

**Evaluation tools for carrying out certification
in the discipline “Pharmacology”
for students of 2023,2024 year of admission
for students of the educational program of specialty
on specialty / direction of training 05/31/03 Dentistry,
specialty (profile) dentistry,
full-time education
for the 2025-2026 academic year**

1. Assessment tools for conducting ongoing certification in the discipline

1.1. The current assessment includes the following types of tasks: testing, solving situational problems, assessing the acquisition of practical skills (abilities), a test, writing and defending an essay, and an interview on test questions.

1.1.1. Examples of test tasks:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

1. The primary mechanism of absorption of most drugs is in the gastrointestinal tract...
 - 1) passive diffusion
 - 2) active transport
 - 3) filtration
 - 4) pinocytosis
2. The half-life of the drug is...
 - 1) time for the content of a substance in plasma to decrease by 50% of the administered amount
 - 2) time of excretion of 50% of the substance from the body
 - 3) absorption from the injection site of 50% of the substance
 - 4) binding to blood proteins of 50% of the administered substance
3. What is the definition of the highest therapeutic dose?
 - 1) this is the amount of a substance, the excess of which causes toxic effects
 - 2) this is the amount of a substance that causes the initial biological effect
 - 3) this is the amount of a substance that causes effects that are dangerous to the body
 - 4) this is the amount of a substance that quickly creates a high concentration of a drug in the body
4. Teratogenic effect is...
 - 1) negative effects on the embryo and fetus, leading to congenital malformations
 - 2) toxic effect on the liver
 - 3) toxic effect on hematopoiesis
 - 4) toxic effect on the kidneys
5. When using M-anticholinergics, there is...
 - 1) bronchodilation and decreased secretion of bronchial glands
 - 2) reduction of intraocular pressure
 - 3) increased bronchial tone and secretion of bronchial glands
 - 4) spasm of the gastrointestinal sphincters
6. The excitation of postsynaptic beta2-adrenergic receptors is associated with...
 - 1) bronchodilation
 - 2) mydriasis
 - 3) miosis
 - 4) contraction of the spleen capsule
7. Myocardial excitability increases...

- 1) adrenalin
- 2) galazolin
- 3) mesaton
- 4) salbutamol

8. The antiepileptic drug most effective in relieving status epilepticus is...

- 1) diazepam
- 2) topiromate
- 3) lamotrigine
- 4) ethosuximide

9. "Daytime tranquilizer", a benzodiazepine derivative

- 1) mezapam
- 2) phenazepam
- 3) diazepam
- 4) nozepam

10. Antipsychotics are used as a basic therapy in the treatment of...

- 1) psychoses
- 2) neuroses
- 3) narcolepsy
- 4) Parkinsonism

1.1.2. Examples of situational problems:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

1. A patient suffering from Parkinson's disease was prescribed a medication. After taking it, the symptoms of the disease subsided, but the patient simultaneously began complaining of increased heart rate, dry mouth, and constipation. What medication was prescribed? What are the causes of these effects?

2. A patient with a long-standing liver condition took a sleeping pill for insomnia. The duration of the hypnotic effect was significantly longer than expected. What medication did the patient take? How did this prolonged duration of action explain the patient's insomnia? What are the specific considerations for prescribing this class of sleeping pills for liver disease?

1.1.3. Example of a test option:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

Answer the following questions:

1. Cholinomimetic agents, classification of drugs.
2. Local anesthetics: mechanisms and localization of drug action.
3. Pharmacological characteristics of alpha-adrenergic agonists.

1.1.4. Examples of abstract topics:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

1. Use of principles of evidence-based medicine.
2. Dependence of the effect of drugs on the dose.
3. Medicines used for the treatment and prevention of candidiasis of the oral mucosa.
4. Use of enzyme preparations in dental practice.
5. Medicines used to relieve emergency conditions in dentistry.

1.1.5. Examples of interview control questions:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

1. Classification of local anesthetics by chemical structure.
2. Classification of local anesthetics by tactics and clinical use.
3. Mechanism of action of local anesthetics.

1.1.6. Examples of tasks for assessing the acquisition of practical skills:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

1. Write prescriptions for medications:

- Atropine sulfate
- Neostigmine methylsulfate

2. Write prescriptions for medications:

- Vikasol
- Heparin

1.2. Assessment tools for independent work of the student

Assessment of independent work includes testing.

