncology) | | | see the references | |
| | Neuropsychic diseases, alcohol addiction, drug addiction, toxic substances addiction as a medical and social problem | Preparing for class work | Learn the literature. Write a report | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 2 |
| | Traumatism as a medical and social problem. Disability and rehabilitation as a medical and social problem. | Preparing for class work | Learn the literature. Write a report | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 1 |
| 7 | Organizing primary healthcare services for the public | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 8 | Organizing in-patient care | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 9 | Organizing first medical aid | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 9 | Organizing healthcare services for factory workers | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |

| | | | | | |
|----|---|--------------------------|--|---|-----|
| | | | theme. | | |
| 10 | Organizing healthcare services for rural population | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 11 | Organizing outpatient care for women | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 11 | Organizing inpatient care for women | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 12 | Organizing outpatient care for children | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 13 | Organizing inpatient care for children | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 13 | Analyzing medical and preventive treatment facilities work and evaluating the quality of medical and preventive services on the example of an out-patient | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |

| | | | | | |
|------------|--|--------------------------|--|---|-----|
| | department | | | | |
| 14 | Analyzing medical and preventive treatment facilities work and evaluating the quality of medical and preventive services on the example of an inpatient department | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 1 |
| 15 | Expert evaluation of temporary and persistent disability | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 1 |
| 15 | Organizing state sanitary and epidemiological service | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 16 | Medical insurance | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 0,5 |
| 17 | Test | Preparing for class work | Learn the theory. Answer the questions for the test | a) 1-3 see the references | 2 |
| 17 | Healthcare system in different countries. The World Health Organization. | Preparing for class work | Learn the literature, write a report, make an intellectual map | a) 1-3 b) 1,2,4 c)1,2,3 see the references | 2 |
| 18 | <i>Seminar</i> | Preparing for class work | Learn the theory. Answer the questions for the seminar | a) 1-3 | 4 |
| Semester 7 | | | | | |
| 1 | Main methods of planning. | Preparing for class work | Learn theory on the theme. | a) 3,4 b) 3 | 0,5 |

| | | | | | |
|---|---|--------------------------|--|--|-----|
| | Programme- and goal-oriented planning and functional and sectoral planning | | Answer the questions for self-control. Learn test questions on the theme. | c)1,2,3 see the references | |
| 2 | Definition of public demand for healthcare services | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 3 | Healthcare plans. Parts of healthcare plans, their correlation | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 4 | System of marketing research. Marketing information. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 5 | Marketing of services and non-profit marketing | Preparing for class work | Learn the literature, write a report, make an intellectual map | a) 3,4 b) 3 c)1,2,3 see the references | 2 |
| 6 | Methodic and methodological basics of clinical management | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 7 | Management of clinical healthcare quality. Healthcare services quality control. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |

| | | | | | |
|----|--|--------------------------|--|---|-----|
| 8 | Information support of clinical management system. Management accounting in a medical institution. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c)1,2,3 see the references | 2 |
| 9 | Application of the main economic laws and consumers' behavior on the medical and pharmacological markets | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 10 | Pricing policy of medical and pharmacological institutions. Pricing strategies and pricing methods. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 11 | Planning the main economic indicators: goods turnover, goods resources management | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 12 | Planning costs and profits of an organization | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c)1,2,3 see the references | 0,5 |
| 13 | Business-planning | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Make a business plan. | a) 3,4 b) 3 c)1,2,3 see the references | 2 |
| 14 | Sources of financing in healthcare: | Preparing for class work | Learn theory on the theme. Answer the | a) 3,4 b) 3 c)1,2,3 | 0,5 |

| | | | | | |
|-------|---|--------------------------|---|--|-----|
| | consolidated budget and non-budget funds. Financial plan of an organization. | | questions for self-control. Learn test questions on the theme. | see the references | |
| 15 | Basics of municipal order to a medical institution | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c) 1,2,3 see the references | 0,5 |
| 16 | Techniques of paying for healthcare services. Payment for medical staff work. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. Solve problems | a) 3,4 b) 3 c) 1,2,3 see the references | 0,5 |
| 17 | Paid healthcare services. | Preparing for class work | Learn theory on the theme. Answer the questions for self-control. Learn test questions on the theme. | a) 3,4 b) 3 c) 1,2,3 see the references | 0,5 |
| 18,19 | Seminar | Preparing for class work | Learn theory on the theme. Answer the questions of the seminar. | a) 3,4 see the references | 2 |

6.2. Instructional guidelines on students' out-of-class work organization

When preparing for practical class work students should get to know the theme of the class, aim and objectives set for them on the given class, the list of test questions and typical test tasks.

