# Ministry of Health of Ukraine Bogomolets National Medical University Department of Pediatric Therapeutic Dentistry and Prevention fo Dental Diseases

"APPROVE"
Vice-Rector for Scientific and Pedagogical and
Educational Work, Doctor of Medical Sciences, Professor

O. M. Vlasenko

2023

Examination materials, developed in accordance with the OSP(C)E program from the discipline "Pediatric therapeutic dentistry" for students of the 5th course of the dental faculty 2022-23 a.y.

at a meeting of the Academic Council of the Dental faculty, Protocol № 9 dated 13.04. 2023

Head of the Academic Council of the

Dental faculty

prof. N.V. Bidenko

### APPROVED

at a meeting of the cyclic methodological commission on dental disciplines,

Protocol № 5 dated 13.04. 2023

Head of the cyclic methodological commission

V.P. Nespryadko

#### APPROVED

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department O.V. Savychuk

Passport of the examination station

of the objective structured practical (clinical) exam for applicants of a higher education degree - master's degree in specialty 221

"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline – "Pediatric dentistry"

Station name - demonstration of non-invasive fissure sealing of the masticatory group of teeth on the simulation phantom of the child's head.

Learning objective - 5th year student performs non-invasive fissure sealing of masticatory teeth in children of different ages on simulation phantoms in the dental / training room using composite light-curing sealant in accordance with "Algorithms for dental and medical manipulations to prepare for State Certification of 5th year students »» for 10 minutes.

Names of competencies assessed at the station: the ability to abstract thinking, analysis and synthesis, knowledge and understanding of the subject area and understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally and in writing, the ability to analyze clinical data, the ability to diagnose: determine preliminary, clinical, final diagnosis, the ability to plan and carry out measures for

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading	Performance	Time warning
the task		
0.5 min	9.0 minutes	0.5 min

# **Station organization:**

**1. Requirements for the premises -** dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools** - task for students on forms(10), photos with the clinical situation (10), checklists according to the number of students, dental unite, turbine and mechanical handpieces, a set of dental instruments and accessories, dental materials.

Consumables - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, pastes of medium degree of abrasiveness, not containing fluorine and oil compounds, end brushes of various shapes, floss, etching gel, applicators, light-cured composite sealants, fluorine-containing varnish light curing, articulation paper, spherical and oil-shaped diamond burs for a turbine handpiece of fine grain (red marking), carborundum and polishing heads for a mechanical handpiece.

- **3. Required simulation equipment** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

Tasks and instructions for the student: choose a photo depicting the clinical situation that corresponds to the indications for the task; to carry out non-invasive fissure sealing of posteriory group of teeth at the child of a certain age (3-8 years)

with use of light-cured composite sealants on a simulation phantom, simulating work with the real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the correctness of the student's non-invasive fissure sealing of the masticatory group of teeth, fill out a checklist, do not interfere.

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Алгоритми виконання стоматологічних і медичних маніпуляцій для підготовки до атестації студентів 5 курсу за спеціальністю «Стоматологія» (видання друге, доповнене і перероблене): Навчальний посібник для студентів стоматологічних факультетів, лікарів-інтернів, лікарів-стоматологів / Біденко Н.В., Борисенко П.В., Васильчук О.В. та ін. К.: Книга-плюс, 2018. С. 5 8.
- 2. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. К.: Книга плюс, 2016. С. 105 110.
- 3. Clinical Practise of the Dental Hygienst / Ed by Esther M. Wilkins. Wolters Kluwer, 2017. P. 623 628.
- 4. Nowak A. et al. (Eds.) Pediatric Dentistry: Infancy Through Adolescence. 6th Edition. Elsevier, 2019. P. 461 473.

# Algorithm of task performance by applicant

# "Non-invasive fissure sealing of the posterior group of teeth"

**Non-invasive fissure sealing -** is a method of exogenous prevention of caries of posterior group of teeth, which consists in filling fissures and blind pits with sealants in order to isolate them from the action of cariogenic factors of the oral cavity.

