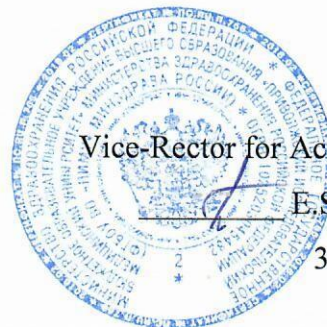


Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation



APPROVED

Vice-Rector for Academic Affairs

E.S. Bogomolova

31 August 2021

WORKING PROGRAMM
Elective discipline

Name of the discipline (according to the working curriculum): **INNOVATIVE
TECHNOLOGIES IN THERAPEUTIC DENTISTRY**

Specialty: **31.05.03 DENTISTRY**

Qualification: **DENTIST**

Department: **THERAPEUTIC DENTISTRY**

Mode of study: **FULL-TIME**

Labor intensity of the academic discipline: **72 academic hours**

Nizhny Novgorod
2021

The working program has been developed in accordance with the Federal State Educational Standard for the specialty 31.05.03 «DENTISTRY», approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 984 of August 12, 2020.

Program Developers:

1. Uspenskaya O.A., Doctor of Medical Sciences, Associate Professor, Head. Department of Therapeutic Dentistry;
2. Spiridonova S.A., Candidate of Medical Sciences, Associate Professor of the Department of Therapeutic Dentistry.

Reviewers:

1. Belenova I.A., Doctor of Medical Sciences, Professor, Head of the Department "Training highly qualified personnel in dentistry", FSBEI HE "Voronezh State Medical Institute named after N.N. Burdenko" of the Ministry of Health of the Russian Federation, Deputy Head of the European Department of Preventive, Personalized, Preventive Dentistry at the European Association for Preventive, Personalized, Preventive Medicine (EPMA - DPPPDP).
2. Sahakyan M.Y., Doctor of Medical Sciences, Associate Professor, Head. Department of Orthopedic Dentistry and Orthodontics , Federal State Budgetary Educational Institution of Higher Education "PIMU" of the Ministry of Health of the Russian Federation. ;

The program was reviewed and approved at a meeting of the Department of Therapeutic Dentistry

Minutes No. 9 dated April 13, 2021

Head of the Department of Therapeutic Dentistry, MD, Associate Professor

O.A. Uspenskaya 

Minutes No. 12 dated May 27 , 2021

AGREED

Deputy Head of EMA ph.d. of biology  Lovtsova L.V.

(signature)

May 27 , 2021

1. Goals and objectives of mastering the discipline

Therapeutic dentistry is the leading among dental disciplines, since the main place in it is occupied by the problems of not only treatment, but also the prevention of dental caries, periodontal disease and oral mucosa, which today is directly related to the use of innovative technologies. There is a close relationship between restorative dentistry and other clinical disciplines, restorative dentistry is the most important preventive section among all other profiles of dentistry - surgical and orthopedic.

Over the past decade, many new technologies have been introduced into medicine. This was especially true for therapeutic dentistry. Among the innovative methods are the methods of treating caries with the ICON system, teeth whitening, plasmolifting, and the use of an operating microscope. Gaining knowledge on the topic of innovative technologies in dentistry allows the student, after graduation, to significantly improve the quality of patient treatment.

The skills acquired at the Department of Therapeutic Dentistry are basic for all subsequent creative activities of a dentist.

I.I. Purpose of teaching discipline

The program of elective disciplines is aimed at an in-depth study of therapeutic dentistry - the leading among dental disciplines, since the main place in it is occupied by the problems of not only treatment, but also the prevention of major dental diseases.

The purpose of teaching therapeutic dentistry as a discipline of choice is an in-depth study of the causes, mechanisms of development, modern methods of diagnosis and treatment of diseases of the teeth, periodontium and oral mucosa.

The manual and theoretical knowledge acquired in the preclinical course allows one to more deeply and fully master the diagnosis and treatment of the pathology of hard dental tissues of non-carious origin.

For better assimilation of the material, the educational process is as close as possible to the real work environment in the clinic, which enables students to better master the practical side of the matter. The topics studied are worked out in two stages: theoretically, then practically in the dental office, which helps to reflect the essence of the topic being studied from different positions. This tactic makes it possible to better meet the requirements of bringing teaching closer to practical medicine, to ensure the specific nature of the pedagogical process. Practical classes are held in direct work with patients, which is important in acquiring manual skills and of great educational value - ethics, aesthetics, deontology.

1.2. The tasks of studying the discipline of choice

The main task is to develop students' knowledge about the diagnosis and treatment of non-carious diseases of hard tissues and methods for their prevention. When studying this topic, both in therapeutic dentistry and in pediatric dentistry,

much attention is paid to the provision of emergency care, the actions of a dentist in emergency situations in the treatment of non-carious diseases.

In the practice of therapeutic dentistry, the student must master the methods of preparing carious cavities of grades 1-5, observing the technique and stages of preparation, learn how to carry out antiseptic treatment of the prepared cavity, choosing an antiseptic correctly and rationally. Work out the technique of mixing materials for temporary and permanent fillings, medical and insulating pads. An important task is the choice of filling material, its application, taking into account the localization of the cavity. In the process of studying, the student gets the opportunity to use Soviet and foreign filling materials, which allows you to work out manual skills and abilities.

Students master the methods of applying devitalizing pastes, learn to properly open the pulp chambers of all anatomical groups of teeth, trepan the crowns of intact teeth, remove the pulp after devitalization and decay of the pulp from the root canal. Mastering endodontic manipulations, high-quality filling of canals and the imposition of a permanent filling allows you to save the tooth as an organ for many years. Having learned to analyze radiographs, the student gets the opportunity to confirm the diagnosis, evaluate the quality of endodontic treatment, filling canals and carious cavities.

Mastering the skills of determining non-carious diseases of hard tissues of teeth that form before and after eruption, as well as genetically determined diseases. Be able to differentiate them from each other. It is correct to choose the method of treatment and prevention, not only of non-carious lesions, but also of periodontal diseases, which often accompany this pathology considered by students in the discipline of their choice. The student must have the skills to read orthopantomograms, panoramic radiographs, and also be proficient in the technique of applying periodontal bandages, open and closed curettage, and assist in flap surgery.

In the lecture course and in practical classes, much attention is paid to deontological principles, the formation of the worldview of a generalist doctor who is able to provide qualified dental care to children, pre-conscript, pregnant women, and people suffering from chronic diseases.

The process of studying the discipline is aimed at developing the following universal competencies (MC) in the graduate:

Able to carry out a critical analysis of problem situations based on a systematic approach, to develop an action strategy (UK-1);

The process of studying the discipline is aimed at developing the following professional competencies (PC) in the graduate:

Willingness to participate in scientific research, analysis and public presentation of medical information based on evidence-based medicine and to participate in the introduction of new methods and techniques aimed at protecting public health and reducing dental morbidity (PC-12);

Willingness to collect and analyze complaints and other information from the patient (relatives / legal representatives), his medical history, interpretation of

examination results, laboratory, instrumental, pathoanatomical and other studies in order to recognize the condition or establish the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard of Medical Care, Clinical Recommendations on the provision of medical care, etc.) (PC -6).

Possibility and willingness to conduct preventive medical examinations, medical examinations of various categories of citizens and the implementation of dispensary observation of patients with dental pathology (PC-2) ;

As a result of studying the discipline

STUDENT SHOULD KNOW:

— stages of development of innovative technologies in dentistry, the role of leading scientists in their development. Principles of modern dental office equipment;

– definition, classification, etiology and pathogenesis of dental caries;

— pathological anatomy, clinic, differential diagnostics, methods of treatment and prevention of caries;

- classification, etiology, pathogenesis, pathological anatomy of pulpitis;

— clinic, differential diagnostics, methods of treatment of inflammation of the pulp;

- classification, etiology, pathogenesis, pathological anatomy of periodontitis;

– clinic, differential diagnostics, methods of treatment of periodontal inflammation;

- classification, etiology, pathogenesis, pathological anatomy of lesions of teeth of non-carious origin. Clinic, differential diagnosis, methods of prevention and treatment of lesions of hard tissues of the tooth of non-carious origin;

- classification, etiology, pathogenesis, pathological anatomy of diseases of the oral mucosa. Clinic, differential diagnosis, methods of prevention and treatment of diseases of the oral mucosa;

– possible errors and complications arising in the treatment of caries, its complications, dental diseases of non-carious origin, their elimination and treatment;

– treatment of caries with the ICON infiltration method ;

– conducting a teeth whitening technique with various systems such as: Beyond , OpalescensBoost , Zoom ;

- carrying out methods of plasmolifting :

– methods of direct and indirect restoration using veneers ;

– methods of non-invasive treatment methods: microabrasion .

- methods of mechanical processing of root canals with rotary systems: Mtwo , Reciproc , SAF -file, FlexMaster ;

- modern irrigation protocols;
- modern techniques for isolating the working field using a cofferdam system;
- innovative methods of three-dimensional obturation of root canals with Thermafil , BeeFill system ;
- MAP - system for the treatment of periodontal diseases.

