

THE MINISTRY OF HEALTH OF UKRAINE
THE HIGHER STATE EDUCATIONAL INSTITUTION OF UKRAINE
"UKRAINIAN MEDICAL STOMATOLOGICAL ACADEMY"

Approved
at the meeting of orthodontics department
«____»_____20____y.
protocol №____by _____
Head of department_____ L.V. Smaglyuk

METHODICAL RECOMMENDATION
for independent work of students during the preparation
to practical lessons and on the lessons

Academic discipline	Orthodontics
Module №1	Orthodontia. Diagnostic of dento-gnathic anomalies and deformations.
The theme of the lesson № 18	Principles of orthodontic care for the population of Ukraine. Preventive orientation and complexity of orthodontic treatment. Ability to self-regulation of malocclusion. Choice of treatment methods taking into account the patient's age, severity of abnormality. Dispensary groups.
Course	III
Faculty	Preparation of foreign students

Poltava 2016

1. The relevance of the topic. Preventive orthodontics is a complex of measures aimed at preventing and eliminating the etiologic and pathogenic factors that lead to the development of dento-alveolar and facial anomalies. It facilitates the cooperation of orthodontists. Therefore, knowledge about organizational and therapeutic measures, which provide early identification and elimination of risk factors for the development of dento-alveolar and facial anomalies, is important in the training of a dentist-orthodontist.

2. Specific objectives:

To determine the features of orthodontic care organization;
 To know the features of the doctor-orthodontist work organization;
 To know the features of the orthodontic dental laboratory organization;
 To know the features of the orthodontic prophylactic work organization;
 To know the features of the orthodontic dispensary organization;
 To know the features of the orthodontic dispensary groups.

3. Basic knowledge's, abilities, skills necessary for studying the topic (interdisciplinary integration)

Name of previous disciplines	Skills
1. Prevention of dental diseases	To determine the prophylactic work organization. To determine the dispensary organization.
2. Children dentistry	To write the dental formula (clinical, anatomical, WHO).
3. Normal physiology	To determine the timing of muscle contractions, coordination of certain muscle groups work.

4. Tasks for independent work during preparation to the lesson and on the lesson

4.1.A list of the main terms, parameters, characteristics that need to learn by the student during the preparation to the lesson:

Terms	Definition
1. Dispensary	is a method of population health care that includes the appropriate range of health preventive and social events with the aim of preserving and improving the health of the troops, subject to examination.
2. Prophylactic	from Ancient Greek πρό (pró, "before") + φύλαξις (phúlaxis, a watching, guarding") – a medicine which preserves or defends against disease; a preventive.
3. Norm	(lat. norma – "rule") is a regulatory rule that specifies the boundaries of its application; corresponds to something typical or usual, that occurs in a natural way and does not cause health problems.

4. Anomaly	(gr. abnormality) abnormality, an aberration from the general pattern.
5. Deformation	(from lat. deformatio "distortion") – change the size and shape of a rigid body under the action of external forces or other effects.

4.2. Theoretical questions to the lesson:

1. The definition of "norm" in orthodontics.
2. The definition of the terms "abnormality" and "deformity".
3. The definition of "prophylactic".
4. The definition of "dispensary".
5. How many orthodontic dispensary groups do you know?
6. The definition of the first dispensary groups.
7. The definition of the second dispensary groups.
8. The definition of the third dispensary groups.
9. The definition of the fourth dispensary groups.
10. To determine the features of orthodontic care organization.
11. To determine the features of the doctor-orthodontist work organization.
12. To determine the features of the orthodontic dental laboratory organization.

4.3. Practical works (task) which are executed at the lesson:

1. To identify the existing malocclusion;
2. To identify the dispensary groups for the existing patient;
3. To make a plan of orthodontic clinic according to Ukrainian orthodontic care organization.
4. To make a graph of orthodontic dispensary groups.

The content of the topic:

Provision of orthodontic care

Now orthodontics is the science that deals with the study of the etiology, pathogenesis, clinic, diagnostics, methods of treatment and prevention of persistent anomalies and deformities of the dento-alveolar system in children and adults.

Despite this, modern orthodontics has to solve the following tasks:

1. The study of factors that lead to the development of malocclusions.
2. The study of the pathogenesis of malocclusions.
3. The development of new diagnostic methods.
4. Development of methods for prevention and treatment of malocclusion.
5. Development of methods for prevention and treatment of individual teeth, dentition, jaws and face of children defects.
6. Managing of the jaws growth.
7. The normalization of the disturbed functions of the oral cavity.

