

**MEANS FOR CERTIFICATION  
in the discipline "Public health and healthcare "  
for 2022 year entering students  
of the educational program of the specialist degree  
in the specialty 31.05.01 GENERAL MEDICINE,  
direction (profile) GENERAL MEDICINE,  
form of study full-time,  
2025-2026 academic year**

**1. Assessment tools for monitoring the level of competencies obtained**

The current assessment includes the following types of tasks: testing, solving situational problems, assessing the mastery of practical skills, writing and defending an abstract, interview on control issues.

**1.1. Sample Tests**

1. The main methods of science "Public Health and Health, Health Economics" are:

- a) historical
- b) clinical
- c) statistical
- d) sociological
- e) technological
- f) experimental
- g) economic
- h) analytical

2. The main factors having an impact on public health are:

- a) socio-biological
- b) socio-economic
- c) ecological and natural-climatic
- d) organizational and medical
- f) moral and ethical

3. The study of health consists of levels (from smaller to larger):

- a) individual health
- b) health of the population of the territory
- c) group health
- d) public health

4. In assessing public health, indicators are used:

- a) morbidity
- b) disability
- c) physical development
- d) demographic
- e) provision of the population with inpatient care
- f) provision of outpatient care to the population

5. The significance of the factors affecting public health is expressed in sequence (descending):

- a) biological factors and conditions
- b) environment
- c) factors and conditions characterizing the lifestyle of the population
- d) factors characterizing the activities of health authorities and institutions

6. Living conditions are...

- a) genetic predisposition and biological characteristics of people living in a certain territory
- b) natural-climatic and ecological factors affecting people living in a settlement or state
- c) objective, independent of the person himself, side of his life (natural, social, etc.)

7. Socioeconomic conditions and lifestyle factors include:

- a) production and labor activity
- b) non-labor activities
- c) family condition
- d) civil law
- e) medical activity

8. Environmental conditions and factors include:

- a) the state of the human environment
- b) ecology
- c) environmental impact, human relations
- d) the level of political freedom of citizens and the development of democratic institutions

9. The components of the quality of life are:

- a) living conditions
- b) lifestyle

- c) satisfaction with conditions and lifestyle
- d) absence of chronic diseases
- e) absence of bad habits

10. Medical activity of the population is ...

- a) typical, specific activities related to health and health care
- b) frequency of visits by patients to doctors of various specialties
- c) average number of calls served by physicians

## 1.2. Examples of situational tasks

### Task 1.

In the city N, the average annual population is 408,000 people. During the reporting year, 3,249 people died. Determine the total mortality for the reporting year in the city of N.

### Task 2.

As part of the targeted medical examination of the working-age population in the city polyclinic, an analysis of the incidence of diseases of the circulatory system in persons aged 40-55 years was carried out. Of the 42,000 individuals of this age, 5345 patients had a history of acute myocardial infarction, of which 425 died from this disease during the study year.

1. Determine the incidence of acute myocardial infarction in working-age individuals.
2. What indicator did you use for this?
3. What relative indicators can you use to determine the mortality characteristics of the working-age population from acute myocardial infarction?

## 1.3. Examples of Practical Skills Assessment Tasks

### Practical Task 1

Create a layout of a statistical table for use in analyzing data on the distribution of doctors in Volgograd in the reporting year by specialty (therapist, surgeon, pediatrician, dentist), work experience (up to 5 years, from 5 to 10 years, 10 years and more) and place of work (municipal clinic, private medical organization).

### Practical Task 2

In the city where the clinic is located, 50,000 people are adults. Calculate the number of GP positions based on the oriented standard.

## 1. 4. Examples of student project work topics

1. History of worldviews about health and healthy living.
2. The formation of a healthy lifestyle among the population.
3. Methods and means of health education in the activities of a doctor.
4. The role of the family in shaping healthy lifestyles.

### 1.5. Interview Test Question Examples

1. What are the main characteristics of the variation series, types of variation series? The value of average values in the practice of the doctor.
2. For what purpose is it necessary to calculate the confidence boundaries of the average value in the general population?
3. List the stages of the medical and statistical study.
4. List methods for studying the health status of the population.
5. What are the main indicators of the activities of the city polyclinic?

## 2. Assessment tools for Intermediate Discipline Qualification

Intermediate certification is carried out in the form of an exam.

Intermediate qualification includes the following types of tasks: solving a situation problem, interview.

### 2.1. Example of a situational task

Situational task.

City N has 192,735 adults. Based on the initial data presented in the table, calculate the proportion of visits to the polyclinic made by residents for diseases (in %).