STUDENT SHOULD BE ABLE TO:

- to conduct a survey of patients in order to diagnose caries, pulpitis, periodontitis, periodontal disease and oral mucosa, non-carious lesions of the teeth;
- determine the index of oral hygiene according to Fedorov- Volodkina , according to Green- Vermillion ;
- describe radiographs;
- determine the degree of tooth mobility (I, II , III);
- determine the type of plaque on the teeth, tartar, its color, consistency;
- determine the state of the anatomical sections of the gums (free and attached gums);
- determine the nature of gingivitis (acute, chronic, catarrhal, hypertrophic, atrophic, ulcerative);
- determine the depth of the pockets with a graduated probe;
- to determine the presence of subgingival tartar, discharge from pockets;
- determine the severity of gingival inflammation (mild, moderate, severe);
- conduct a Schiller-Pisarev test to clarify the boundaries of inflammation;
- determine the papillary-marginal-alveolar index (PMA);
- determine the periodontal index (PI);
- to determine the CPITN index - the index of the need for the treatment of periodontal diseases;
- take a smear for cytological, bacterioscopic , bacteriological examination of the contents of the pocket;
- perform palpation of regional lymph nodes of the facial skeleton, soft tissues of the face;
- perform palpation of the Valle points ;
- perform palpation of the oral mucosa;
- to determine the morphological elements of the lesion;
- probe deep ulcers, fistulas;
- take material for cytological examination (scrapings, prints);
- take material for direct microscopy for fungi, fusospirochetes ;
- carry out drying and vital staining of enamel in order to identify carious spots;
- prescribe and conduct training in rational oral hygiene;
- to carry out therapeutic measures for enamel remineralization in order to prevent and treat caries and non-carious lesions of the teeth;
- to carry out comprehensive measures for the prevention of caries;

- to carry out application, infiltration and conduction anesthesia for the purpose of painless treatment of affected hard tissues of the tooth and pulp;
- to choose and carry out a rational method of treating caries, pulpitis, periodontitis, non-carious lesions of the teeth, depending on the clinical manifestations and the state of the body as a whole;
- dissect carious cavities of I - VI classes of Black , atypically located cavities;
- carry out antiseptic treatment and drying of cavities in the hard tissues of the tooth;
 - mixing materials for temporary and permanent fillings, root canal filling, therapeutic and insulating pads;
 - apply therapeutic and insulating pads, temporary fillings and dressings, fillings from cements, amalgam, compomers and composite filling materials;
 - seal intact fissures of teeth with sealants;
 - grinding and polishing fillings;
 - apply a paste for pulp devitalization ;
 - remove temporary and permanent fillings;
- open the cavities of all anatomical groups of teeth, prepare the crowns of intact teeth;
 - remove the pulp after devitalization from the root canal;
 - to carry out instrumental, drug treatment of the root canal, its drying, determining the degree of its patency;
 - seal root canals with pastes and sealants without using and using pins;
 - remove fragments of instruments from the root canal;
 - to carry out therapeutic measures in case of damage to the oral mucosa with arsenic salts;
 - to carry out therapeutic manipulations in case of perforation of the bottom and walls of the carious cavity, pulp chamber, bi- and trifurcation ;
 - to carry out therapeutic manipulations to eliminate complications associated with the treatment of caries and its complications;
 - remove dental deposits: plaque, above - and subgingival tartar;
 - polish teeth after removing dental deposits;
 - to carry out applications of drugs on the marginal gum;
 - wash pockets with a syringe, spray gun;
 - introduce turundas with medicinal substances into pockets;
 - dissect the periodontal pocket in the presence of an abscess;
 - carry out curettage of pockets;
 - prepare and apply medical dressings;
 - into the hypertrophied gingival papilla for the purpose of sclerosis ;
 - perform a gingivectomy ;
 - splinting teeth in case of periodontal diseases (ligature binding, splints made of quick-hardening plastic and composites);
 - inject medicinal substances into the transitional fold;
 - eliminate local traumatic factors;

- inject drugs under the elements of the lesion;
- local treatment of mucosal lesions
 - removal of raids, necrotic tissues, washing, irrigation, applications;
 - correctly draw up the ICSB and other medical documentation (referrals to other departments, etc.);
- write out prescriptions for medicines \$
- apply rubber dam;
 - to carry out the method of infiltration of caries;
- perform teeth whitening
- to carry out injection treatment of periodontal diseases - plasmolifting ;
- to carry out microabrasion followed by remineralizing therapy.

STUDENT SHOULD OWN:

- methods of preparation, mechanical and drug treatment and filling of carious cavities;
- methods of remotherapy ;
- microabrasion techniques ;
- whitening techniques;
- plasmolifting techniques ;
- methods of mechanical and drug treatment of root canals;
- methods of filling root canals;
- methods of treatment of periodontal diseases;
- methods of treatment of diseases of the mucous membrane of the oral cavity and lips;
- methods of treatment of non-carious lesions of hard dental tissues;
- methods of injection and non- injection local anesthesia;
- methods of treatment of pulpitis, apical periodontitis and caries;
- methods of professional oral hygiene;
- fissure sealing techniques ;
- Methods of resuscitation and emergency care.

To fulfill this provision

The teacher sets himself the following tasks:

1. By his personal example, demeanor, appearance, technique of examination and communication with the patient - to demonstrate to the student the basic provisions that must be observed in communicating with the patient, the ability to get in touch with him.
2. Demonstrate in practice a sample of a consistent methodical examination of the patient, to the maximum extent possible to show the symptoms of a particular disease.
3. Actively involve students in conversations with patients, in individual stages and moments of patient examination (palpation, percussion, probing,

identification of various symptoms) and thereby facilitate their first independent steps, help overcome the "barrier" in communicating with patients.

4. Analyzing the data obtained during the collection of anamnesis and objective data, give an example of clinical thinking at the patient's chair.

5. To involve students in primary preventive measures to reduce dental diseases, as well as in dental educational work (issuing health bulletins, brochures, writing lectures and talks on topical dental topics for patients).

6. The study of the disease of hard tissues of the tooth, pulp, periodontal, periodontal and oral mucosa is accompanied by a demonstration of patients, analysis of the anamnesis, etiology and course of the disease, the treatment of pathology is complex and local, focusing on modern aspects in the practice of treating a particular disease.

The practical orientation of the classes is realized by involving students in direct work with patients, which contributes to the fulfillment of the main task: to teach students not only to know, but also to be able to.

2. The place of discipline in the structure of the PEP VO organization

2.1. The discipline "Innovative technologies in therapeutic dentistry" refers to the variable part of Block 1 of the PEP VO.

2.2. To study the discipline, knowledge, skills and abilities are necessary, formed by the previous disciplines:

2.2.1. pathological physiology.

Knowledge - Inflammation. Pathology of thermoregulation. Fever. Tumors. Allergy.

Skills - to identify the presence of inflammation, an allergic reaction, a tumor.

Skills - to determine the severity and severity of the inflammatory process

2.2.2. Pathological anatomy.

Knowledge - Inflammation. Necrosis. Regeneration. Tumors. Injuries.

Skills - to take material for cytological examination (scrapings, prints) from the area under study;

Skills - to distinguish various pathological processes from each other.

2.2.3. Pharmacology.

Knowledge - Antiseptics in the clinic of therapeutic dentistry.

Enzymes. Antibiotics. Antimicrobial and antiparasitic agents. Means that affect tissue metabolism. Antidotes and complexones.

Tranquilizers and sedatives. Narcotic and non-narcotic analgesics. Local anesthetic drugs.

Skills - the choice of the necessary drug depending on the pathology

Skills - write prescriptions for drugs.

2.3. And the study of the discipline is necessary for the knowledge, skills and abilities formed by subsequent disciplines/practices:

Department of Therapeutic Dentistry - graduating department.

3. The results of mastering the discipline and indicators of the achievement of

competencies.

The study of the discipline is aimed at developing the following universal (UK), general professional (OPK) and professional (PC) competencies among students:

No. p / p	Competency Code	The content of the competence (or part of it)	Code and name of the indicator of achievement of competence	As a result of studying the discipline, students should:		
				Know	Be able to	Own
1.	UC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	IET 1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis IUK 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience IUK 1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems	Principles and methods of search, analysis and synthesis of information.	Apply the principles and methods of searching, analyzing and synthesizing information ; Competently, logically, reasonably form their own judgments and assessments .	Practical skills of searching, analyzing and synthesizing information.
2.	PC-2	Able to recognize conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care, recognize conditions that pose a threat to the patient's life including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration), requiring the provision of emergency medical care	IPC 2.1 Knows: Normative legal acts regulating the procedures for conducting preventive medical examinations and medical examinations The main criteria for a healthy lifestyle and methods for its formation Socio-hygienic and medical aspects of alcoholism, drug addiction, substance abuse, the basic principles of their prevention Forms and methods of sanitary and hygienic education among patients (their legal	pathological anatomy, clinic, differential diagnostics, methods of treatment and prevention of caries; pulpitis, periodontitis , periodontal diseases and oral mucosa; methods and means used in the medical examination , dispensary	prescribe and conduct training in rational oral hygiene; carry out therapeutic measures for enamel remineralization in order to prevent and treat caries and non-carious lesions of the teeth; carry out comprehensive measures for the prevention	methods of preparation, mechanical and drug treatment and filling of carious cavities; remotherapy techniques ; methods of mechanical and drug treatment of root canals; root canal filling techniques; methods of treatment of periodontal diseases; methods of