1. Preparing for class work: using textbooks, lectures, internet-resources students answer test questions, revise practical skills necessary for acquiring the theme of the class.
2. Preparing reports: after the teacher hands out the tasks students learn materials from textbooks and lectures, then use additional literature, internet resources and research articles recommended by the teacher on the given theme.

There is a study guide for each class theme. Study guides include questions to prepare for class, recommended literature, theoretical materials, samples of solving problems, tasks for independent work, test questions. Students are provided with the electronic version of the study guide.

6.3. Materials to carry out current monitoring and interim attestation of students' knowledge

Competence mastering assessment

| № | Assessment type | Monitored topics (sections) | Competences that include components under assessment |
|---|---------------------------|---------------------------------|--|
| | Checking tests | Sections 1, 2, 3, 4, 5, 6, 7, 8 | PC-1, PC-4, PC-17, PC-18 |
| | Checking practical skills | Sections 1, 2, 3, 4, 5, 6, 7, 8 | PC-1, PC-4, PC-17, PC-18 |
| | Interview | Sections 1, 2, 3, 4, 5, 6, 7, 8 | PC-1, PC-4, PC-17, PC-18 |
| | Checking reports | Sections 1, 2, 3, 4, 5, 6, 7, 8 | PC-1, PC-4, PC-17, PC-18 |
| | Checking problem solution | Sections 2, 3, 5, 6, 7, 8 | PC-1, PC-4, PC-17, PC-18 |

Demonstrative test variant

- Which benefits are given to working parents of disabled children to look after them until they are 18?
 - monthly compensations added to the salary
 - additional paid month of holiday
 - shortened workday
 - four additional paid days off per month
- How often does a deputy chief doctor for clinical and expert work have to conduct medical conferences on issues of disease incidence with temporary and persistent disability?
 - monthly
 - not less than once in three months
 - not less than once in six months
 - annually
- The patient is given a medical disability certificate from 18.02 to 27.02, with a due visit on 27.02. The patient came only on 05.03 (he was out of town on his own will). After medical examination progress in disease was stated. How should the medical disability certificate be completed?
 - extended from 28.02 with a note "routine violation"
 - extended from 05.03
 - a new one was started
 - extended from 05.03 with a note "routine violation from 27.02"
- In case of normal pregnancy, child delivery and postnatal period and delivery of a live baby, women are given a medical disability certificate for the period of:
 - 86 days
 - 140 days
 - 156 days
 - 180 days
 - 194 days
- In case of "embryo implanting" operation a medical disability certificate is given by
 - an attending medical doctor
 - operating doctor
 - head of department
 - chief doctor

6. When is a medical disability certificate given in case of pregnancy?
 - a) from 26 weeks
 - b) from 30 weeks
 - c) from 32 weeks
 - d) from 29 weeks

7. Who is in charge for all the work on expert evaluation of disability, issuing, keeping and accounting of medical disability certificates?
 - a) chief doctor
 - b) chief doctor and head nurse
 - c) deputy chief doctor for clinical and expert work

8. On what day of the patient's stay in the inpatient department should they be given a medical disability certificate and who should it be signed by?
 - a) on any day of the stay in the inpatient department; signed by the attending medical doctor and head of department
 - b) on any day of the stay in the inpatient department; signed by the attending medical doctor, head of department and chief doctor
 - c) on the patient's release from the inpatient department or on their requirement to submit at work to get a compensation; signed by the attending medical doctor and head of the department