1.2.1. Examples of test tasks with a single answer:

Verifiable indicators of competency achievement: GPC-3.1.1; GPC-7.1.1; GPC-7.2.1; PC-1.3.2; PC-3.1.1

1. Choose one answer from four. Pharmacokinetics is a branch of pharmacology that studies:

Movement of drugs through the body
Mechanisms of drug action
Side effects of medications
Targets of drug action

2. Choose one answer out of four. The fraction of a drug dose that reaches the systemic circulation unchanged after extravascular administration

Abioavailability
Biotransformation
Bioequivalence
Biotechnology

3. Choose one answer out of four. Medicines sold in the pharmacy network undergo

Three phases of clinical trials
Tests on healthy volunteers only
Phase I clinical trials
Only preclinical trials

4. Choose one answer out of four. Level of evidence for the effectiveness of drug A

Results of completed controlled randomized studies with mathematical processing of the obtained results

Results of randomized trials with a limited number of observations when reaching expert consensus

Results of individual observations in a large number of clinics

A consensus of a group of experts based on open research data

5. Choose one answer out of four. The main mechanism of drug absorption from the gastrointestinal tract:

Passive diffusion

Pinocytosis

Infiltration

Active transport

1.2.2. Examples of multiple choice and/or matching and/or sequencing test items

Verifiable indicators of competency achievement: GPC-3.1.1; GPC-7.1.1; GPC-7.2.1; PC-1.3.2; PC-3.1.1

1. Select several correct answers. Side effects of growth hormone use include:

A. Acromegaly

B. High blood pressure

B. Hearing impairment

G. Loss of vision

D. Severe headaches

E. Increased daily diuresis

2. Match the pharmacological effects (A-D) with the names of drugs (1-5):

A. Stimulation of testosterone, progesterone and estrogen production

B. Stimulation of protein synthesis, increase in muscle mass

B. Suppression of inflammation, reduction of cell proliferation, increase in blood pressure

D. Suppression of bone decalcification

D. Slowing down the excretion of sodium ions and water in the nephrons

1. Human chorionic gonadotropin

2. Nandrolone

3. Ethinyl estradiol

4. Dexamethasone

5. Deoxycorticosterone acetate

1.2.3. Examples of open-ended test questions (questions with open answers):

Verifiable indicators of competency achievement: GPC-3.1.1; GPC-7.1.1; GPC-7.2.1; PC-1.3.2; PC-3.1.1

1. A patient consulted a doctor complaining of a severe headache and rapid heartbeat. An examination revealed a hyperkinetic hypertensive crisis. A medication was administered sublingually to lower blood pressure. Blood pressure decreased, and heart rate decreased. An adverse reaction resulted in bronchospasm. This class of drugs is classified as a doping agent in sports. What drug group was used in this situation? In your answer, please provide only the name of the drug group based on its mechanism of action.

3. Assessment tools for conducting interim assessment in the discipline

Interim certification is carried out in the formexam.

The midterm assessment includes the following types of tasks: completing a task to assess practical skills, an interview.

2.1. Tasks for assessing the acquisition of practical skills:

Verifiable indicators of competency achievement: GPC-6.1.1, GPC-6.2.1, PC-7.1.1

List of medications for which students need to know the medications, forms of release, and dosage rules:

1. Aminocaproic acid 2. Amoxicillin 3. Articaine 4. Ascorbic acid 5. Atropine 6. Acetylsalicylic acid 7. Acyclovir 8. Benzylpenicillin sodium salt 9. Hydrogen peroxide 10. Sodium heparin 11. Glibenclamide 12. Diazepam 13. Diclofenac sodium 14. Dopamine 15. Ibuprofen 16. Insulin 17. Calcium gluconate 18. Lidocaine 19. Lincomycin 20. Menadione sodium bisulfite 21. Metronidazole 22. Metformin 23. Moxonidine 24. Morphine 25. Nandrolone 26. Sage leaf infusion 27. Sodium fluoride 28. Neostigmine methylsulfate 29. Nystatin	30. Nifedipine 31. Nitroglycerine 32. Nitrofurantoin 33. Paracetamol 34. Pilocarpine 35. Procaine 36. Prednisolone 37. Propranolol 38. Salbutamol 39. Trimeperidine 40. Trypsin 41. Fluocinolone acetonide 42. Epinephrine 43. Ergocalciferol 44. Calcium chloride 45. Chlorhexidine
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2.2. List of interview questions

No	Questions for midterm assessment	Verifiable indicators of competency achievement
1	Pharmacokinetics of drugs: routes of administration, absorption, distribution, transformation of drugs and their elimination from the body	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
2	Pharmacodynamics of drugs: types and nature of action, mechanism of action of drugs and factors influencing the pharmacological effect.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