8. Addressing the factors that lead to the development of malocclusion.
9. Influence of development on the related organs and systems.

Preventive orthodontics is a complex of measures aimed at preventing and eliminating the etiologic and pathogenic factors that lead to the development of dento-alveolar and facial anomalies. The aims of preventive orthodontics are:

1. A positive impact on the general condition of the pregnant woman and the baby.
2. Organizational and therapeutic measures, which provide early identification and elimination of risk factors for the development of malocclusions.

F. Y. Khoroshylkina (1982) identified 6 areas of orthodontics from the age of the patients in need of orthodontic treatment, and specifics of treatment activities:

1. Preventive orthodontics among organized children's collectives.
2. Specialized treatment of children in orthodontic departments.
3. Orthodontic treatment of adolescents.
4. Orthodontic treatment of adults.
5. Orthodontic treatment and dental prosthetics of patients with congenital malformations (cleft defects of the lips, alveolar processes, palate) in the system of their comprehensive treatment.
6. Orthodontic treatment in a surgical hospital as a preparatory or final stage of surgical reconstructive elimination of dento-alveolar and facial anomalies and deformations bite.

Orthodontic care is provided for children aged 3 to 14 years (in some cases – congenital malformations of the face and jaws immediately after the birth of a child), adolescents on the basis of urban or district children's dental clinics, and adults to dental clinics, which, depending on the number of the population should have a treatment an orthodontic department.

The work of orthodontist is regulated by the orders of MOH of Ukraine. According to the existing regulations for 10,000 children living in a city with a population over 25,000, release of 0.45 the position of orthodontist. For service orthodontic office is entitled to 1 post of nurse on 2 posts of doctors-orthodontists, and 1 office nurses (nursing) 3 posts of doctors-orthodontists. The post dental technicians allocate the posts of doctors orthodontists in the ratio 1:1.

As the head of orthodontic Department have 5-6 posts of doctors-orthodontists. Head of the Department performs medical work in the amount of 0,5 posts of the doctor-orthodontist, conducting organizational activities and providing guidance.

In accordance with the order of MOH of Ukraine in every city with a population over 100,000 residents with the necessary children's dental clinic, this includes orthodontic office. Orthodontic office or department is part of children's

dental clinic (regional, city or district) along with preventive, therapeutic and surgical departments.

In the orthodontic department or office on every working place of orthodontist is given not less than 7 m². Orthodontic office, which has 4 dental chairs shall be equipped sterilization room. Every working place of orthodontist has a universal dental unit. The work is especially dental mirror and tweezers and probe, spatula, drills for straight and angled machines, circular saw blades, wheels, stones, crampton forceps, technical spatula, a rubber bulb, a gypsum knife. In addition, the cast, the sets, orthodontic wax, orthodontic wires of different diameters, auxiliary supplies, special orthodontic tools.

In the orthodontic office should also have a gas burner or a spirit lamp, a separate table for work with plaster for casting models of the jaws.

Every orthodontist needs to have a separate table for the records in the patients' case reports, a wardrobe for storage of diagnostic models of the jaws, a box for the finished orthodontic works, box for case reports.

Great attention should be paid to the rules of asepsis and antisepsis. This work regulated the industry standard "Sterilization and disinfection of medical devices" (Methods, means and modes of the EAST 42-21-86, order No. 770 from 10.01.1986).

Organization of the orthodontist work.

To assess the efficiency of the orthodontist according to the order of MOH of Ukraine №302 of 27.12.1999 G. introduced the following indicators:

1. The number of patients attended per day (month, year).
2. Labor units.
3. The number of patients who have completed orthodontic treatment.
4. The number of patients under the supervision of the orthodontist (in different dispensary groups).

So, 1 working day the orthodontist needs to take 12 patients, 1 of which is primary to develop 25 conventional units. Orthodontic appliances and baby dentures made in the dental laboratory.