Nº	Sequence of actions	Criteria for monitoring proper performance
1.	Say hello to the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put on a medical mask	Medical mask is on

5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands are treated with antiseptic
7.	Identify the patient	Addressing the patient by name
8.	Explain to the patient the essence of the procedure, taking into account age	Explaining to the patient the essence of the procedure taking into account cognitive abilities of the patient
9.	Choose a tooth that is suitable for	Closed intact fissures at the stage of
1.0	non-invasive sealing	tooth root formation
10.	Choose the necessary dental materials, tools and accessories	Dental kit, mirror, tweezers, probe, brushes of cone-shaped and cylindrical shape, floss, articulation paper, diamond heads of spherical or oil-shaped fine grain (red marking) for turbine, polishing heads for mechanical tip, applicator. Paste of average abrasiveness, not containing oils and fluorine compounds, etching gel, composite sealant of light hardening, fluorine-containing varnish of light hardening
11.	Clean the chewing, vestibular and oral surfaces of the tooth with brushes and toothpaste of medium abrasiveness	Chewing, vestibular and oral surfaces are free from soft plaque
12.	Clean the contact surfaces of the tooth with floss	The contact surfaces of the tooth are free of soft plaque
13.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
14.	Isolate the tooth from saliva with wadded or cotton pads and a saliva ejector	The tooth does not come into contact with saliva
15.	Dry all tooth surfaces for 10-15 seconds	All tooth surfaces are dry
16.	Apply an etching gel containing 37% orthophosphoric acid to the fissure area for 15 s	The etching gel is evenly distributed on the fissure.  Observance of time of etching of enamel in a site of fissures
17.	Rinse the etched area with water for 30 seconds	Fissures do not contain residues of etching gel
18.	Replace wadded or cotton rollers	Wadded or cotton rollers are dry
19.	Dry all tooth surfaces for 10-15 seconds	All tooth surfaces are dry.

		Enamel in the area of fissures
		acquired a chalky color
20.	Apply a light-cured composite sealant to the fissure using a syringe with a cannula	Composite sealant fills the fissure
21.	Evenly distribute the sealant along the entire length of the fissure with a probe	Composite the sealant is evenly distributed along the entire length of the fissure
22.	Polymerize the sealant for 20 s	Adherence to the polymerization time of the sealant
23.	Check occlusal contacts with articulation paper, in case of need to carry out grinding of sealant by carborundum heads for a mechanical handpiece, fine-grained (red marking) spherical or olive-shaped diamond heads for the turbine handpiece, to carry out polishing of sealant by polishing heads of a mechanical handpiece	The sealant does not exceed the occlusal contacts and has a smooth surface
24.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
25.	Replace wadded or cotton rollers	Wadded or cotton rollers are dry
26.	Dry all tooth surfaces for 10 - 15 seconds	All tooth surfaces are dry
27.	Apply light-cured fluorine-containing varnish on the chewing surface using an applicator	The chewing surface of the tooth is shiny
28.	Evenly distribute the fluoride varnish on the chewing surface with a stream of air	The layer of fluoride varnish is evenly distributed on the chewing surface
29.	Polymerize fluorine-containing varnish for 20 s	Adherence to the polymerization time of fluoride varnish
30.	Wash hands and dispose of medical gloves	Hands are washed, gloves are disposed of in a special container with antiseptic solution

- variants of tasks for the applicant;
  photos with images of various clinical situations;
  video presentation of clinical competence.

at a meeting of the Academic Council of the Dental faculty, Protocol № 9 dated 13.04. 2023

Head of the Academic Council of the

Dental faculty -

prof. N.V. Bidenko

#### APPROVED

at a meeting of the cyclic methodological commission on dental disciplines,

Protocol № 5 dated 13.04. 2023

Head of the cyclic methodological commission

V.P. Nespryadko

### **APPROVED**

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department

O.V. Savychuk

### Passport of the examination station

of the objective structured practical (clinical) exam for applicants of a higher education degree - master's degree in specialty 221

"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline - "Pediatric dentistry"

Station name - demonstration of invasive fissures sealing on the posterior group of teeth on simulation phantom of the child's head.