Table. Information about the medical staff and the number of visits to the polyclinics of the city of N

| Professionals                       | Occupied positions | Total visits, including preventive visits | Of the total number of visits made for diseases |
|-------------------------------------|--------------------|-------------------------------------------|-------------------------------------------------|
| Total doctors of all specialties    | 348,25             | 1 328 368                                 | 1 079 019                                       |
| - including primary care physicians | 94,5               | 502 980                                   | 471103                                          |

## 2.2. PROGRAM OF COURSE EXAM on «Public health and health care, health care economics» for the 12th year students of the General Medicine Department (English-speaking medium)

### **I. THEORETICAL BASIS**

1. Public health and health care as a science and practical activities. The main definitions and tasks of public health and health care.
2. Public health and health care. Definition of health. The availability of health care to the population. Ensuring the rights of people on affordable health care.
3. Public health and health care. Problems studied by public health and health care. The most important medical and social problems of our time. Global issues.
4. The health care system. The state health system. Organizational principles of the state health system.
5. The health care system. Health insurance. Organizational principles of health insurance. Characteristics of mandatory or voluntary health insurance. Advantages and disadvantages of health insurance.
6. The health care system. Private healthcare system. Feature. Advantages and disadvantages of a private health care system.
7. The health care system. Characteristics of health care all over the world. Directions of reforming of health care (WHO).
8. The history of outlooks of health and Healthy Lifestyle. Concepts of “Healthy Lifestyle”. Modern principles.
9. The role of behavioral factors in the formation of a Healthy Lifestyle. Struggle with bad habits: smoking, alcoholism, drug addiction, as the way of formation of a Healthy Lifestyle.
10. The value of labor and rest for maintenance of health.
11. Culture and education as the elements of the formation of a Healthy Lifestyle.
12. Sanitary education, his role and place in health care. Forms, methods and the facility of sanitary-educational work, the role of medical personnel.
13. Modern approaches to the person's health protection in the XXI century.

### **II. MEDICAL STATISTICS**

14. Statistics. The definition of the concept. The object and the subject of statistics. The role of statistics in medicine. Methods of statistics feature.

15. Statistics. The definition of medical statistics. Tasks of the medical statistics. Groupsof indicators characterize the health status of the population.
16. Statistics. The statistics of health care. The definition of the concept. The steps of thestatistical research. Use in medicine.
17. Statistics. A statistical sample. The definition of the concept. The main characteristic of the sample.The types of statistical observation.
18. Statistics. The organization of statistical research. The stages and purpose of statistical research. A detailed plan, feature.
19. Statistics. Methods of statistical observation. Types and methods of samples.
20. Statistics. The organization of statistical research. The definition of a data collection plan. Categorization of the sampling units.
21. Statistics. Statistical Tables. Types of statistical tables. Requirements for the design ofthe statistical tables.
22. Statistics. Data visualization in statistics and medicine. Graphics for presenting statistical values. The types of graphics and diagrams. Use in medicine.
23. Statistics. The types of statistical quantities. Absolute value. Relative values, types, characteristics. Use in medicine.
24. Statistics. Methods of analysis of the dynamics of the phenomenon. Statistical series: definition, types. Indicators a statistical series analysis.
25. Statistics. Variational series: definition, types. The main component of grouped the variational series. Methods of calculating average values. The use of average values in medicine.
26. Statistics. Characteristic of the diversity of variables in the sample. Types of distribution in the statistical set. The rules work with average values.
27. Statistics. Characteristic of dissipation of variants in the sample. Methods of evaluation of variability of mean values.
28. Statistics. The error of representativeness, definition, formula. Calculation of confidence intervals.
29. Statistics. Comparison of two independent samples (the two sample sizes may or maynot be equal).Calculation of Student's t-test, its estimation.
30. Statistics. The evaluation of the reliability of the results of statistical research used relative quantities.

### **III. PUBLIC HEALTH AND METHODS OF ITS STUDY**

31. Public health, definition. Indicators characterizing the health of the population. The main groups of factors that influence human health.

32. Demography as a science, the definition of concepts. Medical demography, statistical study of human populations. The problem of the population size and composition. The problem of an aging population.
33. Demography. Statics of the population. Census. The main features of population censuses.
34. Demography. Statics of the population. The concepts as current population, resident population, and the average annual rate of change of population size. The age-categories of the population.
35. Demography. Population dynamics, its kinds. Types and characteristics of migration, their impact on health outcomes. The problem of migration processes. Urbanization.
36. Demography. The natural movement of the population, the main elements and factors influencing it.
37. Demography. Fertility as a medical and social problem. The method of calculation, criteria for estimating crude birth rates.
38. Demography. Specific indicators of reproduction (Total Fertility Rate, age-specific Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate), patterns of reproductive behavior.
39. Demography. Mortality as a medical and social problem. The method of calculation, criteria for estimating crude mortality rates. The modern trends.
40. Demography. The infant mortality. The causes and factors that determine its level. Method of calculation infant mortality (Raatz formula), criteria of estimating.
41. Demography. The maternal mortality, definition. The method of calculating the indicators. The ratio of maternal mortality in the world (in the WHO region).
42. Demography. Natural population growth: methods of calculation of the indicator. Life expectancy: definition, modern trends in the WHO region.
43. Morbidity as a medical and social problem. Factors affecting morbidity. Their value at the organization of medical care.
44. Morbidity. The incidence of morbidity. Types of the pathology of the population. Main sources of data about morbidity.
45. Morbidity. Types of morbidity. The methods for the study of diseases and data acquisition.
46. General morbidity, methods of studying. Accounting and reporting documents. Features of morbidity statistics.
47. Morbidity. The methods for the study of diseases. The study of morbidity with a temporary disability. Accounting and reporting documents. Indicators.