Treatment of malocclusions requires considerable labor costs of the medical service. No existing regulations of the doctors-orthodontists states do not allow coping with the treatment of all children (and adults) with malocclusions. So, there is only one hope for prevention. The most important conditions for the proper formation of the masticatory apparatus, we believe the following:

- 1) a good level of health of future mothers (healthy lifestyle);
- 2) breastfeeding of infant;
- 3) after eruption of temporary molars baby eating hard and the vitaminized food (fresh vegetables, fruits, crackers, bread crust, etc.);

- 4) a sufficient number of milky products;
- 5) the rational hygiene of oral cavity;
- 6) the formation of the child a high level of health (physical education, sports, health-building activities);
- 7) primary dental prevention and timely rehabilitation of the oral cavity;
- 8) to prevent the development of harmful habits (sucking of pacifiers, finger, tongue, etc.);
- 9) when the first signs of malocclusions development – consultation at the orthodontist.

Dispensary – a method of healthcare that involves active detection of disease in its early stages, the oversight of certain groups of patients to ensure their livelihoods and health, wellness events, mandatory medical examinations of some categories of the population.

The main goal of prophylactic medical examination of population is primarily the prevention of diseases, carrying out of actions directed on preservation and strengthening of health, reduction of morbidity, disability and mortality, the increase in active longevity.

According to calculations, the state is economically advantageous to prevent disease than to cure diseases and their consequences, to pay for disability.

Prophylactic medical examination includes: medical examination of the population holding a certain amount of laboratory and instrumental examinations; additional examination of persons in need; identifying of individuals with a risk factors that cause the emergence and development of diseases; timely detection of diseases; development and implementation of a complex of necessary medical and social events, dynamic monitoring of the health status of the population.

Dispensary is carried out by health institutions with the participation of higher medical educational institutions of all accreditation levels, institutions of postgraduate education, scientific institutions, central and local executive authorities, agencies, institutions and organizations.

Territorial health authorities, or certain institutions organized their teams of specialists from health care institutions of regional subordination, higher educational medical institutions of all accreditation levels, institutions of postgraduate education scientific institutions for the dispensary examination of the adult and child population in districts and towns of the corresponding administrative territory, especially in rural settlements that have problems staffing and logistics of the clinical examination. These teams are provided with necessary medical equipment and means of transport.

Patients are under active supervision, are the plan of measures for their rehabilitation. Of course, not in itself take the patient register, and the full and

timely implementation of health promotion activities determines the effectiveness of the dispensary observation.

Every orthodontist needs to organize their work in such a way that at least one day a week was dedicated to the prevention, that is, children of preschool age. The physician should not wait for the arrival of children into the study, and should routinely examine them in preschools and to identify the initial stage of malocclusion.

Children who have identified disorders of the endocrine system, pathology of the upper respiratory tract, pathology of dento-alveolar apparatus, rickets, and other diseases are sent to the children's clinic to the doctors of the relevant specialty; at the same time children are subject to preventive measures and early treatment by an orthodontist. The orthodontists should conduct systematic interviews with mothers about the importance of proper air and sun of the regime, to pay attention to the need of rational nutrition of children and the intensive chewing of food. The doctor also conducted demonstrational lessons of myogymnastics with children and instruction for mothers with methodology of chewing and mimic muscles gymnastics at home. In the fight with malocclusions should be involved not only orthodontists, but children's dentists. You can't count oral sanitation if it is not resolved deformation of dentition. Moreover, for a valid and full of valuable caries prevention is important not only struggle with the initial decay of the hard tissues, but elimination of those factors that can cause the initial stages of carious lesion. And the presence of oral cavity anomalies of the teeth or dentition is an important cause of tooth decay, just as tooth decay is a common cause of deformation of dentition. Prevention of malocclusion, therefore, is an integral part of rehabilitation of the oral cavity. Therefore, this quest for a healthy mouth of a child is almost identical in the work of the orthodontist and children's dentist for sanitation of the oral cavity.

Sanitary-educational work on combating malocclusions should also be attracted by pediatricians, otolaryngologists, endocrinologists, hygienists, teachers and all other child care workers; doctors orthodontist will be able to identify children with malocclusions in the early stage of development and the struggle dentists for a healthy child's body, for a full chewing apparatus will be much more successful and fruitful.

Malocclusions have a significant prevalence among children. Now no one doubts that the necessary prevention and early treatment of tooth-jaw anomalies and deformations.