Learning objective - 5th year student performs invasive fissures sealing on the posterior group of teeth in children of different ages on simulation phantoms in the dental / training room with light-curing composite sealant in accordance with "Algorithms for dental and medical manipulations to prepare for the State Certification of 5th year students in specialty «Dentistry» for 10 minutes.

Names of competencies assessed at the station: the ability to abstract thinking, analysis and synthesis, knowledge and understanding of the subject area and understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally and in writing, the ability to analyze clinical data, the ability to diagnose: determine preliminary, clinical, final diagnosis, the ability to plan and carry out measures for

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading	Performance	Time warning
the task		
0.5 min	9.0 minutes	0.5 min

# **Station organization:**

**1. Requirements for the premises** - dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools** - task for students on forms(10), photos with the clinical situation (10), checklists according to the number of students, dental unite, turbine and mechanical handpieces, a set of dental instruments and accessories, dental materials.

Consumables - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, pastes of medium degree of abrasiveness, not containing fluorine and oil compounds, brushes of various shapes, floss, etching gel, applicators, light-cured composite sealants, fluorine-containing varnish light curing, articulation paper, spherical and oil-shaped diamond burs for a turbine handpiece of fine grain (red marking), fissurotomy, carborundum and polishing heads for a mechanical handpiece.

- **3. Required simulation equipment -** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

**Tasks and instructions for the student:** choose a photo depicting the clinical situation that corresponds to the indications for the task; to carry out invasive fissure sealing of masticatory group of teeth at the child of a certain age (3-8 years) with use of light-cured composite sealants on a simulation phantom, simulating work with the real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the correctness of the student's invasive fissure sealing of the masticatory group of teeth, fill out a checklist, do not interfere.

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Алгоритми виконання стоматологічних і медичних маніпуляцій для підготовки до атестації студентів 5 курсу за спеціальністю «Стоматологія» (видання друге, доповнене і перероблене): Навчальний посібник для студентів стоматологічних факультетів, лікарів-інтернів, лікарів-стоматологів / Біденко Н.В., Борисенко ПА.В., Васильчук О.В. та ін. К.: Книга-плюс, 2018. С. 8 10.
- 2. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. К.: Книга плюс, 2016. С. 105 110.
- 3. Clinical Practise of the Dental Hygienst / Ed by Esther M. Wilkins. Wolters Kluwer, 2017. P. 623 628.
- 4. Nowak A. et al. (Eds.) Pediatric Dentistry: Infancy Through Adolescence. 6th Edition. Elsevier, 2019. P. 461 473.

# Algorithm of task performance by applicant

# "Invasive fissures sealing on the posterior group of teeth "

**Invasive sealing of fissures** - is a method of exogenous caries prevention on posterior group of teeth, which consists in filling fissures and blind pits with sealants after their previous opening in the presence of pigmentation or chalk-altered enamel on the edge of the fissures to isolate them from cariogenic factors of the oral cavity.

Nº	Sequence of actions	Criteria for monitoring proper performance
1.	Greet the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put on a medical mask	Medical mask is on
5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands treated with antiseptic