3	Types (pharmaceutical, pharmacological) and mechanisms of drug interactions.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
4	General principles of treatment of acute drug poisoning.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
5	Local anesthetics. Classification. Mechanism of action. General requirements for local anesthetics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
6	Agents used for infiltration and conduction anesthesia. Mechanism of action and pharmacological characteristics of the drugs. Application in dental practice.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
7	Agents used for terminal anesthesia. Mechanism of action and pharmacological characteristics of the drugs. Use in dental practice.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
8	Substances that have a protective effect on the oral mucosa. Classification. Mechanism of action. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
9	Necrotizing, deodorizing, cauterizing, dehydrating, and cleansing agents. Mechanism of action. Pharmacological characteristics. Specific uses in dentistry.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
10	Pharmacology of adrenergic transmission. Types and distribution of adrenergic receptors and the physiological effects that occur upon their activation. Classification of adrenergic agents.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
11	Adrenergic agonists. Classification. Mechanism of action. Pharmacological characteristics of the drugs. Indications for use. Use in dentistry. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
12	Adrenergic blocking and sympatholytic agents. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
13	Cholinergic transmission. Types and distribution of cholinergic receptors and the physiological effects that occur when they are stimulated. Classification of cholinergic agents.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

14	Cholinomimetic agents. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Use in dentistry. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
15	M-anticholinergic agents. Mechanism of action. Pharmacological characteristics of the drugs. Indications for use. Use in dentistry. Atropine poisoning and its treatment.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
16	N-anticholinergic agents (ganglionic blockers and muscle relaxants). Classification. Mechanism of action. Comparative characteristics of individual drugs. Use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
17	Ethyl alcohol. Local and resorptive effects. Pharmacokinetics and pharmacodynamics. Indications. Use in dentistry. Acute ethyl alcohol poisoning and its treatment. Social and medical aspects of alcoholism.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
18	Hypnotics. Classification. Mechanism of action. Effect-dosage relationship. Comparative characteristics of drugs. Indications for use. Acute poisoning with hypnotics and its treatment.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
19	Narcotic analgesics. Classification. Mechanism of analgesic action. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
20	The main manifestations of drug addiction. Methods of prevention and treatment of morphine addiction.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
21	Non-narcotic analgesics. Classification. Mechanism of analgesic, antipyretic, and anti-inflammatory action. Pharmacological characteristics. Side effects. Indications for use in dentistry.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
22	Antipsychotics. Classification. Pharmacological characteristics. Mechanism of action. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
23	Tranquilizers. Classification. Differences from neuroleptics. Comparative characteristics of drugs. Use in dental practice. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
24	Psychostimulants and nootropics. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

25	Analeptics. Classification. Mechanism of action. Comparative characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
26	Expectorants and antitussives. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
27	Bronchodilators. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
28	Cardiac glycosides. Sources. Pharmacokinetics. Main effects on the heart and their mechanisms. Indications for use. Signs of intoxication and its treatment.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
29	Antiarrhythmic agents. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
30	Antianginal drugs. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
31	Antihypertensive agents with central and peripheral neurotropic action. Classification. Mechanism of action. Pharmacological characteristics of the drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
32	Direct myotropic antihypertensive agents, diuretics, and agents affecting the renin-angiotensin system. Classification. Mechanism of action. Pharmacological characteristics. Use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
33	Medications used to relieve hypertensive crises and acute angina attacks. Pharmacological characteristics and mechanism of action. Prescribing guidelines.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
34	Hypertensive agents. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
35	Medications used to treat digestive gland disorders. Classification. Mechanism of action. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

36	Drugs affecting gastrointestinal motility. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
37	Anticoagulants. Classification. Pharmacological characteristics of the drugs. Indications for use. Pharmacological antagonists of anticoagulants.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
38	Hemostatic agents for local and systemic use. Classification. Mechanism of action. Pharmacological characteristics of the drugs. Indications for use in dental practice. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
39	Drugs affecting hematopoiesis (erythropoiesis and leukopoiesis). Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
40	Thyroid hormones and antithyroid agents. Pharmacological characteristics. Side effects. Indications for use.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
41	Pancreatic hormone preparations. Effect on metabolism. Insulin preparations. Synthetic antidiabetic agents. Classification and mechanism of hypoglycemic action. Use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
42	Sex hormones and anabolic steroids. Pharmacological characteristics. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
43	Hormonal contraceptives. Composition. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Adverse reactions.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
44	Glucocorticoid agents. Classification. Effect on metabolism. Mechanism of anti-inflammatory action. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
45	Nonsteroidal anti-inflammatory drugs. Classification. Mechanism of action. Use in dentistry. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
46	Medicines used for immediate-type allergic reactions. Classification. Mechanism of action.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