Pediatric dentists at best only ascertain the existence of noticeable deformities or abnormalities of the face. But the necessary hardware or other treatment, and better still to prevent the occurrence malocclusion and it is no less

effective. Unfortunately, the treatment is long, not always perfect and may be accompanied by complications and relapse. Therefore, the best course is prevention. Taking action to prevent jaw anomalies during the period of active growth of the jaws all the necessary methods it is more reliable and just next to the intermediate treatment and fixing the defects in early and preschool age – less effective. It is therefore necessary not to miss the necessary age and time for preventative measures, even sometimes it is important not to miss not only the year, month, week or day to identify and eliminate harmful factors, bad habits, dysfunction of the swallowing, chewing, breathing, speech, and the like. Preventive gymnastics of masticatory and mimic muscles. If you compare the state of the masticatory apparatus of children that were fed natural food is hard, fed artificially, it clearly indicates that the former have normal ratios of dentition and jaws, especially in the front section, the front permanent teeth are free to move forward during the change of milk teeth. This emphasizes self-control even primary of malocclusion early age, including progenia, oblique, open or deep malocclusion. This method of self-regulation is particularly effective just as early childhood and unstable anomaly. Simultaneously with the appointment of children hard foods, you must also enter a complex of gymnastic exercises for the masticatory and facial muscles that reinforce success.

To prevent the development of malocclusion:

1. Early detection of "bad habits".
2. Timely sanitation of the oral cavity, pharynx, naso-pharynx.
3. Preventive myogymnastics.
4. Medico-genetic counseling.
5. The reasons for the development of malocclusion.
6. Hereditary.
7. Congenital.
8. Purchased.
9. Purchased malocclusion (etiology).
10. Pathology of endocrine organs.
11. Pathology of the respiratory tract.
12. Bad habits.
13. Artificial feeding.
14. The consistency and condition of food.
15. Diseases of the teeth and jaws.

Dispensary – is a method of population health care that includes the appropriate range of health preventive and social events with the aim of preserving and improving the health of contingents, subject to the clinical examination

(Vinogradova, 1988). The idea of the clinical examination at the dentist advanced Evdokimov.

Dispensary in orthodontics. For a successful preventive and therapeutic measures need to organize medical examinations of children in preschool institutions and schools. The organizer of the work in the dispensary groups of children is the district children's dentist. The orthodontist is assigned to multiple sections (optimally four). In the clinical examination of children with dento-alveolar anomalies and deformations they are grouped according to nosological forms.

Dispensary – the medical institutions of our country, to ensure disease prevention, early detection and treatment the systematic monitoring of patients. Is made up of district children's offices clinics and in particular doctor orthodontist who is a preventive day a week, conducted in organized institutions.

The first stage is the registration of all children. Take into account age, gender and overall health.

The second stage is a specialized examination of each child.

The third stage is the distribution of dispensary groups.

The fourth stage – observation of patient oral cavity sanitation, conducting hygiene lessons and other mass preventive measures.

The fifth stage is to study the effectiveness of orthodontic examination.

Main institutional arrangements in the examination the following:

1) examination of children for the detection of dento-alveolar anomalies and deformations, and to establish certain factors and the reasons for their development;

2) definition of medical groups and development of preventive and curative interventions a plan;

3) timely referral of children with anomalies generated by the treatment;

4) control of specialized treatment starting and conducting, contact with parents and caregivers;

5) control over elimination of the revealed factors in the emergence of anomalies and deformations;

6) organization and conduct of the groups of children, teaching children and their parents, teaching and medical staff, the content and methodology of interventions aimed at promoting hygiene and care of the healthy condition of the organs of the oral cavity;

7) organization and conduct of the myogymnastics.

During orthodontic examination of children, in addition to enterprises according to nozological forms are grouped on the basis of stages of development of pathology. Consider the most widely used system.

Group I. Children with the normal structure of the masticatory apparatus, the correct closing of the lips, the normal basic functions (biting and chewing food, swallowing, breathing, speech). Possible minor deviations in the structure of the masticatory apparatus can be regarded as a normal variant. These kids are education and hygiene skills that promote healthy condition of the oral cavity organs. The children of this group around the district children's dentist 1 time a year.

Group II. Children who do not have significant morphological changes of the dentition, but have violations of functions (posture, way of breathing, speech, facial expressions, position and articulation of tongue, lips, cheeks, muscles of the floor of the oral cavity and muscles of region). This includes children who have bad habits. That is, the children of the second group are "risk factors", the predisposition to the development of malocclusions. These children need in addressing the causal factors. In complex events, held a significant place in children of this group should be given the myogymnastics, appointed as myogymnastic exercises of a general nature, and special, eliminating the impaired function of this child. Children of the second cohort actively observed for 3 months. After complete removal of the reasons of malocclusion development and normalization of all functions they are, as a rule, are transferred to the first group. Unfortunately, some of the children now enter the third cohort.