7.	Identify the patient	Addressing the patient by name
8.	Explain to the patient the essence of the procedure, taking into account age	Explain to the patient the essence of the procedure taking into account his cognitive abilities
9.	Choose a tooth that is suitable for invasive sealing	Closed intact fissures at the stage of root development
10.	Choose the necessary dental materials, tools and accessories	Dental kit, mirror, tweezers, probe, trowel, stopper, applicator, diamond heads for turbine handpiece spherical or olive-shaped fine-grained (red marking), polishing heads for a mechanical handpiece, applicator. Paste of average abrasiveness, not containing oils and compounds of fluorine, etching gel, light-curing composite sealant, adhesive system, ;light-curing fluorine-containing varnish
11.	Clean the occlusal, vestibular and oral surfaces of the tooth with brushes and toothpaste of medium abrasiveness	Occlusal, vestibular and oral surfaces are cleaned from soft plaque
12.	Clean the contact surfaces of the tooth with floss	The contact surfaces of the tooth are cleaned from soft plaque
13.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
14.	Disclose a suspicious fissure (pigmented, chalky) with a fissurotomy bur fixed in a turbine handpiece	Adherence to the thickness of the enamel removal from the fissure walls: 0.5 mm
15.	Assess the condition of the fissure bottom visually and with a probe	The enamel at the bottom of the fissure is shiny, dense
16.	Isolate the tooth from saliva with wadded or cotton rolls and a saliva ejector	The tooth does not come into contact with saliva
17.	Dry all tooth surfaces for 10 - 15 seconds	All tooth surfaces are dry
18.	Apply a etching gel containing 37% orthophosphoric acid to the fissure area for 15 s	The etching gel is evenly distributed on the fissure. Observance of enamel etching time in a site of fissures
19.	Rinse the etching area (s) with water for 30 s	Fissures do not contain residues of etching gel
20.	Replace wadded or cotton rolls	Wadded or cotton rolls are dry

21.	Dry all tooth surfaces for 10 - 15 seconds	All tooth surfaces are dry. Enamel in the area of fissures acquired a chalky color
22.	Apply a one-component adhesive system to the fissure using an applicator	Observance of duration of adhesive system applying into fissure by adhesive system according to the instruction
23.	Evenly distribute the adhesive system with air	The walls and bottom of the fissure are evenly covered with a thin layer of adhesive system
24.	Polymerize the adhesive system for 10 - 20 s	Observance of the adhesive system polymerization time in accordance to instructions.  The walls and bottom of the fissure are shiny
25.	Apply a light-curing composite sealant to the fissure using a syringe with a cannula	Composite sealant fills the fissure
26.	Evenly distribute the sealant along the entire length of the fissure with a probe	Composite sealant is evenly distributed along the entire length of the fissure
27.	Polymerize the sealant for 20 s	Observance of the sealant polymerization time
28.	Check occlusal contacts with articulation paper, in case of need - to carry out grinding of sealant by carborundum heads for a mechanical handpiece, fine-grained (red marking) spherical or olive-shaped diamond heads for the turbine handpiece, to carry out polishing of sealant by polishing heads of a mechanical handpiece	The sealant does not exceed the occlusal contacts and has a smooth surface
29.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
30.	Replace wadded or cotton rolls	Wadded or cotton rolls are dry
31.	Dry all tooth surfaces for 10-15 seconds	All tooth surfaces are dry
32.	Apply light-curing fluorine varnish on the occlusal surface using an applicator	The occlusal surface of the tooth is shiny
33.	Evenly distribute the fluoride varnish on the occlusal surface with a stream of air	The layer of fluoride varnish is evenly distributed on the occlusal surface

34.	Cure the fluoride varnish for 20	Observance of fluoride varnish
	seconds	polymerization time
35.	Wash hands and dispose of medical	Hands are washed, gloves are
	gloves	disposed of in a special container
		with antiseptic solution

- variants of tasks for the applicant;
- photos with images of various clinical situations;
- video presentation of clinical competence.

# Form for checking the quality of performance of skills

### **CHECK-LIST**

of the objective structured practical (clinical) exam
(the second stage of the Unified State Qualifying Exam)
of the applicant for a higher education degree - master's degree
in the specialty 221 Dentistry
field of knowledge 22 "Health care"

Station "Demonstration of invasive fissures sealing on the posterior group of teeth on simulation phantom of the child's head"
Individual identification number of the applicant
Date of exam

at a meeting of the Academic Council of the Dental faculty, Protocol № 9 dated 13.04. 2023

Head of the Academic Council of the

Dental faculty <

orof. N.V. Bidenko

#### APPROVED

at a meeting of the cyclic methodological commission on dental disciplines,

Protocol № 5 dated \_13.04. 2023

Head of the cyclic methodological commission

prof. \_\_\_\_\_\_ V.P. Nespryadko

### APPROVED

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department

O.V. Savychuk

Passport of the examination station

of the objective structured practical (clinical) exam for applicants of a higher education degree - master's degree in specialty 221

"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline - "Pediatric dentistry"

**Station name** - demonstration of treatment of acute initial dental caries by deep fluoridation on a simulated phantom of the child's head.