	Pharmacological characteristics. Application. Side effects.	
47	Immunotropic (immunosuppressant and immunostimulant) agents. Classification. Pharmacological characteristics. Use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
48	Water-soluble vitamin preparations. Mechanism of action. Pharmacological characteristics. Use in dental practice.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
49	Fat-soluble vitamin preparations. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
50	Enzyme and antienzyme preparations. Classification. Mechanism of action. Pharmacological characteristics. Indications for use in dental practice. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
51	Natural factors regulating calcium, phosphorus, and magnesium metabolism in the body. Mechanisms of action. Pharmacological characteristics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
52	Vitamin D (active metabolites and preparations). Pharmacokinetics, pharmacodynamics, and pharmacological characteristics of preparations. Indications for use. Specific uses in dentistry. Hypervitaminosis D and its treatment.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
53	Medicinal products containing calcium, phosphorus, magnesium, and fluoride. Mechanism of action. Pharmacological characteristics. Indications for use in dentistry. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
54	Anti-atherosclerotic agents. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
55	Antigout medications. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
56	Inorganic antiseptics. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Heavy metal poisoning and its treatment.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

57	Organic antiseptics. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
58	Classification of antibiotics by chemical structure, mechanism, and spectrum of action. Principles of antibiotic therapy. Application in dental practice. Side effects of antibiotics and their prevention.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
59	Penicillin antibiotics. Classification. Mechanism and spectrum of antimicrobial action. Pharmacokinetics and pharmacodynamics of the drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
60	Cephalosporin antibiotics, carbapenems, and monobactams. Classification. Mechanism and spectrum of antimicrobial action. Pharmacokinetics and pharmacodynamics. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
61	Macrolide and azalide antibiotics, tetracyclines, and chloramphenicol. Mechanism and spectrum of action. Pharmacokinetics and pharmacodynamics of the drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
62	Aminoglycoside antibiotics, cyclic polypeptides, lincosamides, and fusafungine. Mechanism and spectrum of antimicrobial action. Pharmacokinetics and pharmacodynamics of the drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
63	Antifungal agents. Classification. Mechanism and spectrum of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
64	Sulfonamide drugs. Classification. Mechanism and spectrum of action. Pharmacokinetics and pharmacodynamics of drugs. Side effects. Indications for use. Combination drugs.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
65	Synthetic chemotherapeutic agents – quinolone, nitrofurantoin, 8-hydroxyquinoline, thiosemicarbazone, and nitroimidazole derivatives. Mechanism of action. Pharmacological characteristics. Use in dentistry. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

66	Antisymphilitic agents. Classification. Mechanism of action. Pharmacological characteristics. Application. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
67	Anti-tuberculosis drugs. Classification. Mechanism of action. Pharmacological characteristics of drugs. Use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
68	Antiviral agents. Classification. Mechanism of action. Pharmacological characteristics of drugs. Indications for use. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1
69	Antineoplastic agents. Classification. Mechanism of action. Pharmacological characteristics. Use in dental practice. Side effects.	GPC-6.1.1, GPC-6.2.1, PC-7.1.1

2.3. Example of examination tickets

Federal State Budgetary Educational Institution of Higher Education "Volgograd State Medical University"
Ministry of Health of the Russian Federation

Department: _____

Discipline: _____

Specialty 31.05.03 Dentistry (specialty level)

Academic year: 20__-20__

Examination ticket No. ... (interview)

1. Neuroleptics - phenothiazine derivatives. Classification. Mechanism of action. Comparative characteristics of drugs. Indications for use. Side effects.
2. Anticoagulants. Classification. Mechanism of action. Pharmacological characteristics. Use. Side effects. Pharmacological antagonists of anticoagulants.
3. Anti-atherosclerotic agents that lower blood cholesterol levels, primarily LDL. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.

M.P. Head of Department _____ A.A. Spasov

Federal State Budgetary Educational Institution of Higher Education "Volgograd
State Medical University"
Ministry of Health of the Russian Federation

Department: _____

Discipline: _____

Specialty 31.05.03 Dentistry (specialty level)

Academic year: 20__-20__

Examination ticket No. ... (practical skills)

Write out prescriptions:

1. Atropine
2. Diphenhydramine
3. Nitroglycerin (metered-dose spray)

Head of Department _____ A.A. Spasov

The full range of assessment tools for the discipline/practice is available in the Volgograd State Medical University's Electronic Information System (EIS) at the following link(s):

<https://elearning.volgmed.ru/course/view.php?id=9674>

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Protocol No. 18 dated "31" May 2025

Head of Department,
Academician of the Russian
Academy of Sciences,
Doctor of Medical Sciences,
Professor



AA Spasov