Group III. Children with not very pronounced dental anomalies: incorrect position of the teeth, change the shape of the dentition, small deviations in the jaw relationship. While they have an active causal factors. The children of this group need to address the factors and simple treatment with a simple orthodontic appliances and myogymnastics. If the second cohort the myogymnastics is an independent method of treatment, in the third – combined with the appliance method. After elimination of the causes and signs of abnormalities these kids look like children of the first group once per year.

Group IV. It includes children with severe malocclusion. Causal factors in them are eliminated according to the method defined for the children of the second and third groups, and carried out the whole complex of orthodontic treatment. The translation of this group takes place after retting period. The myogymnastics in this group can be used both during active treatment and retention period (in combination with appliance and surgical methods).

The complex of medical-preventive actions identified during the inspection of the child shall be recorded in the clinical examination, after which distribute to children in the Dispensary groups. **Osadchiy has allocated 4 Dispensary groups:**

To the 1st group classifies children with the proper closing of the lips, the normal functioning of the dento-gnathic apparatus and correct bite. It's practically healthy children, they are inspected 1 time per year.

The 2nd group includes children with risk factors, that is, with functional impairment of breathing, swallowing, speech, mastication, facial expressions, bad habits have shortened frenulum lip, small eve of the oral cavity. These children need to resolve the causes of deviations and to create favorable conditions for normal growth of jaws and occlusion formation. Carried out sanitation of the oral cavity are recommended ways of dealing with addictions, therapeutic myogymnastics, consultation of specialists: ENT, orthopedist, pediatrician, etc.; such children need to observe parents and caregivers, the medical staff of children's institutions. Orthodontist examination – every six months.

The 3rd group includes children with no pronounced morphological changes and abnormal positioning of the teeth or their groups, changing the shape of the dental arches, malocclusion, caused by functional changes. To assist these children carry out activities aimed at eliminating the causes of violations, including the use of orthodontic appliances. After treatment, the observation is carried out 1 time per year.

To the 4th group includes children with pronounced changes. Dysfunction of breathing, swallowing, speech, biting and chewing food. Such children need specialized care in complex medical events that lead to normal function of dental system and the whole organism.

The principles of orthodontic care organization. Organization of orthodontic department (office) work.

The most rational principle of children orthodontic care organization is a territorial-district principle. When planning sites, you should consider the existing structure of pediatric areas. Main parts of preventive and curative work are preschool and school sites. Orthodontist works with organized children in the area, as a rule, 1 time per week.

The post dentists in children's dental clinics established by calculating 0.45 posts per 1000 children in rural areas - 0,25 positions. The number of orthodontists from the total number of pediatric dentists is established based on the need for orthodontic care (as a rule, 0.1 position of orthodontist per 1,000 children). Orthodontist in an average year takes 2770 patients and completes their treatment only 180 patients. Based on the data of timing and load of the doctor and revealed pathology established that on 10 thousand people need to have a 1.5 rate of orthodontist.

Skilled care for children up to 15 years with dental and facial anomalies and deformations is in orthodontic offices, pediatric dental clinic. One job of the

orthodontist is given not less than 14 m² for each additional 7 m². The doctor's workplace must be equipped with universal dental setting and a set of dental instruments (tweezers, mirror, spatula, excavator and drills for straight and angled tip crampon forceps, technical spatula, rubber cup, gyps knife, gas or alcohol burner, etc.). Definitely in the office should be table for medical records, cabinet for control gyps models, box for ready devices and prostheses. Workplace is provided with appropriate materials: disk materials, gypsum, set orthodontic wax, orthodontic wire, auxiliary materials, and medicines so on.

Dental laboratory should consist of the main production areas (area per equipment of not less than 4 m²), stamping and pressing, curing, soldering and welding, foundry, and finishing and polishing.

In major hospitals are assisted by the orthodontist at the surgical methods of treatment of dento-facial anomalies with various operations on the jaws and, especially, patients with congenital defects of the lip and palate.

In the orthodontic office shall be conducted following accounting documentation:

1. "Medical card of dental patient" (form number 043 / O).
2. "Page of the orthodontist daily accounting work" (form no. 037-1 / O-88),
3. "Combined statement of account for the work of the orthodontist" (form № 039-2 / o-88), the outfit works.