9. In what cases is a reference of a specific form on temporary disability given?
 - a) in cases of home accident, artificial abortion, care for a sick child, medical conditions connected with intoxication, poisoning with alcohol, and actions connected with intoxication
 - b) in cases of home accident, illnesses and injuries developed at night (evening) time when the doctor was absent, care for a sick child (when there is quarantine)
 - c) in cases of periodical medical check-ups according to the USSR Ministry of Public Health Order no.700 of 19.06.1984
 - d) in cases of examination of people bound to military service and draft-aged men at recruiting stations, forensic medical examination and forced medical treatment

10. State the terms of sending the patients to social security medical assessment board (except tuberculosis)
 - a) not later than 4 months when there is evident negative clinical and working forecast
 - b) not later than 10 months when there is positive working forecast
 - c) independent of the term, working disabled people in case of worsening clinical and working forecast
 - d) all stated above is true
 - e) all stated above is false

Criteria for test assessment

- «Excellent» («5») – 91% and more correct answers on the test questions
 «Good» («4») – 81-90% correct answers on the test questions
 «Satisfactory» («3») – 71-80% correct answers on the test questions
 «Bad» («2») – 70% and less correct answers on the test questions

Questions for review sessions

Fundamentals of medical statistics and organization of statistical research. Statistical analysis

1. Give the definition of total population, sampled population.
2. Name the stages of statistical research.

3. Which issues should be considered in the plan of statistical research
4. Which issues should be considered in the programme of statistical research
5. Give the definition of observation unit. Give examples of different observation units depending on the aim of research
6. What is a registration form?
7. What are the specific features of gathering information in clinical and statistical research?
8. Methods of selecting observation units
9. Methods of gathering statistical information

Public health and its determinants

1. Name major indicators of public health
2. Methods of studying public health
3. What is the subject of demography? Name major indicators of public statics and dynamics. What is involved in the concept of mechanical movement of population. External and internal migration.
4. Types of age structures of population: progressive, stationary, regressive.
5. What indicators characterize natural movement of population.
6. Statistics of birth rate (indicators).
7. Statistics of death rate (indicators and criteria). Infant mortality.
8. Exemplary levels of birth rate indicators, total and children mortality.
9. What types of relative values are used in healthcare practice? Give examples.

Public health protection

1. Give definitions: medical and labor examination, temporary disability, expert evaluation of temporary disability.
2. Levels of expert evaluation of disability. Functions of an attending medical doctor in examining disability. Functions of a head of the department in examining disability. Functions of a clinical expert commission in examining disability. Functions of a head of the institution in examining disability.
3. What is the difference between disability registration and medical disability certificate.
4. Features of a medical disability certificate for non-resident citizens.
5. Rules of completing medical disability certificates.
6. Features of paperwork for diseases and injuries.
7. Features of paperwork for care of a sick family member, a healthy child and a disabled child.
8. Features of paperwork for the period of health resort treatment.
9. Features of paperwork during quarantine.

Criteria for evaluating answers on review sessions

- “Excellent”** – the answer is full, competent, logical; fluency in anatomical terminology and medical documents circulation; answers to additional questions are clear and concise.
- “Good”** – the answer is not logical enough with minor errors in some details; some mistakes in terminology; answers to additional questions are correct, but unclear.
- “Satisfactory”** – the answer is not competent and complete enough with some errors in details; mistakes in terminology; answers to additional questions are not clear enough with some errors in details.
- “Bad”** – the answer is not competent with gross errors; errors in assessing the situation; ignorance of terminology; answers to additional questions are incorrect.

Demonstrative questions of practical skills

Fundamentals of medical statistics and organization of statistical research. Statistical analysis

Task: Comparison of average values (or indicators)

A group of patients with coronary atherosclerosis was studied for serum cholesterol under the influence of choline. The serum cholesterol content in all patients before the use of choline averaged 231 ± 4.0 mg %, after the use of choline 204.0 ± 3.0 mg %. Is it possible to consider that the use of choline for patients with coronary atherosclerosis leads to a real decrease in serum cholesterol level?