			<p>representatives), medical workers</p> <p>Features of specific and non-specific prevention of dental diseases</p> <p>The main hygienic measures of a health-improving nature that promote health and prevent the occurrence of dental diseases</p> <p>Etiology, pathogenesis, prevention of dental diseases</p> <p>Fundamentals of Preventive Medicine</p> <p>Stages of planning and implementation of community programs for the prevention of dental diseases</p> <p>IPC 2.2 Able to:</p> <p>Conduct health and hygiene education among children and adults (their legal representatives) and medical workers in order to form a healthy lifestyle and prevent dental diseases</p> <p>Carry out health education among children and adults with dental diseases in order to form a healthy lifestyle and prevent dental diseases</p> <p>To form in children and adults (their legal representatives) behavior aimed at maintaining and improving the level of somatic and dental health</p> <p>Develop and implement healthy lifestyle programs, including programs to reduce alcohol and tobacco consumption, prevent and combat the non-medical use of narcotic drugs and psychotropic</p>	<p>groups depending on the dental disease</p>	<p>of caries; determine the index of oral hygiene according to Fedorov-Volodkina , according to Green-Vermillion ; determine the type of plaque on the teeth, tartar, its color, consistency; carry out therapeutic manipulations to eliminate complications associated with the treatment of caries and its complications; remove dental deposits: plaque, supra- and subgingival tartar; polish teeth after tartar removal</p>	<p>treatment of diseases of the oral mucosa; methods of treatment of non-carious lesions of hard dental tissues; methods of injection and non-injection local anesthesia; methods of treatment of pulpitis, apical periodontitis and caries; methods of professional oral hygiene; fissure sealing techniques .</p>
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			<p>substances</p> <p>Develop a plan of preventive measures and implement methods of group and individual prevention of major dental diseases</p> <p>Conduct preventive medical dental examinations of the population</p> <p>Assign preventive measures to patients, taking into account risk factors for the prevention and early detection of diseases, including cancer</p> <p>Conduct the selection and prescription of drugs and non-drug methods for the prevention of dental diseases in children and adults</p> <p>Carry out dispensary supervision of children and adults with dental diseases</p> <p>IPC 2.3 Has practical experience:</p> <p>Promotion of a healthy lifestyle and prevention of dental diseases</p> <p>Carrying out health education among children and adults with dental diseases</p> <p>Formation in children and adults (their legal representatives) of behavior aimed at maintaining and improving the level of somatic health</p> <p>Formation of healthy lifestyle programs, including programs to reduce alcohol and tobacco consumption, prevent and combat the non-medical use of narcotic drugs and psychotropic substances</p> <p>Development of a plan of preventive measures and the implementation of methods for group</p>			
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			<p>and individual prevention of dental diseases</p> <p>Carrying out preventive medical dental examinations of the population, taking into account age</p> <p>Prescribing preventive measures for children and adults with dental diseases, taking into account risk factors, oncological and hygienic prevention in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care</p> <p>Selection and prescription of drugs and non-drug methods for the prevention of dental diseases in children and adults</p> <p>Conducting a dispensary examination of children and adults with dental diseases</p> <p>Monitoring compliance with dental preventive measures</p>			
3.	PC-6	<p>Able to send a patient to laboratory, instrumental examination, to a consultation with specialist doctors if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations</p>	<p>IPC 6.1 Knows: The methodology for collecting complaints and anamnesis from patients (their legal representatives). Methods of physical examination of patients (examination, palpation, percussion, auscultation). The procedure for providing medical care to the adult population with dental diseases The procedure for providing medical care to children with dental diseases Clinical guidelines on the provision of medical care to</p>	<p>pathological anatomy, clinic, differential diagnosis, methods of treatment and prevention of caries; classification, etiology, pathogenesis, pathological anatomy of pulpitis; clinic, differential diagnostics, methods of treatment of inflammatio</p>	<p>conduct examination of patients in order to diagnose caries, pulpitis, periodontitis, non-cariou lesions of the teeth, periodontal diseases and oral mucosa, take a smear for cytological, bacterioscopic, bacteriological</p>	<p>methods of treatment of periodontal diseases; methods of treatment of diseases of the oral mucosa; methods of treatment of non-cariou lesions of hard dental tissues; methods of treatment of pulpitis, apical periodontitis and caries</p>

		<p>(treatment protocols) on providing medical care taking into account the standards of medical care, and also refer the patient for providing specialized medical care in an inpatient setting or in a day hospital if there are medical indications in accordance with the current procedures for the medical care delivery, clinical recommendations (treatment protocols) on the medical care delivery taking into account the standards of medical care</p>	<p>patients with dental diseases Standards of Care IPK 6.2. Can: interpret the results of examination, laboratory, instrumental, pathological and other studies, incl. diagnostic studies using modern technical means and digital technologies, in order to recognize the state or establish the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard of medical care, Clinical recommendations on the provision of medical care, etc.) Develop a plan for the treatment of children and adults with dental diseases in accordance with the procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care. IPC 6.3 Has practical experience: interpretation of the results of examination, laboratory, instrumental, pathoanatomical and other studies, incl. diagnostic studies</p>	<p>n of the pulp; classification, etiology, pathogenesis, pathological anatomy of periodontitis ; classification, etiology, pathogenesis, pathological anatomy of dental lesions of non-carious origin. Clinic, differential diagnosis, methods of prevention and treatment of lesions of hard tissues of the tooth of non-carious origin; clinic, differential diagnostics, methods of treatment of periodontal inflammation; classification, etiology, pathogenesis, pathological anatomy of diseases of the oral mucosa. Clinic, differential diagnosis, methods of prevention and treatment of diseases of the oral mucosa</p>	<p>examination of the contents of the pocket; perform palpation of regional lymph nodes of the facial skeleton, soft tissues of the face; palpation of the oral mucosa; determine the morphological elements of the lesion; probe deep ulcers, fistulas; take material for cytological examination (scrapings, prints); take material for direct microscopy for fungi, fusospirochetes ; to carry out therapeutic measures in case of damage to the oral mucosa with arsenic salts; local treatment of lesions of the mucous membrane - removal of plaque, necrotic tissues, washing, irrigation, applications ; inject drugs under the</p>	
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			<p>using modern technical means and digital technologies, in order to recognize the state or establish the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard of medical care, Clinical recommendations on the provision of medical care, etc.)</p> <p>Development of a treatment plan for children and adults with dental diseases, taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care</p>		<p>elements of the lesion; eliminate local traumatic factors determine the index of oral hygiene according to Fedorov-Volodkina , according to Green-Vermillion ; describe radiographs; determine the degree of tooth mobility (I, II , III);</p>	
4.	PC-7	<p>Able to: make a differential diagnosis with other diseases/conditions including emergencies, establish a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD)</p>	<p>IPC 7.1 Knows: Methods of drug and non-drug treatment, medical indications for the use of medical devices for dental diseases</p> <p>Groups of drugs used to provide medical care in the treatment of dental diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility,</p>	<p>clinic, differential diagnostics, methods of treatment of inflammation of the pulp; periodontal, periodontal and diseases of the oral mucosa, classification, etiology, pathogenesis,</p>	<p>choose and carry out a rational method of treating caries, pulpitis, periodontitis , periodontal diseases, oral mucosa, depending on the clinical manifestations and the</p>	<p>methods of treatment of non-carious lesions of hard dental tissues; methods of preparation, mechanical and drug treatment and filling of carious cavities; methods of treatment of pulpitis, apical periodontitis</p>

		<p>possible complications, side effects, adverse reactions, including serious and unexpected</p> <p>Principles, techniques and methods of anesthesia, selection of the type of local anesthesia in the treatment of dental diseases</p> <p>Ways to prevent or eliminate complications, side effects, adverse reactions, including serious and unforeseen, that occurred during the examination or treatment of patients with diseases of the teeth, pulp, periodontium, periodontium, oral mucosa and lips</p> <p>Materials science, technologies, equipment and medical products used in dentistry</p> <p>Anatomy of the head, maxillofacial region, features of blood supply and innervation; the structure of the teeth; histology and embryology of the oral cavity and teeth, the main violations of embryogenesis</p> <p>IPK 7.2. Able to:</p> <p>Develop a plan for the treatment of children and adults with dental diseases in accordance with the procedures for the provision of medical care, clinical guidelines, taking into account the standards of care</p> <p>Select and prescribe medicines, medical devices (including dental materials), dietary nutrition, medical and</p>	<p>pathological anatomy. Methods of treatment, indications, contraindications to methods of treatment.</p>	<p>state of the body as a whole; apply paste for pulp devitalization; open the cavities of all anatomical groups of teeth, prepare the crowns of intact teeth; remove the pulp after devitalization from the root canal; to carry out instrumental, drug treatment of the root canal, its drying, determining the degree of its patency; seal root canals with pastes and sealants without using and using pins; remove fragments of instruments from the root canal; carry out the removal of supra- and subgingival dental deposits, applications on the oral mucosa, blockade under the elements of the lesion take a smear for cytological, bacterioscop</p>	<p>and caries, methods of professional hygiene, removal of dental deposits, methods of treatment of diseases of the oral mucosa</p>
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		<p>recreational regimen for the treatment of children and adults with dental diseases in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care</p> <p>Determine medical indications and contraindications for local anesthesia techniques in the maxillofacial region</p> <p>Perform local anesthesia (application, infiltration, conduction) in children and adults with dental diseases</p> <p>Perform medical interventions, including therapeutic ones, in children and adults with dental diseases on an outpatient basis (excluding repeated endodontic treatment):</p> <ul style="list-style-type: none"> - individual training in oral and dental hygiene, selection of means and items for oral hygiene - controlled brushing of teeth - professional oral and dental hygiene - injection of drugs in the maxillofacial area - local application of remineralizing preparations in the area of the tooth - deep fluoridation of tooth enamel - sealing the fissure of the tooth with a sealant - professional teeth whitening - grinding of hard tissues of the tooth - restoration of a tooth with a filling using dental cements, 		<p>ic , bacteriological examination of the contents of the pocket; perform palpation of regional lymph nodes of the facial skeleton, soft tissues of the face; palpation of the oral mucosa; determine the morphological elements of the lesion; probe deep ulcers, fistulas; take material for cytological examination (scrapings, prints); take material for direct microscopy for fungi, fusospirochetes ; to carry out therapeutic measures in case of damage to the oral mucosa with arsenic salts; local treatment of lesions of the mucous membrane - removal of plaque, necrotic tissues, washing, irrigation, applications</p>	
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			<p>chemical curing materials, photopolymers</p> <ul style="list-style-type: none"> - restoration of teeth with a violation of the contact point - tooth restoration with filling material using anchor pins - application of devitalizing paste - pulpotomy (amputation of the coronal pulp) - pulp extirpation - instrumental and medical treatment of a well-passable root canal - temporary filling of the root canal with a drug - filling the root canal of the tooth with paste, gutta-percha pins - removal of supragingival and subgingival plaque in the tooth area (manual method) - ultrasonic removal of supragingival and subgingival dental deposits in the tooth area - closed curettage for periodontal diseases in the tooth area - application of a medical dressing for periodontal diseases in the area of one jaw - prescription of drug therapy for diseases of the oral cavity and teeth - appointment of dietary therapy for diseases of the oral cavity and teeth <p>Perform medical interventions, including surgical ones, in children and adults with dental diseases on an outpatient basis (excluding the extraction of impacted and dystopic teeth):</p> <ul style="list-style-type: none"> - removal of a tooth 		<p>; inject drugs under the elements of the lesion; eliminate local traumatic factors</p>	
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			<ul style="list-style-type: none"> - removal of a temporary tooth - permanent tooth extraction - opening and drainage of odontogenic abscess <p>Carry out phased sanitation of the oral cavity (excluding sanitation of the oral cavity in children under anesthesia)</p> <p>Perform medical interventions, including orthopedic, in adults with dental diseases on an outpatient basis (excluding prosthetics on dental implants, technologies for automated production of orthopedic structures, complete removable lamellar and clasp dentures):</p> <ul style="list-style-type: none"> - obtaining anatomical and functional impressions - restoration of a tooth with a crown - restoration of the integrity of the dentition with fixed bridges - prosthetics with partial removable lamellar dentures - correction of a removable orthopedic structure - removal of a fixed orthopedic structure <p>Interpret the results of X-ray studies of the maxillofacial region</p> <p>Conduct counseling for children and adults with diseases of the mucous membranes of the mouth and lips, determine indications for referral for a consultation with specialist doctors</p> <p>Prevent or eliminate donkey</p>			
5.	PC-12	Able to prepare the necessary medical documentation for the implementation of	IPC 12.1 Knows: Fundamentals of evidence-based medicine; the main	Scientific literature, educational and	Analyze scientific literature and	Methods of medical statistics, determination