Dental laboratory

Dental laboratory called industrial premises, which are made of orthodontic and orthopedic construction. Modern dental laboratory is a complex of rooms located in the adjacent rooms, which are depending on the technological purpose of various equipment, ventilation and lighting and consist of the following facilities:

1. Room for modeling – the room in which occurs the basic process of orthodontic appliances manufacturing and dentures for children. A workplace of technician-orthodontics is the dental table, with local lighting, portable drill, electro-spatula, an electric train machine with vacuum cleaner, gas burner and chair. The surface of the desktop covered with tin, it has a crescent cutout in the center of which is located “finagle” (a device for cutting patterns). Directly under the neck one or two drawers for storage of tools and collection of waste gypsum, plastic and the like.

The case table – is tables' storage models, materials, orthodontic devices and prostheses, which are at different stages of production.

Chair for dental technician should have a high, comfortable backrest.

The volume of the room in accordance with the regulatory requirements must be 13 m², the area for each dental technician, orthodontist shall not be less than 4,0-4,5m². The height of the room from floor to ceiling – 3.2-3.5 m, width of

aisles free of equipment – 1,5 m. The floor should be covered with linoleum needed a faucet with hot and cold water, sink and ventilation. Room lighting, in addition to natural, provided by fluorescent lighting. Windows should be placed at an equal distance from each other and the corners of the room; the top edge of the window must be at a distance of 20-30 cm from the ceiling; workplaces should be placed so that the light fell right or left side; the distance from the workplace dental technician to windows in rooms lit side light, must not exceed three times the distance from the floor to the top of the window border.

The design of the workplace dental technician should be given considerable attention, since a large part of his time he spends at the table. The workplace should meet all the requirements of ergonomics and occupational safety and health. Along with the technical requirements necessary to take into account aesthetic elements and modern design.

2. Gypsum room – designed to work with gyps. It is casting models of the jaws (diagnostic, working, auxiliary, educational, phantom and the museum); their opening; the design of the models base; gypsing in a ditch; gypsing of models in occludator or articulator. Gypsum room floors can be tiled or covered with linoleum.

Table for work with gyps covered with zinc, it has a height of 100-110 cm². In the table depending on the length makes a few holes, and under them – the boxes for collecting gyps. On the table set the container for storage of gypsum, a press for extruding plaster from a ditch. In drawers or on shelves to store dishes, occludators, articulators, instruments. For mixing the gyps with water, use modern vibrators; extruding the remnants of the gypsum from a ditch – a special press.

3. Stamping-pressing room. This room is intended for use with plastic and stamping of orthodontic appliances metal components. The walls covered with a tile, a floor should also be tiled. The room is mandatory ventilation and normal natural light. In the room are the following fixtures and equipment: technics cuvette and press; the apparatus by Samson to pull the liners, which can be placed on a massive table or to attach metal brackets to the wall. Table to work with acrylic with a height of 70-75 cm, upholstered in galvanized sheet.

4. The curing room – a room for the manufacture of orthodontic devices and prosthetic appliances. For polymerization the acrylics are used the following devices: automatic sterilizer for polymerization of "water-bath" apparatus for the dry polymerization under pressure, the apparatus for extrusion molding. For the manufacture of orthodontic devices and prostheses from plastic discs and plates used vehicles "Biostar", "Munster" (Germany). Apparatus "Triad-2000" (USA) is used for the manufacture of orthodontic appliances by cold polymerization under the action of light.

The room needed a table to work with acrylic and a gas cooker where you set two sterilizers open type or similar devices. One of the sterilizers designed for smelting wax from the ditch, and the other for the polymerization of acrylic. Over the table and a gas stove be sure to install the hood ventilation system.

5. Soldering and welding room – designed for soldering or welding parts of orthodontic appliances and prostheses fixed constructions, their bleaching and heat treatment. The room equipped with one or more fume cupboards, where the set of soldering tools, equipped with compressors for automatic feed of gasoline. In a fume hood place a muffle furnace for smelting wax from the flasks. Office is happening soldering of the individual components, bleaching them after soldering. This room should have a powerful exhaust vent and tiled floor.