Public health and its determinants

Task: Evaluate health conditions of workers and identify priority areas of work of a shop doctor.

Injury rate at one of the factories 2 shops (I and II).

| Gender | Number of workers | | Number of injuries | | Indicators of injury rate per 100 workers | | Number of workers in two periods | Distribution in standard (%) | “Expected” number of injuries according to the standard | |
|--------|-------------------|-----|--------------------|----|---|------|----------------------------------|------------------------------|---|-------|
| | I | II | I | II | I | II | | | I | II |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Male | 200 | 600 | 32 | 72 | 16,0 | 12,0 | 800 (8 ¹) | 57 (9 ¹) | 9,12 | 6,84 |
| Female | 400 | 200 | 28 | 16 | 7,0 | 8,0 | 600 (8 ²) | 43 (9 ²) | 3,01 | 3,44 |
| Total | 600 | 800 | 60 | 88 | 10,0 | 11,0 | 1400 (8 ^Σ) | 100 | 12,13 | 10,28 |

Usual indicators: I shop – 10,0 per 100 workers, II shop – 11,0

Standardized indicators: I shop – 12,1 per 100 workers, II shop – 10,2

Conclusion: if the workers’ sex composition in the shops were the same, the injury rate in II shop would be lower. A higher indicator of injury rate in II shop is explained by a higher percentage of men among the workers, and they have higher injury rate indicators than women.

Protection of public health

Task 1. A patient needs special treatment in a hospital not at the place of residence. How the treatment of the patient can be organized? How can he certify disability? For how many days can the attending physician single-handedly issue and extend a medical disability certificate?

Task 2. A patient was in the in-patient facility of the Central District Hospital due to acute peptic ulcer from 15 April to 10 May. He was dismissed with improvement. However, at the conclusion of the Clinic and Expert Committee, he is disabled and needs out-patient treatment at the place of residence. How can he certify disability? Who is a part of the Clinic and Expert Committee in the hospital department?

Task 3. From 25 April to 20 May a resident of a village was undergoing treatment for adhesive bowel disease in a rural outpatient clinic. How can he certify disability? What is the procedure for issuing a disability certificate in remote rural medical institutions with one doctor and in which case the disability certificate can be issued by the average medical worker and for what period?

Task 4 During the leave, an employee had a 2-year-old child fell ill, with who she was in the hospital for 21 days. How can she certify disability? Does she have the right to extend the next leave?

Criteria for practical skills assessment

“Excellent” mark is given for the answer when the student possesses systematic theoretical knowledge (knows the methods of performing practical skills), demonstrates the performance of practical skills independently and without errors;

“Good” mark is given for the answer when the student possesses theoretical knowledge (knows the methods of performing practical skills), demonstrates the performance of practical skills independently with some minor errors which they notice and correct themselves;

“Satisfactory” mark is given for the answer when the student possesses satisfactory theoretical knowledge (knows major techniques of performing practical skills), demonstrate the performance of practical skills making some mistakes which he can correct when pointed at by the teacher;

“Bad” mark is given for the answer when the student doesn’t possess enough theoretical knowledge (doesn’t know the methods of performing practical skills) and/or is not able to demonstrate independently practical skills or makes errors when performing them.

Pass/fail exam questions

Theoretical fundamentals of the discipline Public Health and Healthcare. Health Economics. Public healthcare policy

1. Public health and healthcare as a science and discipline (brief history of development)
2. Main stages of healthcare development in Russia
3. Development of the legal framework of healthcare in Russia
4. Public health and methods of its study. The concept of health, its evaluation, social determination.