**Learning objective** - 5th year student treats acute initial dental caries by deep fluoridation in children of different ages on simulation phantoms in a dental / training room using enamel-sealing liquid in accordance with "Algorithms for dental and medical manipulations to prepare for the State certification of 5th year students "Dentistry" for 10 minutes.

Names of competencies assessed at the station: the ability to abstract thinking, analysis and synthesis, knowledge and understanding of the subject area and understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally and in writing, the ability to analyze clinical data, the ability to diagnose: determine preliminary, clinical, final diagnosis, the ability to plan and carry out measures for

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading	Performance	Time warning
the task		
0.5 min	9.0 minutes	0.5 min

# **Station organization:**

1. **Requirements for the premises -** dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools-** task for students on forms(10), photos with the clinical situation (10), checklists according to the number of students, dental unite, mechanical handpieces, a set of dental instruments and accessories, dental materials.

Consumables - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, pastes of medium degree of abrasiveness, not containing fluorine and oil compounds, end brushes of various shapes, floss, preparations for deep fluoridation of enamel (enamel-sealing liquid).

- **3. Required simulation equipment** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

**Tasks and instructions for the student:** choose a photo depicting the clinical situation that corresponds to the indications for the task; to carry out treatment of acute initial dental caries by the method of deep fluoridation in a child of a certain age (3-8 years) with the use of enamel-sealing liquid on a simulation phantom, simulating work with a real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the correctness of the student's deep fluoridation of focal demineralization of enamel, fill out a checklist, do not interfere.

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Біденко Н.В. Алгоритми виконання стоматологічних медичних маніпуляцій для підготовки до атестації студентів 5 крсу за спеціальністю «Стоматологія» / Н.В. Біденко, А.В. Борисенко, О.В. Васильчук та інш. К.: Книга плюс, 2018. С. 4 5.
- 2. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. К.: Книга плюс, 2016. С. 178 179.
- 3. Pediatric Therapeutic Dentistry: Text-book for students of dental faculties of higher educational institutions of IV accreditation level (Written record № 2, 1.06.2012) / Khomenko L. A., Savychuk A. V., Ostapko, Ye. I., Shmatko V. I., Bidenko N. V., Golubeva I. N., Kononovich Ye. F., Lubarets S. F. / Under Editorship prof. L.A. Khomenko. Kiev: "Book-plus", 2012, 2015. 240 p.

# Algorithm of task performance by applicant

# "Deep fluoridation of focal demineralization of enamel"

**Deep fluoridation** - it is a method of exogenous caries prevention and conservative treatment of acute initial caries, which consists in sequential treatment of enamel with a solution of magnesium fluoride silicate complex, and then a suspension of highly dispersed calcium hydroxide to increase its degree of mineralization.

№	Sequence of actions	Criteria for monitoring proper performance
	Say hello to the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put on a medical mask	Medical mask is on
5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands treated with antiseptic