6. Foundry with high frequency or electrical installation for casting metallic parts of orthodontic and orthopedic structures. The room should be provided with natural and artificial light. The floor is tiled, ventilation and exhaust. Opportunities for the production of modern structures partial removable orthodontic appliances were made possible by the creation of the original installation, where high frequency induction melting of metal alloys combined with central casting and new technology of making forms for casting. With the help of induction currents can melt any metal that is used for manufacturing crowns, partial removable apparatus and the like.

7. The polishing room is designed for polishing of orthodontic and orthopedic structures. The room should be provided with natural and artificial lighting; tiled floor; ventilation exhaust. In addition to the main working areas of the dental laboratory technology the laboratory shall have and utility rooms, namely, material warehouse, changing room, shower room, and the like. But depending on the conditions of the dental clinic, you can merge several closely related processes in the same room.

For the manufacture of contemporary orthodontic appliances technician-orthodontist in addition to tools and equipment used for the manufacture of dental prostheses, requires special tools, apparatus and fixtures, namely:

1. Cutting: gyps knife, technical spatula, scalpel, technical and crown scissors, jigsaw with blades, discs silicon carbide and diamond, circular saw blades with different diameters, a cutter for cutting orthodontic wires.

2. Bending: universal tongs – crampon, pliers, and title format Adams, Schwartz, Nance. Use them to hollow out clasp, vestibular arc, P - and M-bends, springs Coffin, Kalvelis.

For manufacturing base of metal rings, which are fixed permanent structure, use a Curling steel tape stitched around the crowns of the teeth, forceps simulating Peak – for connection of the ends of the metal strips and manufacturing of its rings.

3. Forging supplies: dental anvil, lead with indentations designed for the manufacture of orthodontic crowns, various rods, hooks and other attachments; technics hammers.

4. Drilling: consist of burs sets for straight and angular lugs, cutters, drills of various shapes and sections, of diamond stones and heads, including distribute, which is clamped in cans for manual drilling or in cans train motor.

5. Grinding and polishing tools: bluefish, silicon carbide grinding stones, wheels, heads, flits, polishing brushes, wheels (metal, diamond, silicon carbide, rubber).

In addition, the work of a dental technician-orthodontist you need:

1. Apparatus by Samson.
2. Apparatus by Charles.
3. Apparatus by Bromstrom.

The efficiency of a dental technician, orthodontist estimated labor units and as follows (Persin, 1999):

1. Metal crown – 0,5 units.
 2. Soldering – 0.25 units.
 3. Base of appliance – 1.0 unit.
 4. Laminar orthodontic appliance with a screw and auxiliary parts – 2, 5 units.
 5. A removable partial denture – 4.0 units.
 6. Full denture – 6.0 units.
 7. The regulator of functions by Frenkel (I, II, III type) – 6.0 units.
 8. Activator by Andresen-Houple – 3.0 units.
 9. Activators of other structures – 6.0 units.
 10. Appliance by Persin – 5.0 units.
 11. Repair of orthodontic appliance – 1.0 unit.
- 1 bet dental technician, the orthodontist should develop 2 units of labor per day.

Materials for self-control:

A. Tasks for self-control (tables, diagrams, drawings, graphs):

1. To identify the existing malocclusion;
2. To identify the dispensary groups for the existing patient;
3. To make a plan of orthodontic clinic according to Ukrainian orthodontic care organization.
4. To make a graph of orthodontic dispensary groups.

B. Tasks for self-control:

1. By Zwolinski to conduct orthodontic examination you need the following number of doctors-orthodontists posts per 10,000 child of population:

- 1,7
- 1,0
- 1,5
- 1,25
- 1.75

2. By Treiman for orthodontic clinical examinations will require a number of doctors-orthodontists posts per 10,000 child of population:

- 3,6
- 1,7
- 1,0
- 2,0
- 2,6

3. Measures of orthodontic examination is carried out:

- five stages
- two stages
- three stages
- four stages
- six stages

4. The first stage of prophylactically medical examination is:

- registration of patients
- epidemiological studies
- specialized inspection
- formation of studying groups
- monitoring of patients

5. The second stage of prophylactically medical examination is:

- specialized inspection
- registration of patients
- epidemiological studies
- formation of studying groups
- monitoring of patients

6. The third stage of prophylactically clinical examination is:

- formation of studying groups
- registration of patients
- epidemiological studies
- specialized inspection
- monitoring of patients

7. The fourth stage of prophylactically clinical examination is:
monitoring of patients
registration of patients
epidemiological studies
specialized inspection
formation of studying groups