		<p>medical and social expertise in federal state institutions of medical and social expertise and refer a patient with a persistent impairment of body functions caused by diseases, the consequences of injuries or defects to medical and social expertise</p>	<p>sources of medical information based on evidence-based medicine; methods and forms of public presentation of medical information; basic principles of medical research</p> <p>IPC 12.2 Can: Search for medical information based on evidence-based medicine; interpret the data of scientific publications; critically evaluate modern methods of diagnosis, prevention and treatment of diseases from the perspective of evidence-based medicine; justify your choice of methods for diagnosing, preventing and treating dental diseases; prepare a presentation for the public presentation of medical information, the results of scientific research</p> <p>IPC 12.3 Has practical experience: Development of algorithms for examination and treatment of adults and children with dental diseases in accordance with the principles of evidence-based medicine; search and interpretation of medical information based on evidence-based medicine; public presentation of medical information based on evidence-based medicine; partial participation in scientific research</p>	<p>methodical publications, scientific journals and collections of works. Methods of medical statistics.</p>	<p>statistical reviews, conduct statistical analysis, present the resulting statistics, and interpret them.</p>	<p>of the Student's criterion, non-parametric methods, comparison of independent and dependent groups, methods for describing qualitative features.</p>
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4. Sections of the academic discipline and competencies that are formed when

mastering them:

№	Competence code	Section name of the discipline	The content of the section in teaching units
1.	UC-1, PC-2	Prevention of caries; non-carious lesions of hard tissues of teeth, periodontal diseases and oral mucosa. Methods of treatment of diseases of hard tissues of teeth in patients of different ages	Etiology, pathogenesis, pathological anatomy, clinic, diagnostics, differential diagnostics, methods of caries treatment and prevention; pulpitis, periodontitis, non-carious lesions of hard dental tissues, periodontal diseases and oral mucosa
2.	PC-6, PC-7, PC-12	Diagnosis of caries; pulpitis, periodontitis, non-carious lesions of hard dental tissues, periodontal diseases and oral mucosa. Endodontic treatment of pulp and periodontal diseases in patients of different ages	Etiology, pathogenesis, pathological anatomy, clinic, diagnostics, differential diagnostics, methods of caries treatment and prevention; pulpitis, periodontitis, non-carious lesions of hard dental tissues, periodontal diseases and oral mucosa

5. Volume of discipline and types of educational work

The distribution of the labor intensity of the discipline and types of educational work according to semesters:

Type of educational work	Labor intensity		Labor intensity (AH) in semesters		
	volume in credit units (CU)	volume in academic hours (AH)	6	7	10
classroom work, including	2	72			72
Lectures (L)		10			10
Laboratory workshops (LP)					
Practical exercises (PZ)					
Clinical Practice (CPP)		34			34
Seminars (C)					
Student Independent Work (SIW)		28			28
Intermediate certification					
test/exam (<i>specify type</i>)	<i>offset</i>				
TOTAL	2	72			72

6. The content of the discipline

6.1. Sections of the discipline and types of classes:

№	Name of the section of the academic discipline	Types of academic work* (in AH)	№							Name of the section of the academic discipline
			L	LP	PE	CP	S	IWS	Total	
1	10	Innovative methods of examination of the patient. Dental and medical documentation.	2			6			5	Current testing. Testing practical skills. Writing a fragment of the medical history.
2	10	Innovative methods and materials for the treatment of dental caries. Methods of modern prevention of dental diseases	2			7			5	Current testing. Oral individual survey . Writing a fragment of the case history.
3	10	Innovative methods of treatment of diseases of the pulp and periodontal	2			7			6	Current testing. Oral individual survey . Abstract. Solution of situational problems.
4	10	Modern innovative methods of treatment of periodontal diseases: gingivitis , periodontal disease, periodontitis, idiopathic	2			7			6	Current testing. Oral individual survey. Abstract.

		diseases.							
5	10	Innovative methods for diagnosing diseases of the oral mucosa	2		7		6		Current testing. Oral individual survey. Written test work. Writing a fragment of the medical history.
	10	<i>offset</i>							
		TOTAL	10		34		28		

L- lectures

LP - laboratory workshop

PE - practical exercises

CP - clinical practice

S - seminars

IWS - independent work of the student

6.2. Thematic plan of lectures using EOT and DOT:

№	Lecture Topics	Semester 6	Semester 7	Semester 10
1.	Dental caries. Cariogenic situation in the oral cavity, methods for its detection and elimination. classification of caries. Etiopathogenetic rationale for the treatment and prevention of dental caries. Exogenous and endogenous prevention. Modern methods of treatment and prevention of caries. Modern etiopathogenetic methods and methods of restoration of permanent teeth with modern filling materials.			2
2.	Pulpitis. Periodontitis. Classification, clinic, diagnostics, differential diagnostics. Modern methods of treatment. Modern etiopathogenetic methods and methods of restoration of permanent teeth subjected to primary and repeated endodontic treatment using modern filling materials.			2
3.	Periodontal diseases: Gingivitis (catarrhal, hypertrophic, erosive). Periodontitis. Classification, clinic, diagnostics, differential diagnostics. Modern methods of treatment. Modern etiopathogenetic methods and methods of prevention			2
4.	Periodontal diseases:			2

	Periodontitis. Idiopathic periodontal disease. Classification, clinic, diagnostics, differential diagnostics. Modern methods of treatment. Modern etiopathogenetic methods and methods of prevention.			
5.	Tactics of a doctor in diseases of the oral mucosa. Modern methods of treatment and diagnosis of all types of diseases of the oral mucosa. Clinical cases in the disease of oral mucosa.			2
total				ten

6.3. Distribution of laboratory workshops by semesters: not provided by the Federal State Educational Standard .

6.4 Distribution of practical training topics by semester: not provided by the Federal State Educational Standard .

6.5. Distribution of topics of clinical practical classes by semesters using EOS and DOT:

№	Name of topics of clinical practical classes	Volume in AH		
		Semester 6	Semester 7	Semester 10
1.	Innovative methods of examination of the patient. Dental and medical documentation.			6
2.	Innovative methods and materials for the treatment of dental caries. Methods of modern prevention of dental diseases			6
3.	Innovative methods of treatment of diseases of the pulp and periodontal			6
4.	Modern innovative methods of treatment of periodontal diseases: gingivitis , periodontal disease, periodontitis, idiopathic diseases.			6
5.	Innovative methods for diagnosing diseases of the oral mucosa			7
	offset			
	Total (total - 34 Ah)			34

6.6 Distribution of seminar topics by semester: not provided by the Federal State Educational Standard .

6.7 Distribution of student independent work (SIW) by type and semester:

№	Name of the type of CPC*	Volume in AH		
		Semester 6	Semester 7	Semester 10
	Preparation for clinical practical classes, homework, preparation for current control			5
	Working with lecture material			5
	Working with electronic resources on the distance			6

	education portal "PIMU"			
	The study of material submitted for independent study (separate topics, paragraphs), work with literary sources			6
	Preparing for testing			6
	Total			28

7. Fund of evaluation tools for current control and intermediate certification

7.1. Forms of current control and intermediate certification*, types of evaluation tools:

№	semes ter numb er	Types of control	Name of the discipline section	Evaluation tools		
				Kinds	Number of questions in the task	Number of independent options
1	2	3	4	5	6	7
1	10	offset	Innovative technologies in therapeutic dentistry	Tests, clinical situational tasks	3	50

* forms of current control: control of the student's independent work, control of the development of the topic;
forms of intermediate certification: test, exam

The current control over the discipline is carried out using control questions, situational tasks, as well as test tasks.

Example:

1. Caries in the stain stage. Clinic, diagnostics, differential diagnostics, modern methods of treatment, choice of treatment method.
2. Principles and stages of preparation of carious cavities . Non-invasive methods of caries treatment.
3. Features of preparation and filling of carious cavities of 1, 2, 3, 4, 5, 6 Black classes .
4. Pulp of the tooth. Histological structure, innervation, blood supply, main functions.

Situational task on the topic of innovation in therapeutic Dentistry No. 1

During the planned sanitation of the patient R., 19 years old, it was revealed: abundant deposits of soft plaque, bleeding gums, IG=4 points, KPU=9. After professional hygiene, multiple chalky spots were found.

1. List the most likely diseases.
2. Make a diagnosis.
3. Perform differential diagnosis.

4. Define " cariogenic situation".
5. What are "risk zones" and "immune zones" on the tooth surface?
6. Prescribe treatment.

Situational task on the topic of innovation in therapeutic dentistry No. 2

When examining the oral cavity of patient K., 20 years old, a dentist found multiple chalky spots on many teeth, especially pronounced on the incisors of the upper and lower jaws. The enamel in the area of the spot is smooth and shiny.

1. Make a diagnosis. Justify the answer.
2. Perform differential diagnosis.
3. What additional anamnestic data is needed to clarify the diagnosis?
4. ICON infiltration in this case ?