7.	Identify the patient, explain to him the essence of the procedure, taking into account age	Addressing the patient by name, explaining the essence of the procedure considering cognitive abilities
8.	Choose a tooth that is suitable for deep fluoridation of the focus of enamel demineralization	Chalk-like spots in the cervical region of the teeth, devoid of gloss
9.	Choose the necessary dental tools, accessories, materials and drugs	Tray, mirror, tweezers, probe, end brushes of conical and cylindrical shape, floss, applicators.  Paste of average degree of abrasiveness, not containing oil and fluorine compounds, enamel-sealing liquid
10.	Clean the chewing, vestibular and oral surfaces of the tooth with end brushes and toothpaste of medium abrasiveness	Chewing, vestibular and oral surfaces are free from soft plaque
11.	Clean the contact surfaces of the tooth floss	The contact surfaces of the tooth are free of soft plaque
12.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
13.	Isolate the tooth from saliva with wadded or cotton pads and a saliva ejector	The tooth does not come into contact with saliva
14.	Dry all tooth surfaces for 10 - 15 seconds	All tooth surfaces are dry
15.	Apply liquid № 1 to the demineralization site with an applicator for 1 minute	The area of focal demineralization is abundantly moistened with liquid № 1 Observance of liquid exposure time дини 1 on enamel
16.	Apply liquid № 2 to the demineralization site with another applicator for 1 minute	The area of focal demineralization is abundantly moistened with liquid № 2 Observance of liquid exposure time pi 2 on enamel
17.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
18.	Wash hands and dispose of medical gloves	Hands are washed, gloves are disposed of in a special container with antiseptic solution

- variants of tasks for the applicant;
  photos with images of various clinical situations;
  video presentation of clinical competence.

at a meeting of the Academic Council of the Dental faculty, Protocol № 9 dated 13.04. 2023

Head of the Academic Council of the

Dental faculty

N.V. Bidenko

### **APPROVED**

at a meeting of the cyclic methodological commission on dental disciplines,

Protocol № 5 dated 13.04. 2023

Head of the cyclic methodological commission

V.P. Nespryadko

### APPROVED

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department\_

O.V. Savychuk

Passport of the examination station

of the objective structured practical (clinical) exam for applicants of a higher education degree - master's degree in specialty 221

"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline - "Pediatric dentistry"

Station name - demonstration of treatment of acute initial dental caries by remineralization therapy on a simulated phantom of the child's head.

Learning objective - 5th year student treats acute initial dental caries by remineralizing therapy in children of different ages on simulation phantoms in the dental / training room using a combined calcium and fluoride varnish in accordance with "Algorithms for dental and medical manipulations to prepare for the State 5 in the specialty "Dentistry" for 10 minutes.

Names of competencies assessed at the station: the ability to abstract thinking, analysis and synthesis, knowledge and understanding of the subject area and understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally and in writing, the ability to analyze clinical data, the ability to diagnose: determine preliminary, clinical, final diagnosis, the ability to plan and carry out measures for

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading	Performance	Time warning
the task		
0.5 min	9.0 minutes	0.5 min

# **Station organization:**

**2. Requirements for the premises -** dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools-** task for students on forms(10), photos with the clinical situation (10), checklists according to the number of students, dental unite, mechanical handpieces, a set of dental instruments and accessories, dental materials

**Consumables** - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, pastes of medium degree of abrasiveness, not containing fluorine and oil compounds, end brushes of various shapes, floss, combined calcium and fluoride varnish.

- **3. Required simulation equipment** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

**Tasks and instructions for the student:** choose a photo depicting the clinical situation that corresponds to the indications for the task; to carry out treatment of acute initial dental caries by remineralization therapy in a child of a certain age (3-8 years) using a combined calcium and fluoride varnish on a simulation phantom, simulating work with a real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the correctness of the student's remineralizing therapy of focal demineralization of enamel, fill out a checklist, do not interfere

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Біденко Н.В. Алгоритми виконання стоматологічних медичних маніпуляцій для підготовки до атестації студентів 5 крсу за спеціальністю «Стоматологія» / Н.В. Біденко, А.В. Борисенко, О.В. Васильчук та інш. К.: Книга плюс, 2018. С. 4 5.
- 2. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. К.: Книга плюс, 2016. С. 178 179.
- 3. Pediatric Therapeutic Dentistry: Text-book for students of dental faculties of higher educational institutions of IV accreditation level (Written record № 2, 1.06.2012) / Khomenko L. A., Savychuk A. V., Ostapko, Ye. I., Shmatko V. I., Bidenko N. V., Golubeva I. N., Kononovich Ye. F., Lubarets S. F. / Under Editorship prof. L.A. Khomenko. Kiev: "Book-plus", 2012, 2015. 240 p.