8. The fifth stage of prophylactically medical examination is:
determination of prophylactic medical examination efficiency
registration of patients
specialized inspection
formation of study groups
monitoring of patients

9. Prophylactically medical examination not carried out in the following groups of children:
children with chronic diseases
children of the first year of life
children of preschool age
students under the age of 15 years
newborn

10. The first group of health include:
healthy children with no deviations according to all signs of health
children with risk factors for chronic disease
children with chronic pathology in the state of decompensation
children with chronic pathology in the state of compensation
children with chronic pathology in the state of subcompensation

11. The second group of health include:
children with a risk factors for chronic disease
children with chronic pathology in the state of compensation
healthy children with no deviations according to all indications of health
children with chronic pathology in the state of decompensation
children with chronic pathology in the state of subcompensation

12. Khoroshilkina offers the following number of dispensary observation groups:
four
two
three
five
six

13. Child dental examination in the first year of life is carried out:
1 time per 6 months
each month
every 3 months
at the end of the first year of life
inspection of a dentist not required

14. Children dentist examination under the age of 3 years:
1 time per 6 months
each month
every 3 months
at the end of the first year of life
inspection of a dentist not required

15. The system of preventive care for children in outpatient condition does not include such events as:
comprehensive medical examination and rehabilitation of the oral cavity
active dynamic medical supervision over the development of the child
comprehensive medical examination of children by medical specialists
anti-epidemic measures and preventive inoculations
sanitary-educational work with the child's family

16. Operational readiness to malocclusion development does not include:
early restructuring of the swallowing type
violations of the functions (chewing, swallowing, breathing, speech)
children's bad habits
early removal of deciduous teeth
late eruption of the temporary teeth after 4 years

17. The structure of the dental care provision for children is divided into the following levels:
3 levels
2 levels
4 levels
5 levels
6 levels

18. Preventive dental care is provided in institutions:
dental office of kindergarten
the advisory-diagnostic center
the clinics of higher educational establishments
clinical research institutes
third level of accreditation clinics

19. Specialized dental care is provided in institutions:
children's dental clinics
dental office of kindergarten
the advisory-diagnostic center
the clinics of higher educational establishments
third level of accreditation clinics

20. Preventive care is carried out by:
pediatric dentist
orthodontist
periodontist
dental surgeon
pediatric

21. Children aged 3-6 years old must be examined by a dentist:
1 time per year
every 3 months
1 every 6 months
1 time per quarter
1 once a year

22. Children aged 3-6 years old must be checked by an orthodontist:
1 time per year
each month
every 3 months
1 every 6 months
1 once a quarter

23. Children aged 6 - 9 years needs to be examined by a dentist:
every 6 months
1 time per year
every 3 months
1 time per quarter
1 once a year

24. Children ages 6 - 9 years old must be examined by the orthodontist:
1 time per year
each month
every 3 months
1 every 6 months
1 once a quarter

25. Children 9 to 12 years of age must be examined by a dentist:
every 6 months

each month
1 time per year
every 3 months
1 once a quarter

26. Children 9 to 12 years of age must be examined by an orthodontist:

1 time per year
each month
every 3 months
1 every 6 months
1 once a quarter

27. Children 12 to 15 years should be examined by a dentist:

1 time per year
each month
every 3 months
every 6 months
once a quarter

28. Children 12 to 15 years should be examined by an orthodontist:

1 time per year
each month
every 3 months
every 6 months
every 2 years

29. As the head of orthodontic department has the following number of posts of doctors-orthodontists:

5-6
6-7
3-4
2-3
1-2

30. Rates of dental technicians to set the rates of doctors-orthodontists in the ratio:

1:1
1:2
1:3
1:4
1:1,5

31. 10,000 children in the city, there are the following number of doctors-orthodontists needed:

- 1
- 0,45
- 0,5
- 1,5
- 2

32. In the orthodontic department for each workplace of the orthodontist is not less than:

- 7 m²
- 2 m²
- 3 m²
- 5 m²
- 9 m²

33. To work as an orthodontist the basic legal documentation is:

- card of dental patient
- page of daily accounting
- summary statement
- attire in the laboratory
- referral for orthodontic treatment

34. Average time for one orthodontics patient is:

- 24 min.
- 10 min.
- 15 min.
- 20 min.
- 5 min.

35. The average number of patients per one working day at five-day working week is:

- 15 visits
- 25 visits
- 20 visits
- 40 visits
- 12 visits

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