Test tasks:

Tests

1. HOW MANY INGREDIENTS ARE IN THE ICON SYSTEM FOR THE TREATMENT OF CARIES IN THE STAGE OF WHITE SPOT?

- 1.1
- 2.2
- 3.3
- 4.4
- 5.5

2. IS ANESTHESIA USED IN THE TREATMENT OF CARIES IN THE STAGE OF WHITE SPOT WITH THE ICON SYSTEM?

1. Yes
2. No
3. Not always
4. At the request of the patient

3. ADVANTAGES OF THE ICON METHOD?

1. The development of caries stops in the early stages
2. Healthy tooth tissues are preserved
3. Painless procedure without anesthesia and preparation
4. Successful treatment in one visit
5. All of the above

4. WHAT SOLUTION IS USED FOR OBJECTIVE EVALUATION OF THE EFFICIENCY OF REMOTERAPY?

1. Lugol
2. 2% methylene blue solution
3. Magenta
4. Brilliant green

5. Potassium iodide

5. WHAT SYSTEM IS USED FOR MICROABRASION?

1. Opalescence
2. Opalustre
3. ICON
4. Klox
5. Beyond

Boundary control in the discipline is carried out by conducting a test using tasks and test tasks.

Example :

Situational task on the topic of innovation in therapeutic dentistry No. 1

Patient Z., 23 years old, came to the dentist with complaints of an aesthetic defect in the front teeth.

Objectively: the enamel of all surfaces of the anterior group of teeth has a matte tint, and against this background there are well-defined pigmented spots.

1. Make a preliminary diagnosis.
2. What additional anamnestic data, additional research methods are needed to make a final diagnosis?
3. Create a comprehensive treatment plan.
4. Is it possible to carry out teeth whitening in this clinical situation? Which bleaching system would you prefer in this case?

Situational task on the topic of innovation in therapeutic dentistry No. 2

A 14-year-old teenager consulted a dentist with complaints of an aesthetic defect in the area of teeth 1.2, 1.1, 2.1, 2.2, 3.2, 3.1, 4.1, 4.2.

From the anamnesis: in early childhood he had a severe form of dysentery, which was treated with large doses of tetracycline.

1. Make a diagnosis.
2. What methods of treatment can be applied in this case?
3. What is the prevention of this pathology?

An example of test tasks:

1) GENERAL CONTRAINDICATIONS FOR TEETH WHITENING:

1. Allergic reactions to hydrogen peroxide
2. Extensive Restorations
3. Large pulp chamber
4. Pregnancy, breastfeeding
5. All of the above

2) CHOOSE THE STAGES OF PROFESSIONAL WHITENING:

1. Isolation of gums and soft tissues

2. Activation of the whitening gel
3. Cleansing from plaque
4. Applying the whitening gel
5. Color definition

3) WHAT COMPONENT IS INCLUDED IN PROFESSIONAL TOOTH WHITENING SYSTEMS?

1. Carbamide peroxide
2. Ozone
3. Oxygen
4. Hydrogen peroxide
5. Glycerin

4) DURATION OF THE "WHITE DIET" AFTER TEETH WHITENING:

1. 24 hours
2. 48 hours
3. 1 month
4. 2 months
5. 3 months

5) CHOOSE SYSTEMS FOR HOME WHITENING:

- 1 Opalescence Endo
2. Opalescence Boost
3. Beyondpolus _
4. OpalescencePF _
5. Charismadiamond

The final control is carried out at the end of the training, students pass the final state certification in the form of state final exams after the 5th year in 3 stages: certification of practical skills, test tasks, interviews on clinical situational tasks.

8. Educational, methodological and information support of the discipline (printed, electronic publications, Internet and other network resources) .

8.1. List of basic literature*:

No.	Name according to bibliographic requirements	Number of copies	
		At the department	In library
one	Therapeutic dentistry. Part 2: Periodontal disease: a textbook for universities 2 / Barer G. M.; Publisher: GEOTAR-Media, 2008	1	33
2	Therapeutic dentistry. Guide to practical exercises: study guide / Maksimovsky Yu. M.; Publisher: GEOTAR-Media, 2011	1	102
3	Therapeutic dentistry: a textbook for students. honey. universities / Borovsky E.V. Publisher: Medical News Agency, 2011	1	54

four	Dentistry of the XXI century: topical aspects: a collection of scientific papers with international participation, dedicated to the 20th anniversary of the departments of therapeutic and orthopedic dentistry / Lukinykh L. M.; Ed. Nizhny State Medical Academy , 2012	1	6
5	Restoration of teeth with light- curing composite materials: a practical guide for dentists- therapists Author : Makeeva I.M.; Publisher: MEDpress-inform , 2013	1	30

8.2. List of additional literature:

№	Name according to bibliographic requirements	Number of copies	
		At the department	In library
1	Modern filling materials and drugs in therapeutic dentistry: a practical guide / Dmitrieva L. A.; Publisher: Medical Information Agency, 2011	1	1
2	Phantom course of therapeutic Phantom course of therapeutic dentistry / Nikolaev AI; Publisher: MEDpress-inform , 2009	1	96
3	Restoration of teeth with light- curing composite materials: a practical guide for dentists - therapists / Makeeva I.M.; Publisher: MEDpress-inform , 2011	1	1
4	Mistakes in endodontic treatment and ways to prevent them: a teaching aid / Murzova T.V .; Publisher: NizhGMA , 2010	1	35
5	Apical periodontitis: textbook / Lukinykh L. M.; Ed. Nizhny State Medical Academy , 2010	1	54
6	Therapeutic dentistry: a textbook for students. honey. Universities / Borovsky E.V.; Publisher: Medical Information Agency, 2011	1	54
8	Dentistry. Recording and maintaining a medical history: a guide / Afanasiev V.V.; Publisher: GEOTAR-Media, 2013	1	50
9	Restoration of teeth with light- cured composite materials: a practical guide for the doctor / Makeeva I.M.; Publisher: MEDpress-	1	30

	inform , 2013		
10	Treatment of periodontal diseases: textbook / Zhulev E. N.; Publisher: NizhGMA , 2016	6	1

8. 3. List of guidelines for classroom and independent work of students:

№	Name according to bibliographic requirements	Number of copies	
		At the department	In library
1	Pulpitis. Etiology. Pathogenesis. Diagnostics. Treatment / N.N. Bondarenko, L.M. Lukinykh. - Nizhny Novgorod: Publishing house of NizhGMA , 2014.- 190p.	1	1
2	Algorithm for aesthetic restoration of anterior and posterior teeth: monograph / L.A. Lobovkina , A.M. Romanov - M. : MEDpress-inform , 2008	1	1
3	The scheme of examination and writing a medical record of a dental patient (guidelines) / Kondyurova E.V., Uspenskaya O.A. // Saransk: Publishing House Mordovs . un-ta, 2015. - 72 p.	1	1
four	.Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions / L.M. Lukinykh, O.A. Assumption. - N.Novgorod : 5th edition, Publishing House of NizhGMA , 2015.-44s.	1	1
5	Irrigation of the root canal system / ed. L.M. Lukinykh . , 2nd edition - Nizhny Novgorod: NizhGMA Publishing House , 2015.- 36p.	1	1
6	Obturation of the root canal system / ed. L.M. Lukinykh. - Nizhny Novgorod: Publishing house of NizhGMA , 2015.- 60s.	1	1
7	Apical periodontitis / Lukinykh L.M., Egorova L.I., Tiunova N.V., Zhdanova M.L. // Tutorial. Publishing house NGMA. Nizhny Novgorod, 2016. - 174p.	1	1
eight	Dental caries: textbook / Yu.M. Maksimovsky - M. : GEOTAR-Media, 2009 Ab / scientific	1	1
9	Gutova, Yu.S. Influence of post- bonding on the quality of restorations during surgical and restorative treatment of dental hard tissues using composite filling materials: autoref . dis cand. honey. Sciences: 14.00.21 / Yu.S. Gutov. - M.: B.i. , 2008. - 26 p.	1	1
ten	Chagai , A.A. Clinical and experimental substantiation of the choice of methods of restoration of teeth in the treatment of uncomplicated caries: autoref . dis cand. honey. Sciences: 14.00.21 / A.A. Chagay . - Yekaterinburg: B.i. , 2007.	1	1

Educational and methodological materials published by the staff of the Department of Therapeutic Dentistry and used by both teachers and students:

№	Teaching aid, monograph	The authors)	Edition (where, when)
1.	Catarrhal gingivitis. Etiology, clinic, treatment. (Guidelines for students)	L.M. Lukinykh	Nizhny Novgorod, NGMI.- 1992.- 24s.
2.	Reading radiographs of teeth and jaws. (Guidelines for students)	L.M. Lukinykh	Nizhny Novgorod, NGMI. - 1992. - 27s.
3.	Scheme of clinical examination of the patient and writing an academic medical history. (Guidelines for students)	L.M. Lukinykh	Nizhny Novgorod, NGMI . - 1992. -28s.
4.	Periodontal disease (guidelines for students). Part 1	L.M. Lukinykh	Nizhny Novgorod, NGMA. - 1993. -43s.
5.	Periodontal disease (guidelines for students). Part 2	L.M. Lukinykh	Nizhny Novgorod, NGMA. - 1993. -46s.
6.	Diseases of the oral mucosa mouth. (Tutorial)	L.M. Lukinykh S.I. Gazhva L.N. Kazarina Yu.N. Livshits M.M. Poleshchuk L.V. Shestopalova L.I. Krasulova and others.	Nizhegorod Publishing House . state medical academy , 1993.-211s.
7.	Guidelines for industrial practice for students of the Faculty of Dentistry on the prevention of dental diseases.	L.M. Lukinykh S.I. Gazhva	Nizhny Novgorod, NGMA. - 1994. -16p .
8.	Guidelines for students of the Faculty of Dentistry on the production practice of pediatric dentistry.	L.M. Lukinykh L.N. Kazarina	Nizhny Novgorod, NGMA.- 1994.-18s.
9.	Guidelines for students of the Faculty of Dentistry for practical work in therapeutic dentistry.	L.M. Lukinykh L.N. Kazarina	Nizhny Novgorod, NSMA.- 1995.- 31s.
10.	Organization of therapeutic dental care in the armed forces in peacetime and wartime.	L.M. Lukinykh	Nizhny Novgorod, NGMA. - 1996.- 24s.
11.	Dental caries.	L.M. Lukinykh S.I. Gazhva L.N. Kazarina	Nizhegorod Publishing House . state medical academy , 1996.-128s.
12.	Guidelines for students of the Faculty of Dentistry to industrial practice in therapeutic dentistry and clinical examination	L.M. Lukinykh L.N. Kazarina	Nizhny Novgorod, NSMA.- 1997.- 34s.