Fundamentals of medical statistics and organization of statistical research. Statistical analysis

1. Fundamentals of medical statistics. Relative values (statistical coefficients).
2. Standardized coefficients
3. Dynamic series
4. Average values
5. Selective method. Evaluating validity of average arithmetic and relative values.
6. Methods of collecting statistical information

Public health and its determinants

1. Indicators of demography. Population statics and dynamics. Mechanical movement of population.
2. Natural movement of population. Birth rate. Mortality rate. Natural growth of population. Average life expectancy. Maternal mortality. Infant mortality. Perinatal mortality.
3. Morbidity, overall incidence according to utilization of services
4. Incidence according to medical examinations.
5. Infectious morbidity
6. Incidence of major non-epidemic diseases.
7. Incidence with temporary disability
8. Hospitalized morbidity
9. Disability of population
10. International Statistical Classification of Diseases and Related Health Problems.
11. Physical development

Improving public health. Current problems of prevention

1. Public health promotion. Current problems of prevention
2. Medical and social aspects of the population's lifestyle
3. Major lifestyle risk factors and their medical and social significance
4. Prevention and its main types.
5. Participation of public organizations in public health protection.

The most important infectious and non-communicable diseases as a medical and social problem.

1. Social and hygienic significance of circulatory diseases, organization of medical care.
2. Social and hygienic significance of malignant tumors and organization of medical care.
3. Tuberculosis as a social and hygienic problem and organization of medical care for tuberculosis patients
4. Injury rate.
5. Psychiatric disorders as a social and hygienic problem.

Protection of public health

1. General principles of organization of the clinic. Organization of the registry office of the clinic.
2. Organization of prevention department work.
3. Content and organization of work of therapeutic department of the polyclinic.
4. Organization of dispensary services
5. Major problems of transmission to organizing primary medical aid based on the principle of general practitioner (family doctor).
6. Alternative types of outpatient care.
7. Organization of inpatient care for adult population.
8. Indicators of inpatient medical care.

Healthcare in various countries. World Health Organization.

1. Public healthcare abroad. International cooperation in the sphere of healthcare.
2. State system of healthcare.
3. Health insurance system.
4. Private business health care system.
5. Main directions of reforming healthcare systems in Central and Eastern Europe

Criteria for evaluating answers on the pass/fail exam interview

- “Excellent”** – the answer is full, competent, logical; fluency in anatomical terminology and medical documents circulation; answers to additional questions are clear and concise.
- “Good”** – the answer is not logical enough with minor errors in some details; some mistakes in terminology; answers to additional questions are correct, but unclear.
- “Satisfactory”** – the answer is not competent and complete enough with some errors in details; mistakes in terminology; answers to additional questions are not clear enough with some errors in details.
- “Bad”** – the answer is not competent with gross errors; errors in assessing the situation; ignorance of terminology; answers to additional questions are incorrect.

Demonstrative exam questions

Theoretical fundamentals of the discipline “Public Health and Healthcare”. Public healthcare policy

1. Main stages of healthcare development in Russia
2. Legal basis of healthcare in the Russian Federation

Fundamentals of medical statistics and organization of statistical research. Statistical analysis

1. Fundamentals of medical statistics. Relative values (statistical coefficients).

2. Standardized coefficients.
3. Dynamic series.
4. Average values.

Public health and its determinants

1. Concept of health, its assessment, social conditionality.
2. Demographic indicators.
3. Morbidity of population.
4. Disability of population.
5. Physical development.

Improving public health. Current problems of prevention

1. Current problems of prevention.
2. Medical and social aspects of population's lifestyle.
3. Prevention and its main types.
4. Participation of public organizations in public health protection.

The most important infectious and non-infectious diseases as a medical and social problem.

1. Social and hygienic significance of circulatory diseases, organization of medical care.
2. Social and hygienic significance of malignant tumors and organization of medical care.
3. Tuberculosis as a social and hygienic problem and organization of medical care for tuberculosis patients
4. Injury rate.
5. Psychiatric disorders as a social and hygienic problem.

Protection of public health.

1. Organization of outpatient polyclinic care to population: principles, management, structure, indicators, documents
2. Organization of inpatient care to population: management, structure, indicators, documents
3. Organization of emergency medical care to population: organization, management, structure, indicators, performance evaluation, documents.
4. Organization of outpatient polyclinic care to women: structure of a maternity welfare center, functions of a district obstetrician-gynecologist, indicators, documents
5. Organization of inpatient care to women: structure and management of a maternity hospital, indicators, documents

Healthcare in various countries. World Health Organization.