48. Morbidity. The study of acute infectious diseases (infectious morbidity). Accounting and reporting documents. The study of the incidence of major non-epidemic diseases. Main accounting documents. The direction of prevention.
49. Morbidity. The study of hospitalized morbidity. Accounting and reporting documents. Indicators. The direction of prevention.
50. Method of study of morbidity according to the causes of death. The structure of causes of death. Recording documents.
51. Disability as a medical and social problem. Types of disability. Morbidity with a temporary disability. Accounting and reporting documents. Indicators. The direction of prevention.
52. Morbidity. The study of morbidity on the results of preventive medical examinations. The types of medical examinations.
53. International Statistical Classification of Diseases and Related Health problems. The principles and design features. Its significance in the study of morbidity and mortality.

#### **IV. HEALTHCARE**

54. Health care. Definition. Health policies. The availability of medical care to the population. Health care facilities (medical institutions).
55. Medical care. Types of medical care. Forms of medical care. Conditions for providing medical assistance to the population.
56. Structure of a health service (by WHO). Types of medical institutions. Types of medical staff: doctors, nurses and other.
57. The organization of medical care in outpatient conditions. Basic principles. Tasks. Classification of outpatient organizations.
58. The organization of medical care in the outpatient conditions. City polyclinic, tasks, structure, management.
59. The organization of medical care in the outpatient conditions. City polyclinic. The organization of work. Accounting and reporting documents of outpatient organizations. Analysis of the activities of city polyclinic.
60. The organization of medical care in the outpatient conditions. The precinct-territorial principle of outpatient services, its meaning and implementation in modern conditions. Types of the medical precinct.
61. The organization of medical care in the outpatient conditions. City polyclinic. Contents of work of district physicians and medical specialists.
62. The organization of medical care in the outpatient conditions. Clinical examination of the population. Definition of the problem. Stages. Organization and content of clinical examination in outpatient organizations.
63. The organization of medical care to the population living in rural areas.

Features of the rendering of medical aid in rural areas. Stage of treatment and preventive care of the rural population.

64. The organization of medical care to the population living in rural areas. Rural medical district. The district of General practice, feature. A General practitioner, function.

65. The organization of medical care in stationary conditions. Classification of hospital, dispensaries, specialized health care centers. The indicators of the provision of the population with medical care in stationary conditions.

66. The organization of medical care in stationary conditions. City hospital, tasks, structure, medical staff, management.

67. The organization of medical care in stationary conditions. The hospital, accounting and reporting documents. Analysis of the work of the hospital. Key indicators.

68. The organization of medical care in stationary conditions. Emergency department of the hospital. Tasks. Functions of a doctor of the emergency department. The procedure of admission of patients to the hospital.

69. The organization of medical care in stationary conditions. Prevention of nosocomial infections.

Characteristics of treatment-protective, anti-epidemic and sanitary regimes in the hospital.

70. Protection of motherhood and childhood. Normative legal acts, regulating the health of women and children in Russia. The medical institutions. Modern problems of women's health and children's health.

71. The organization of obstetric care. Structure, goals and organization of the prenatal clinic (women's consultation). Precinct-territorial principle and method of the dispensary.

72. Prenatal clinic (women's consultation). Sections of the work of the obstetrician-gynecologist, characteristics. Indicators for the care of pregnant women.

73. The organization of obstetric care. Maternity hospital, tasks, structure, management, an organization of work. Accounting and reporting documents. Indicators of a maternity hospital.

74. The organization of medical care for children's population. Medical-social problems of children's health.

75. The organization of medical care for children's population. Children's polyclinic, tasks, structure, medical staff, management. Features of rendering of medical aid to children in the outpatient department.

76. The organization of medical care for children's population. Children's polyclinic. The sections of work of pediatrician of the district, characteristics,

rate of loading, records.

77. The organization of medical care for children's population. Children's polyclinic. Organization nursing observation of newborns. Indicators for children's services.