13.	Treatment and prevention of dental caries. (Tutorial)	L.M. Lukinykh	Nizhegorod Publishing House . state medical academy , 1998.-168 p.
14.	Guidelines for foreign students of the Faculty of Dentistry to work practice in therapeutic dentistry.	L.M. Lukinykh	Nizhegorod Publishing House . state medical academy , 1998.-32 p.
15.	Guidelines for students of the 2nd year of the Faculty of Dentistry to the industrial practice "Nurse of a Dental Institution".	L.M. Lukinykh Yu.N. Livshits N.N. Shakerova S.R. Sorokin	Nizhegorod Publishing House . state medical academy , 1998.-10 p.
16.	Dental caries (etiology, clinic, treatment, prevention).	L.M. Lukinykh	N. Novgorod: 2nd edition, Nizhegorod Publishing House . state medical academy , 1999. -185 p.
17.	Non-surgical treatment of periradicular jaw cyst. Monograph	L.M. Lukinykh G.D. Ovrutsky Yu.N. Livshits	Library of the practical doctor. -M.: Medicine.- 1999.- 118s.
18.	Apical periodontitis. (Tutorial)	L.M. Lukinykh Yu.N. Livshits	Nizhegorod Publishing House . state Medical Academy , 1999.- 92.S.
19.	Pulpitis (Clinic, diagnosis, treatment).	L.M. Lukinykh L.V. Shestopalova	Nizhegorod Publishing House . state medical academy , 1999.-88s.
20.	Scheme of clinical examination of the patient and writing an academic medical history. (Guidelines for students of the Faculty of Dentistry)	L.M. Lukinykh I.I. Parshin	Nizhegorod Publishing House . state medical academy , 1999.-44 p.
21.	Diseases of the oral mucosa.	L.M. Lukinykh L.N. Kazarina S.I. Gazhva L.V. Shestopalova Yu.N. Livshits	Nizhegorod Publishing House . state medical academy , 2000.-p. 57-160.
22.	Dental caries (etiology, clinic, treatment, prevention).	L.M. Lukinykh	N. Novgorod: 3rd edition, Nizhegorod Publishing House . state medical academy , 2001. -185 p.
23.	Pulpitis (Clinic, diagnosis, treatment).	L.M. Lukinykh L.V. Shestopalova	N. Novgorod: 2nd edition, Nizhegorod Publishing House . state medical academy , 2002.-88s.

24.	Scheme of clinical examination of the patient and writing an academic medical history. (Guidelines for students)	L.M. Lukinykh I.I. Parshin	Nizhny Novgorod: 2nd edition, Nizhny Novgorod Publishing House . state medical academy , 2003. -44s.
25.	Physiotherapy in the practice of therapeutic dentistry.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod, NGMA. - 2003.-36s.
26.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod, NGMA.- 2003.-40s.
27.	Guidelines for work practice in therapeutic pediatric dentistry for students of the Faculty of Dentistry.	L.M. Lukinykh L.N. Kazarina S.Yu. Kosyuga I.N. Chuprunova MM. Ratsyuk	Nizhny Novgorod, NGMA . - 2003. - 38s.
28.	Prevention of dental caries and diseases periodontal. <i>Monograph</i>	L.M. Lukinykh	M.: Medical book, 2003.-196s.
29.	Dental caries. Etiology, clinic, treatment, prevention.	L.M. Lukinykh	N. Novgorod: 4th edition, Nizhegorod Publishing House . state medical academy , 2004.-186s.
30.	Guidelines for students of the 2nd year of the Faculty of Dentistry to the production practice "Assistant Nurse of a Dental Institution".	L.M. Lukinykh E.V. Kitaeva	Nizhny Novgorod, NGMA. - 2004. -26s.
31.	Guidelines for students of the 3rd year of the Faculty of Dentistry to work practice in therapeutic dentistry.	L.M. Lukinykh E.V. Kitaeva	Nizhny Novgorod, NGMA. - 2004. - 40 p.
32.	Diseases of the mucous membrane of the oral cavity and lips in children.	/ Ed. L.N. Kazarina	Nizhny Novgorod, NGMA. - 2004. - p. 264.
33.	Apical periodontitis. (Tutorial)	L.M. Lukinykh Yu.N. Livshits	N. Novgorod: 2nd edition, Nizhegorod Publishing House . state Medical Academy , 2004.- 92.S.
34.	Pulpitis (Clinic, diagnosis, treatment). (Tutorial)	L.M. Lukinykh L.V. Shestopalova	N. Novgorod: 3rd edition, Nizhegorod Publishing House . state medical academy , 2004.-88C.
35.	Dentist and patient: rights, obligations, a responsibility. <i>Monograph</i>	N.N. Bondarenko	M.: Medical book, 2004. - 96 p.

36.	Diseases of the oral cavity.	/ Ed. L.M. Lukinykh	Nizhny Novgorod Publishing House . state medical academy , 2004.-510s.
37.	Civil-legal bases of medical activity. Guidelines	N.N. Bondarenko	Nizhny Novgorod Publishing House . state medical academy , 2005.-48 p.
38.	Scheme of clinical examination of the patient and writing an academic medical history. (Guidelines for students)	L.M. Lukinykh I.I. Parshin	Nizhny Novgorod: 3rd edition, Nizhny Novgorod Publishing House . state medical academy , 2005. -44s.
39.	Physiotherapy in the practice of therapeutic dentistry.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 2nd edition, NGMA. - 2005.-36s.
40.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 2nd edition, NGMA. - 2005.-40s.
41.	Periodontal disease (clinic, diagnosis, treatment and prevention).	L.M. Lukinykh E.N. Zhulev I.N. Chuprunova	Nizhny Novgorod Publishing House . state medical academy , 2005.-322s.
42.	Legal literacy of dentists. <i>Monograph</i>	A.V. Demina G.A. Pashinyan L.M. Lukinykh	Moscow, Medical Book Publishing House, 2005.-160p.
43.	Forensic stomatological identification of a person (state and development prospects). <i>Monograph</i>	G.A. Pashinyan L.M. Lukinykh G.N. Karpov	Moscow, Medical Book Publishing House, 2005.-157p.
44.	Dental diseases during pregnancy and their prevention. <i>Monograph</i>	CM. Tolmacheva L.M. Lukinykh	Moscow, Medical Book Publishing House, 2005.-150p.
45.	Dental complications that developed after radiation and chemoradiotherapy (Clinical course, treatment and prevention of candidiasis that developed against the background of mucositis). <i>Monograph</i>	L.I. Egorova L.M. Lukinykh	Moscow, Medical Book Publishing House, 2006.-155p.
46.	Physiotherapy in the practice of therapeutic dentistry.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 3rd edition, NGMA. - 2006.-36s.
47.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 2nd edition, NGMA.- 2006.-40s.

48.	Establishing the age and gender of a person by the degree of tooth wear , taking into account the presence of a number of pathological conditions and harmful working conditions. <i>Monograph</i>	G.A. Pashinyan L.M. Lukinykh A.A. Plishkin	Moscow, Medical Book Publishing House, 2007.-104 p.
49.	Dryness in the mouth. Classification, differential diagnosis, treatment	O.A. Uspenskaya A.A. Plishkin N.V. Kazarina E.A. Shevchenko	Nizhny Novgorod: NizhGMA Publishing House , 2007.- 31 p.
50.	Urogenital candidiasis and bacterial vaginosis .	E.A. Shevchenko A.A. Artifeksova O.A. Uspenskaya	Nizhny Novgorod: NizhGMA Publishing House , 2007.-27 p.
51.	Dentistry for pregnant women.	O.A. Uspenskaya E.A. Shevchenko N.V. Kazarina	Nizhny Novgorod: NizhGMA Publishing House , 2008.- 24 p.
52.	Clinical and expert assessment of errors and complications in the practice of a pediatric dentist.	S.I. Gazhva E.S. Tuchik HER. Abramova N.N. Bondarenko	Nizhny Novgorod: NizhGMA Publishing House , 2008.-300 p.
53.	Guide to Forensic Dentistry.	Ed. G.A. Pashinyan	M: LLC Medical Information Agency, 2009. -528 p.
54.	Scheme of clinical examination of the patient and writing a medical record of a dental patient.	L.M. Lukinykh	Nizhny Novgorod Publishing House . state medical academy , 2009. - 72s.
55.	Dentist and patient: legal reality.	N.N. Bondarenko	Moscow, Publishing house Medical book, Publishing house "Dentistry", 2009.-124 p.
56.	Guidelines for the production practice in therapeutic dentistry "Assistant to the dentist therapist".	L.M. Lukinykh CM. Tolmacheva L.I. Egorova E.V. Kitaeva	Nizhny Novgorod: NizhGMA Publishing House , 2010.-44 p.
57.	Apical periodontitis. Tutorial	L.M. Lukinykh L.I. Egorova	Nizhny Novgorod Publishing House . state medical academy , 2010.-120 p.
58.	Methodical Instructions for the clinical practice in therapeutic stomatology for the 3-d year students of the stomatological faculty "THE ASSISTANT OF STOMATOLOGICAL THERAPEUTIST".	L.M. Lukinykh L.I. Egorova CM. Tolmacheva	Nizhny Novgorod: NizhGMA Publishing House , 2010.-35 p.
59.	Guidelines for conducting work practice "Assistant Nurse of the Dental Department."	L.N. Kazarina L.V. Vdovina L.M. Lukinykh	Nizhny Novgorod: NizhGMA Publishing House , 2010.-40 p.