1. Public healthcare system in the UK: characteristics and problems
2. Health insurance system in Germany: characteristics and problems.
3. Private business health care system in the United States: characteristics and problems.
4. Main directions of reforming healthcare systems in Central and Eastern Europe.

Health Economics

1. Health as an economic category. Factors affecting the standard of public health and healthcare.
2. Economic health resources
3. Modern financial system and social sector
4. Healthcare in the system of market relations
5. Healthcare financing
6. Entrepreneurial healthcare
7. Comparative social and economic analysis of health insurance systems in various countries
8. Economics of medical organization
9. Economic aspects of organizing paid medical services
10. Pricing methodology in healthcare. Methods for calculating the price of medical services
11. Remuneration of health workers

12. Planning the activities of a medical organization
13. Economic analysis of the efficiency in using resources of a medical organization
14. Marketing in the health care system

Criteria for evaluating answers on the exam interview

- “Excellent”** – the answer is full, competent, logical; fluency in anatomical terminology and medical documents circulation; answers to additional questions are clear and concise.
- “Good”** – the answer is not logical enough with minor errors in some details; some mistakes in terminology; answers to additional questions are correct, but unclear.
- “Satisfactory”** – the answer is not competent and complete enough with some errors in details; mistakes in terminology; answers to additional questions are not clear enough with some errors in details.
- “Bad”** – the answer is not competent with gross errors; errors in assessing the situation; ignorance of terminology; answers to additional questions are incorrect.

Demonstrative case study

Case 1

Calculate the necessary bed capacity in medical institutions of the city with 40,000 inhabitants. 18% of the total population need hospitalization. Average number of days for the patient's stay at hospital is 21 days. The hospital bed can be used 335 days a year. Evaluate the efficiency of using bed capacity.

Case 2

Evaluate annual bed occupancy, if three departments for 50, 60, and 70 beds were closed for renovation for one month (30 days), 350 bed days were lost because of quarantine. Total number is 360 annual average beds at hospital.

Case 3

120 patients with the clinical diagnosis of intestine cancer were admitted to the inpatient department. In the inpatient department the diagnosis of intestine cancer was confirmed in 95 patients. Besides, 18 patients, sent in with other diagnoses, were also diagnosed intestine cancer. Evaluate the level of hypo- and hyperdiagnostics.

Case 4

Identify pricing policy of the pharmacy to promote any three groups of products to the market:

1. Vital and essential medicines
2. Products from trade classification
3. Real innovation
4. Cosmetic products
5. Care products
6. Medical tools: tonometer, etc.
7. Food supplements
8. Products for newborn babies
9. Complementary product
10. Captive product
11. Another product (offer yourself)

Choose the pricing strategy, state pricing stages, methods for each stage

Case 5

Calculate the optimal stock of medicine for a hospital pharmacy if:

- 1) standard of trading stock is 10 days
- 2) average demand intensity is 28 packs a day
- 3) frequency of stock composition is once a week
- 4) maximum time of accomplishing supply is three days

Criteria for evaluating case study

«**Excellent**» – the answer is full, competent, logical; fluent use of terminology.

«**Good**» – the answer is not logical enough, with minor errors in details; minor errors in the use of terminology.

«**Satisfactory**» – the answer is not logical enough, incomplete, with errors in details; errors in the use of terminology. «**Bad**» – the answer is not competent, incomplete, with major errors; lacking knowledge of terminology.