78. Prophylaxis. The definition of concepts. The types of prophylaxis. Goal, objectives, levels of prevention.

79. Prophylaxis. Primary, secondary, tertiary prevention, measures for their implementation. Health education and training of the population. Definition. Objectives, principles, classification of methods and means of health education and training.

## **V. QUALITY OF MEDICAL CARE. STANDARDS AND STANDARDIZATION IN MEDICAL PRACTICE.**

80. Quality and Quality of medical care. The definition of concepts. The main components of the quality of care according to WHO.

81. Quality assessment. Quality assurance. The definition of concepts. Domains to measure and describe the quality of medical care by the Institute of Medicine.

82. Methods (approaches) for assessing medical care quality. The Donabedian model. Cost efficiency. Critical pathways. Health professional perspective. Clinical practice guideline. Risk management. Patient perspective. Technology and security perspective.

83. Assessment quality of medical care in Russia. Organizations which determine quality.

84. Standards and standardization. Basic concepts. Goals of standards and standardization. Requirements for standards.

85. Objects of standardization in medicine and health care.

86. The basic principles of the classification of standards. Types of standards in medicine. Contents and application area.

## **VI. SOCIAL INSURANCE. HEALTH INSURANCE.**

87. Social protection. Definition. Tasks. The objectives of social protection. Social protection functions.

88. Health insurance. Definition. Basic principles. Tasks. History and evolution of health insurance.

89. Health insurance. National health insurance. Types of programs. Health insurance policy.

- 90. Health insurance in Russia. Types and structure.
- 91. Russian Federation mandatory health insurance system. Insurant, insurer, insured in the Russian system. Scheme of the interaction of health insurance subjects.
- 92. Voluntary health insurance. Comparison of mandatory or voluntary health insurance. Advantages and disadvantages of health insurance.

## **VII. THE HEALTH CARE SYSTEM ALL OVER THE WORLD.**

- 93. The health care system of the USA and Canada.
- 94. The health care system of Great Britain.
- 95. The health care system of Germany.
- 96. The health care system of China.
- 97. The health care system of India and Malaysia.
- 98. The health care system of the African Countries.

## **VIII. BASICS OF HEALTH CARE ECONOMICS**

- 99. Health care economics. Definition, objectives. Types of efficiency in health care (medical, social, and economic). Health care financing, the definition of concepts. The sources of health care financing.
- 100. Price, profit, profitability. Definitions. The concept of the actual expenses of the medical institution. Direct and indirect expenses of medical services. Structural departments of the medical institution allocated in the calculation of the expenses of medical services (main, supporting).
- 101. Medical services, the definition of concepts. The properties of medical services. Types and classification of medical services.
- 102. Cost of medical services. Methods of calculation. Groups of prices of medical services in Russia.
- 103. Salary in health care. Definition. The common salary structures: traditional, broadband and step pay. Forms and types of payment of medical workers in Russia.
- 104. Business activity (entrepreneurship) in health care. Organization of private health care. Paid medical services in the world and in Russia.
- 105. Marketing. Definition. The goal of the task. The basic concepts in marketing: need, requirement (necessity), request, demand.
- 106. Management in health care. The distinctive features of management in health care. Levels of management in a medical institution.

## **IX. MEDICAL ETHICS AND DEONTOLOGY.**

- 107. Medical ethics and deontology. Definition. History of ethics and deontology.
- 108. Ethical rules in medicine. Models of bioethics. Principles and standards of biomedical ethics.
- 109. Models of the doctor-patient relationship. The Hippocratic Oath.
- 110. The International Code of Medical Ethics. The main principles of modern medical ethics.
- 111. The rights and duties of medical and pharmaceutical workers. The rights and duties of patients.

### **2.3. Example of an exam ticket**

ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ  
«ВОЛГОГРАДСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»  
МИНИСТЕРСТВА ЗДРАВООХРАНЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ

Кафедра общественного здоровья и здравоохранения  
Лечебный факультет

### **ЭКЗАМЕНАЦИОННЫЙ БИЛЕТ № 1**

1. Disability as a medical and social problem. Types of disability. Morbidity with a temporary disability. Indicators. The direction of prevention.
2. The basic principles of the classification of standards. Types of standards in medicine.
3. Salary in health care. Definition. The common salary structures: traditional, broadband and step pay. Forms and types of payment of medical workers in Russia.

М.П.                      Зав. кафедрой



В. Л. Аджиенко

In full, the fund of evaluation funds for the discipline is available in the EIET VolgGMU at the link:

<https://elearning.volgmed.ru/course/view.php?id=2347>

Considered at the meeting of the Department of Public Health and Healthcare of the N.P. Grigorenko Institute of Public Health, 06/02/2025, protocol №13.

Head of the Department



V.L. Adzhienko