		E.V. Kitaeva	
60.	Guidelines for the production practice in therapeutic dentistry "Assistant to the dentist therapist".	L.M. Lukinykh CM. Tolmacheva L.I. Egorova E.V. Kitaeva	Nizhny Novgorod: Publishing House of Nizhny State Medical Academy , 2011.-44s.
61.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 3rd edition, NGMA.- 2011.-44p.
62.	Scheme of clinical examination of the patient and writing a medical record of a dental patient.	L.M. Lukinykh	Nizhny Novgorod Publishing House . state medical academy , 2011. -72s.
63.	Physiotherapy in the practice of therapeutic dentistry.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 5th edition, NGMA. - 2011.-36s.
64.	Physiotherapy in the practice of therapeutic dentistry.	L.M. Lukinykh O.A. Uspenskaya E.A. Shevchenko	Nizhny Novgorod: 6th edition, NGMA. - 2012.-52s.
65.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 3rd edition, NGMA.- 2012.-44p.
66.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions.	L.M. Lukinykh O.A. Uspenskaya	Nizhny Novgorod: 3rd edition, NGMA.- 2013.-44p.
67.	Urogenital infection and infertility (monograph)	Shevchenko E.A., Artifeksova A.A., Uspenskaya O.A.	Nizhny Novgorod: NizhGMA Publishing House , 2012. - 160 pages.
68.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions	Lukinykh L.M. Uspenskaya O.A.	Tutorial. 5th edition. Publishing house NGMA. Nizhny Novgorod, 2013. 44 p.
69.	Test tasks in therapeutic dentistry	Lukinykh L.M., Tiunova N.V., Egorova L.I., Zhdanova M.L., Plishkina A.A., Zolotukhin V.A., Kruglova N.V., Spiridonova S.A.	Nizhny Novgorod: NizhGMA Publishing House , 2013. - 272 p.
70.	Optimization of complex treatment of inflammatory periodontal diseases: (monograph)	L.M. Lukinykh, N.V. Kruglova -	N. Novgorod: NizhGMA Publishing House , 2013 - 122 p.; ill.
71.	Lichen planus of the oral mucosa: etiology, pathogenesis, clinic, modern methods of treatment (monograph)	Lukinykh L.M. , Tiunova N.V.	Nizhny Novgorod : NizhGMA Publishing House , 2013. - 116 p.

72.	Reading radiographs of teeth and jaws at various age periods in normal and pathological conditions (textbook).	Lukinykh L.M. Uspenskaya O.A.	Tutorial. 6th edition). Publishing house NGMA. Nizhny Novgorod, 2014. 42 p.
73.	Physiotherapy in the practice of therapeutic dentistry (educational manual)	Lukinykh L.M. Uspenskaya O.A. Shevchenko E.A.	Teaching aid. 2nd edition. Nizhny Novgorod : NizhGMA Publishing House , 2014.–52 p.
74.	Irrigation of the root canal system (educational manual).	Lukinykh L.M., Tiunova N.V., Egorova L.I., Zhdanova M.L., Yartseva A.V.	Publishing house NGMA. Nizhny Novgorod, 2014. - 36 p.
75.	Pulpitis. Etiology. Pathogenesis. Diagnostics. Treatment (textbook).	N.N. Bondarenko, L.M. Lukinykh.	Nizhny Novgorod : NGMA Publishing House, 2014. - 190 pp. ill.
76.	Lichen planus (educational manual).	Lukinykh L.M., Tiunova N.V.	Publishing house NGMA. Nizhny Novgorod, 2014. 44 p.
77.	Erythema multiforme exudative (educational manual)	L.M. Lukinykh, O.A. Uspenskaya, E.A. Shevchenko.	Nizhny Novgorod: Publishing House of NizhGMA , 2015. - 44 p., ill.
78.	Chronic recurrent aphthous stomatitis (textbook)	O.A. Uspenskaya, L.M. Lukinykh, E.A. Shevchenko, N.V. Tiunova .	Nizhny Novgorod: Publishing house of NizhGMA , 2015. - 72 p., ill.
79.	Obturation of the root canal system (training manual).	Lukinykh L.M., Tiunova N.V., Egorova L.I., Zhdanova M.L., Yartseva A.V.	Publishing house NGMA. Nizhny Novgorod, 2015. - 60 p.
80.	Precancerous diseases of the oral mucosa and the red border of the lips (textbook).	Lukinykh L.M., Zhdanova M.L., Tiunova N.V.	Publishing house NGMA. Nizhny Novgorod, 2015. - 88 p.
81.	Physiotherapy in the practice of therapeutic dentistry (educational manual)	O.A. Uspenskaya, L.M. Lukinykh, E.A. Shevchenko	Teaching aid. 3rd edition. Nizhny Novgorod: NizhGMA Publishing House , 2015.–52 p.
82.	Reading radiographs of teeth and jaws at different age periods in normal and pathological conditions (textbook)	O.A. Uspenskaya, L.M. Lukinykh	Tutorial. 7th edition. Publishing house NGMA. Nizhny Novgorod, 2015. - 44 pages.

83.	Scheme of examination and writing a medical record of a dental patient (guidelines).	Kondyurova E.V., Uspenskaya O.A.	Saransk: Publishing house Mordovs . un- ta, 2015. - 72 p.
84.	Treatment of periodontal diseases (textbook)	E.N. Zhulev , N.V. Kruglova, A.V. Kochubeinik	Nizhny Novgorod, 2016-162 c., illustrations ISBN 978-5-7032-1077-2.
85.	Halitosis . (Tutorial.)	O.A. Uspenskaya, N.V. Tiunova	N. Novgorod, NizhGMA publishing house , 2016. - 72p. ill.
86.	Apical periodontitis (Tutorial).	Lukinykh L.M., Egorova L.I., Tiunova N.V., Zhdanova M.L.	Publishing house NGMA. Nizhny Novgorod, 2016. - 174 p.
87.	The orofacial system: the art of clinical diagnosis. (Tutorial).	E.N. Zhulev , V.D. Troshin, O.A. Uspenskaya, N.V. Tiunova .	N. Novgorod, Publishing house of NizhGMA , 2016.- 88 pages

8.4. Electronic educational resources for teaching academic subjects

8.4.1. Internal Electronic Library System of the University (IELSU)

<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>	<i>Number of users</i>
Internal Electronic Library System (IELSU) PIMU	Proceedings of PIMU staff (textbooks, manuals, collections of tasks, methodological manuals, laboratory work, monographs, etc.)	Access by individual login and password from any computer and mobile device	Not limited

8.4.2. Electronic educational resources purchased by the university

No.	<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>	<i>Number of users</i>
1.	Database "Medicine. Healthcare (VO) and "Medicine. Healthcare (SPO)" as part of the database "Electronic library of a technical university (ELS "Student Consultant"	Textbooks and teaching aids for higher medical and pharmaceutical education.	Access by individual login and password from any computer and mobile device	Not limited
2.	Database "Doctor's Consultant. Electronic Medical Library»	National guidelines, clinical guidelines, textbooks, monographs, atlases, reference books, etc.	Access by individual login and password from any computer and mobile device	Not limited
3.	Database "Electronic library " Bucap "	Educational and scientific medical	Access by individual login and	Not limited

	system	literature of Russian publishing houses, incl . translated editions. The collection of subscription publications is formed point by point.	password from any computer and mobile device. From university computers - access is automatic.	
four.	Electronic periodicals in the database "SCIENTIFIC ELECTRONIC LIBRARY eLIBRARY "	Electronic medical magazines	Access - from the computers of the university.	Not limited

8.4.3 Open access resources

<i>No</i>	<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>
1.	Electronic articles and abstracts	Electronic medical magazines	Not limited
2.	Clinical recommendations of the Ministry of Health of the Russian Federation	Protocols for the management of various dental nosologies	Not limited
3.	Standards of care http : www . rspor . en / index . php ? mod 1= standards 3& mod 2= db 1	Medical standards care	Not limited
4.	State Register of Medicines http :// www . drogreg . en / bases / WebReestrQuery . asp	List of commonly used drugs	Not limited
5.	Federal State Institution Scientific Center for Expertise of Medicinal Products of Roszdravnadzor http://www.regmed.ru	Circulation of medicines	Not limited
6.	Pharmaceutical Information Foundation http :// drugreg . en	Medications	Not limited
7.	Russian Encyclopedia of Medicines http :// rlsnet . en	Medications	Not limited
8.	Vidal Handbook . http://www.vidal.ru	Medications	Not limited

9.	STAR-Dental Association of Russia www . e - stomatology . en	Guidelines	Not limited
10.	Russian State Library (RSL) http :// www . rsl . en /	Abstracts for which there are copyright agreements with permission for their open publication.	Not limited
11.	Scientific electronic library of open access CyberLeninka http://cyberleninka.ru/	Full texts of scientific articles with annotations published in scientific journals in Russia and neighboring countries.	Not limited
12.	Federal Electronic Medical Library (FEMB) http: //neb.rf /	Includes electronic analogues of printed publications and original electronic publications that have no analogues recorded on other media (dissertations, abstracts, books, magazines, etc.)	Not limited
13.	European Association of Scientists, Educators and Dental Professionals www.ed-academy	Dental education, scientific activity	Not limited
14.	Russian Medical Academy of Postgraduate Education www . rmappo . en /	Information about the departments and departments, scientific subdivisions. Selection committee.	Not limited
15.	American Dental Association of Dentists www . americandental . ru / index . html ? page =23	International standards and requirements for dental products	Not limited

9. Logistics support of discipline.

9.1. List of premises* required for conducting classroom studies in the discipline.

1. Dental rooms equipped with the necessary equipment and equipment No. 5
2. X-ray room
3. Sterilization

9.2. The list of equipment* required for classroom training in the discipline.

1. Set of electronic presentations;
2. Lecture hall, screen, projector, laptop;
3. Presentations, transparencies, albums, videos .
4. Dental instruments, devices:

Dental filling materials for filling root canals and carious cavities.

- Negatoscope .
- Odontosensimeter , Digitest .
- Apex locator .
- MiniPieson .
- Centrifuge
- Furnace Thermafil
- Apparatus Bifil
- Teeth whitening lamp LumaCool
- Colorimeter ShadeYEYNCC
- TVs and VCRs.
- Laptop and multimedia projector.