Topics of reports

1. Problems of healthcare reform: reality and prospects.
2. Introduction to management in healthcare.
3. Market relations in healthcare at the present stage.
4. Human resources management.
5. Management of preventive activities.
6. Marketing in healthcare.
7. Licensing and accrediting of medical activities.
8. Fundamentals of qualimetry and standardization in healthcare.
9. Problems of organizing expert activities to assess the quality of medical care in health facilities.
10. Quality management of medical care.
11. Problems of specialization and integration in medicine.
12. Ethics of entrepreneurship in medicine.
13. Role and place of professional associations in Russian and foreign healthcare.
14. Modern problems of prevention.
15. Risk factors, epidemiology and prevention of non-infectious diseases.
16. Medical and social aspects of the major non-infectious diseases (circulatory diseases, oncological diseases, respiratory diseases)
17. Neuropsychic diseases, alcoholism, drug addiction, substance abuse as a medical and social problem.
18. Injury as a medical and social problem.
19. Disability and rehabilitation as a medical and social problem.
20. Problems of social and medical insurance.
21. Medical and social assistance to a family.
22. Modern problems of medical care quality.
23. Healthcare system in various countries: state, problems, reform

Criteria for evaluating reports

“**Excellent**” – the author is familiar with basic literature concerning the topic, is capable of identifying the problem and determining methods for its solution, is able to consistently present the content of the issues under consideration, uses concepts and terms appropriately, demonstrates an acceptable level of language literacy.

“**Good**” – the paper is not logical enough, there are some errors in details; there are specific mistakes in terminology; the topic on the whole is disclosed.

“**Satisfactory**” – the paper is not literate, complete enough, there are errors in details; the author demonstrates limited knowledge of guidelines and documents; there are errors in terminology; the topic is partially disclosed.

“**Bad**” – the paper is illiterate, incomplete; there are gross errors; there are errors in assessing the situation; the author lacks knowledge of terminology; the topic is not disclosed.

7. Educational, methodological and informational means provided for subject (module) “Public health and healthcare. Healthcare economics”

a) basic literature:

1. Public health and healthcare [Electronic resource]: textbook / Yu. P. Lisitsyn, G.E. Ulumbekova. -. 3rd edition. - Moscow : GEOTAR-Media, 2015. - <http://www.studmedlib.ru/book/ISBN9785970432914.html>
 2. Public health and healthcare [Electronic resource] / Medik V.A., Yuryev V.K. - Moscow: GEOTAR-Media, 2014. - <http://www.studmedlib.ru/book/ISBN9785970430484.html>
 3. Public health and healthcare, healthcare economics [Electronic resource] / edited by V.Z. Kucherenko - Moscow: GEOTAR-Media, 2013. - <http://www.studmedlib.ru/book/ISBN9785970424155.html>
 4. Financial management in healthcare [Electronic resource]: study manual. Rakhypbekov T.K. - Moscow: GEOTAR-Media, 2013. - <http://www.studmedlib.ru/book/ISBN9785970425985.html>
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b) additional literature:

1. Public health and healthcare [Electronic resource]: textbook / Yu. P. Lisitsyn, G.E. Ulumbekova. -. 3rd edition. - Moscow : GEOTAR-Media, 2013. - <http://www.studmedlib.ru/book/ISBN9785970426548.html>
 2. Applying statistical analysis methods for studying public health and healthcare [Electronic resource]: study manual / Edited by V.Z. Kucherenko – 4th edition - Moscow: GEOTAR-Media, 2011. - <http://www.studmedlib.ru/book/ISBN9785970419151.html>
 3. Public health and healthcare [Electronic resource]: study manual / Edited by A.V. Reshetnikov - 2nd edition - Moscow: GEOTAR-Media. - <http://www.studmedlib.ru/book/ISBN9785970416044.html>
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c) Online resources and software

1. Single window for access to educational resources - <http://window.edu.ru/>
2. Electronic library eLibrary.ru - <http://elibrary.ru/>
3. Electronic library for students «Student’s consultant” - <http://www.studmedlib.ru>