ABOUT educational technologies in an interactive form used in the process of teaching the discipline:

1. role play
2. business games
3. training
4. game design
5. computer simulation
6. situation-case etc.;

imitation technologies :

1. lecture (problematic, visualization, etc.),
2. discussion (with and without brainstorming),
3. programmed learning, etc.

Only 25 % of interactive classes from the volume of classroom work.

Examples of educational technologies in an interactive form:

№	Section name	Forms of classes using active and interactive educational technologies
1	Innovative methods of examination of the patient. Dental and medical documentation.	business game
2	Innovative methods and materials for the treatment of dental caries. Methods of modern prevention of dental diseases	Role-playing game
3	Innovative methods of treatment of diseases of the pulp and periodontal	Seminar-discussion
4	Modern innovative methods of treatment of periodontal diseases: gingivitis , periodontal disease, periodontitis, idiopathic diseases.	Seminar-discussion
5	Innovative methods for diagnosing diseases of the oral mucosa	Lecture - visualization

Role play design. The methodology of the game can be demonstrated on the example of simulating a clinical situation - generalized periodontitis of varying severity (it can be mild, moderate or severe). There are several stages in the role-playing game.

- determining the goal of the game, developing a game scenario depending on the topic of the lesson: studying the clinic, diagnosis, differential diagnosis of generalized periodontitis, of varying severity;

- instructing the participants: the moderator (the role of the teacher or educator) names the topic of the lesson, determines its significance, draws students' attention to the need to highlight five competencies (especially legal aspects) that should be analyzed on this particular topic.

- distribution of roles, determination of the features of their behavior, depending on the role. The educational tasks of each are determined based on the game roles.

Dive into the game . Participants of the game are determined. In a role-playing game, learning takes place in the process of joint activity, but at the same time, each participant performs (solves) his task, in accordance with the role.

Students choose cards with a given role in the "blind" , determine the range of questions in accordance with the job responsibilities associated with the reception of a patient with generalized periodontitis. The "patient" card indicates the diagnosis, severity and aggravating moments (background disease, condition of the dentition: deep bite, partial absence of teeth, short frenulum or any other concomitant pathology). The rest of the participants in the game should not know the diagnosis.

Game process. The student-patient must formulate the complaints with which patients usually go to the doctor in this situation, model the clinical signs of the disease, in the form of individual symptoms characteristic of this particular case - generalized periodontitis of a certain severity.

The task of the doctor was to recreate the picture of the disease from individual symptoms, supplement it with the results of appropriate examination methods, and make a diagnosis that is known only to the student - the patient. At this stage of the game, the main points that were taken into account when discussing the course of the game were the observance of the procedure for examining the patient, compliance with the norms of ethics and deontology.

The student dentist clarifies the patient's complaints, details the conditions for the occurrence and development of these symptoms, how they stop. After a complete survey (anamnesis of the development of the disease, life), he identifies the leading symptoms. Conducts a detailed examination of the patient (external examination, examination of the oral cavity, the condition of hard tissues of the teeth), reveals the objective symptoms of the alleged diagnosis, determines and justifies the need for additional examination methods (X-ray, osteometry , Kulazhenko test, etc.) and their significance in making the final diagnosis. He clarified the need for a consultation consisting of an orthodontist , a surgeon or other related specialists to draw up a protocol for the complex treatment of a patient.

The radiologist describes the patient's x-ray, drawing attention to the degree of bone resorption, which determines the severity of the course of generalized periodontitis.

The lab doctor interprets the tests, identifying changes in the data and their implications for the clinic (for example, a blood test).

Head the dental department analyzes the work of the doctor, in terms of compliance with ethics, deontology, asepsis and antisepsis, the choice of drugs, the validity of their appointment.

An expert-analyst analyzes the work of all participants in the game step by step, evaluates the stages of work with the patient, and assigns marks according to the scorecard.

At the final stage, it is important to discuss the course of the game, the moderator summarizes the results of the game, discusses the performance of the participants, evaluates the participants in the game. The teacher, noting the positive aspects and shortcomings of the role performers, encourages discussion, gives the participants the opportunity to defend individual positions, determines the level of assimilation of knowledge, professional skills and abilities on this topic.

Seminar-discussion

Preparatory stage.

During the preparation period (7–10 days before the seminar), during independent work, a speaker, co-speaker are determined and the leaders of the initiative groups for each issue are determined. Each leader prepares a 5-7 minute speech in advance, revealing the relevance and

significance of the issue under consideration, its main problems. The composition of the expert group consisting of two people is determined to take into account the performances and give individual marks. During this period, a trainee is also assigned to lead the seminar.

His responsibilities include:

- compliance with the time limit for each question;
- directing the discussion of the issue (to whom to give the floor for a report, ensuring order and discipline when discussing the issue);
- providing assistance to each group responding to interrogations, etc.

Main stage.

The seminar begins with an introductory speech by the teacher. After that, it is desirable to hear and discuss the report, as well as hear the opponent. Then the teacher determines the composition of the initiative group on the first question. After determining the composition of the group, he, together with the leader of the seminar, takes his place at two tables facing the entire audience.

The facilitator gives the floor for a 6-7-minute presentation to the group leader, and then questions on the essence of the first question of the seminar, and the initiative group answers them.

This part of the workshop is the most important. Each participant not only asks questions, but also puts forward his own hypotheses, argues, proves his case, repeatedly refers to lecture notes and manuals to clarify his knowledge and find more convincing and accurate arguments.

Thus, the main and basic requirement for the organization of work at such a seminar is the following: trainees should solve the problems posed by themselves as often as possible. Speaking about the method of setting questions and answering them, it should be noted that the person asking the question may not address everyone, but a specific person in the initiative group. If this is not the case, then the facilitator regulates the even distribution of questions among the group members. After the time allotted for the question, the facilitator gives the floor to the teacher, who makes a conclusion on the issue (reveals what is the essence of this issue, indicates what to pay special attention to, gives answers to questions that did not receive proper coverage, etc.). Then, in the same way, all subsequent questions of the seminar are discussed.

The final stage:

- the results of the seminar are summed up;
- the presentation of the expert group and the head of the seminar is heard with an assessment of the work of each trainee;
- a survey of trainees is carried out;
- Set tasks for independent work.

It should be noted that holding a seminar using the method of active dialogue requires some preparatory work and continuous improvement of the methodology. Conducting a seminar with this method allows you to achieve the goal only if you use the various elements of active learning methods in an integrated manner.

Conducting a business game

1. Introduction to the game . Usually at this stage, the participants are introduced to the meaning, goals and objectives of the game being played, the general rules, they are consulted and instructed. However, if necessary, the game may be preceded by a lecture or conversation on the topic "Methods of examining a patient. Dental and medical documentation.

2. Dividing listeners into groups. The optimal group size is 5-7 people; in each group, a leader is selected and, if necessary, playing roles are distributed (dentist, patient). Roles can be distributed both at the beginning of the game, and as needed, as it progresses.

3. Immersion in the game. In this fragment, the listeners receive a "game task", for example: to determine the examination methods used to diagnose periodontal diseases in a patient. The game participants analyze the proposed situation, diagnose and rank problems, agree on terminology, formulate problems, etc. In addition, they receive not only information,

materials for analysis, but also attitudes on the behavior and rules of the game, therefore, *there is a process of familiarization with the rules and entry into role-playing behavior.*

4. Gameplay. At this stage, in accordance with the strategy adopted in each group, the search or development of solutions is carried out. During the discussion, a collective decision is developed, then a project is developed and substantiated, which is visualized on posters or a slide show, the documents necessary for the decision and its presentation at the plenary session are filled in using standard programs. At this stage, it is necessary to use the Internet for communication and information gathering; various search engines. Consultations with the teacher can be carried out by e-mail, using forums and live chats. Among the Internet resources most often used in independent work, it should be noted electronic libraries, educational portals, thematic sites, bibliographic databases, sites of periodicals. To perform calculations and prepare presentations, it is recommended to use standard software packages.

5. General discussion or plenum. Each group delegates a representative of their team to present and justify their decisions or projects (exchange of opinions, opposition, questions and answers). To conduct intergroup communication, the spatial environment of the game changes, and special roles are assigned, as a rule, performing game functions ("devil's advocate", provocateur, opponent, critic, etc.). Expert groups are actively working at the plenum, which evaluate not only the results of the projective activities of the teams, but also the culture of communication and presentation. As a result of the discussion, the teacher can also speak, but only with comments on the content of the discussion, on projects, and not in general on the whole game. In addition, the teacher at this stage has to conduct a plenum, and, consequently, raise questions and correctly manage the process of exchanging opinions.

6. Summing up the game . The need for this stage is especially important, since decisions and projects are evaluated here, different strategies are introduced, their effectiveness and competitiveness are determined. In addition, at this stage, points, penalty and incentive points are calculated, the best teams, players, projects are identified. It is at this stage that the game gets its logical conclusion. The evaluation system must ultimately correlate the planned goals and the result of the game.

7. Unloading from the game. There are many techniques that contribute to the " unloading " of participants from the gameplay. Their choice depends on the goals of the game and the game-technical competence of the teacher. The final part of the game can be devoted to the reflections of the participants about their future, about the prospects for using this kind of learning technologies in the educational process, homework, etc.

Software:

Distance education, tests for 2-5 courses, website of the department, electronic library, clinical situational tasks on all topics, plans for lectures and practical classes, schedules, a list of student's practical skills and abilities, questions for exams, etc.

9.3. A set of licensed and freely distributed software, including domestic production

Item no.	Software	number of licenses	Type of software	Manufacturer	Number in the unified register of Russian software	Contract No. and date
1	Wtware	100	Thin Client Operating System	Kovalev Andrey Alexandrovich	1960	2471/05-18 from 28.05.2018

2	MyOffice is Standard. A corporate user license for educational organizations, with no expiration date, with the right to receive updates for 1 year.	220	Office Application	LLC "NEW CLOUD TECHNOLOGIES"	283	without limitation, with the right to receive updates for 1 year.
3	LibreOffice		Office Application	The Document Foundation	Freely distributed software	
4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscription	
5	Yandex. Browser		Browser	«Yandex»	3722	
6	Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia	170	Office Application	Microsoft		23618/HN10030 LLC "Softline Trade" from 04.12.2020