**8. Material and technical means provided for
subject (module) “Public health and healthcare. Healthcare economics”**

| No. | Special rooms and rooms for independent work | Equipment of special rooms and rooms for independent work | Licensed software with confirming document details |
|-----|---|--|---|
| 1 | Lecture hall: 1-309 | Set of educational furniture: desks, chairs Multimedia system (projector, screen, laptop) | «Microsoft Windows» (subscription DreamSpark/Microsoft Imagine Standart); register number 00037FFEBACF8FD7, agreement № CД-130712001 of 12.07.2013; - «Kaspersky Antivirus» 2016-2017, register number KL4863RAUFQ, agreement № XII-567116 of 29.08.2016; <u>free software</u> : Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip. |
| 2 | Rooms according to the agreement with medical institution (Federal Service on Surveillance for Consumer rights protection and human well-being, Penza, 36 Lermontova Street) Lecture hall: 6-1 | Set of furniture: chairs, desks, lecturing desk Multimedia projector Laptop Videos (films, presentations) | «Microsoft Windows» (subscription DreamSpark/Microsoft Imagine Standart); register number 00037FFEBACF8FD7, agreement № CД-130712001 of 12.07.2013; - « Kaspersky Antivirus » 2016-2017, register number KL4863RAUFQ, agreement № XII-567116 of 29.08.2016; <u>free software</u> : Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip. |
| 3 | Rooms according to the agreement with medical institution (Federal Service on Surveillance for Consumer rights protection and human well-being, Penza, 36 Lermontova Street) Room № 205 | Set of educational furniture: desks, chairs, blackboard Computer with CDs Regulatory documents, educational literature | «Microsoft Windows» (subscription DreamSpark/Microsoft Imagine Standart); register number 00037FFEBACF8FD7, agreement № CД-130712001 of 12.07.2013; - «Kaspersky Antivirus» 2016-2017, register number KL4863RAUFQ, agreement № XII-567116 of 29.08.2016; <u>free software</u> : Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip. |
| 4 | Rooms according to the agreement with medical institution (Federal Service on Surveillance for Consumer rights protection and human well-being, Penza, 36 | Set of educational furniture: desks, chairs, blackboard | |

| | | | |
|---|--|---|---|
| | Lermontova Street) Room № 310 | | |
| 5 | Rooms according to the agreement with medical institution (Federal Service on Surveillance for Consumer rights protection and human well-being, Penza, 36 Lermontova Street) Room № 505 | Set of educational furniture: desks, chairs, blackboard | |
| 6 | Rooms according to the agreement with medical institution (Federal Service on Surveillance for Consumer rights protection and human well-being, Penza, 36 Lermontova Street) Room № 205a | Set of educational furniture: desks, chairs | |
| 7 | Rooms for students' independent work: PSU, 10-204 | Set of educational furniture: desks, chairs, blackboard, computers with educational CDs | «Microsoft Windows» (subscription DreamSpark/Microsoft Imagine Standart); register number 00037FFEBACF8FD7, agreement № CД-130712001 of 12.07.2013; - «Kaspersky Antivirus» 2016-2017, register number KL4863RAUFQ, agreement № XII-567116 of 29.08.2016; <u>free software</u> : Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip. |
| 8 | Rooms for students' independent work: PSU, 10-209 | Set of educational furniture: desks, chairs, blackboard, computers with educational CDs | «Microsoft Windows» (subscription DreamSpark/Microsoft Imagine Standart); register number 00037FFEBACF8FD7, agreement № CД-130712001 of 12.07.2013; - «Kaspersky Antivirus» 2016-2017, register number KL4863RAUFQ, agreement № XII-567116 of 29.08.2016; <u>free software</u> : Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip. |

The work program of subject "Public health and healthcare. Healthcare economics" was composed in compliance with requirements of FSES HE and academic plan for educational program 31.05.01 "General Medicine"

The program was compiled by:

N.S. Zubriyanova, Associate Professor, PhD



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The program was approved at a meeting of sub-department Hygiene, Public Health and Health Care

Report № 3

from « 7 » 11 2018

Head of sub-department H,PHaHC



A.P. Dmitriev

The program was approved by the head of The Medical Faculty

Dean of MF



I.Ya. Moiseeva

(sub-department's title)

(signature, Full name, date)

The program was approved by the methodological committee of The Medical institute

Report № 3

from « 08 » 11 2018

Head of the methodological committee of

The Medical institute



O.V. Kalmin

Перевод выполнен корректно, соответствует оригиналу на
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Переводчик Алла Евгеньевна Калмина А.В. 