# Algorithm of task performance by applicant

# "Remineralizing therapy of focal demineralization of enamel"

**Remineralizing therapy** - it is a method of exogenous caries prevention and conservative treatment of acute initial caries, which consists in treating the enamel with calcium and fluorine compounds in order to increase the degree of its mineralization.

№	Sequence of actions	Criteria for monitoring proper performance
	Say hello to the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put on a medical mask	A medical mask is on
5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands are treated with antiseptic
7.	Identify the patient	Addressing the patient by name
8.	Explain to the patient the essence of the procedure, taking into account age	Explain to the patient the essence of the procedure taking into account it cognitive abilities

9.	Choose a tooth that is suitable for remineralization of the focus of enamel demineralization	Chalk-like spots in the cervical region of the teeth, devoid of gloss
10.	Choose the necessary dental tools, accessories, materials and drugs	Tray, mirror, tweezers, probe, end brushes of conical and cylindrical shape, floss, applicators. Paste of average degree of abrasiveness, not containing oil and fluorine compounds, combined calcium and fluorine varnish
11.	Clean the chewing, vestibular and oral surfaces of the tooth with end brushes and toothpaste of medium abrasiveness	Chewing, vestibular and oral surfaces are free from soft plaque
12.	Clean the contact surfaces of the tooth floss	The contact surfaces of the tooth are free of soft plaque
13.	Rinse all tooth surfaces with water for 20 - 30 seconds	All tooth surfaces are clean
14.	Isolate the tooth from saliva with wadded or cotton pads and a saliva ejector	The tooth does not come into contact with saliva
15.	Dry all tooth surfaces for 10 - 15 seconds	All tooth surfaces are dry
16.	Apply a combined calcium and fluoride varnish to the area of demineralization with an applicator	The area of focal demineralization is glossy
17.	Evenly distribute the varnish on the enamel surface with a jet of air	The area of focal demineralization is evenly covered with varnish
18.	Wait for the varnish to dry 40 - 60 s	Observance of time of drying of a varnish
19.	Provide recommendations:  1. do not eat for 2 hours; - do not brush your teeth 12 - 24 years	Parents and child are informed
20.	Wash hands and dispose of medical gloves	Hands are washed, gloves are disposed of in a special container with antiseptic solution

- variants of tasks for the applicant;
  photos with images of various clinical situations;
  video presentation of clinical competence.

at a meeting of the Academic Council of the Dental factor Protocol № 9 dated 13.04. 2023

Head of the Academic Council of the Dental faculty

prof. \_\_\_\_\_N.V. Bidenko

### **APPROVED**

at a meeting of the cyclic methodological commission dental disciplines,

Protocol № 5 dated \_13.04. 2023

Head of the cyclic methodological commission prof. \_\_\_\_\_\_\_ V.P. Nespryadko

### APPROVED

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department\_

O.V. Savychuk

Passport of the examination station

of the objective structured practical (clinical) exam for applicants of a high education degree - master's degree in specialty 221
"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline - "Pediatric dentistry"

Station name - demonstration of I class carious cavities filling in primary teeth values glass ionomer cements on the simulation phantom of the chapter head.

Learning objective - 5th year student performs I class carious cavities filling primary teeth in children of different ages on simulation phantoms in the dentraining room with glass ionomer cement of chemical hardening in accordance "Algorithms for dental and medical manipulations to prepare for State Certification of students of the 5th year "Dentistry »» for 10 minutes.

Names of competencies assessed at the station: the ability to abstract think analysis and synthesis, knowledge and understanding of the subject area understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally an writing, the ability to analyze clinical data, the ability to diagnose: determinently, clinical, final diagnosis, the ability to plan and carry out measures

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading	Performance	Time warning
the task		
0.5 min	9.0 minutes	0.5 min

# **Station organization:**

**1. Requirements for the premises** - dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools** - task for students on forms(10), checklists according to the number of students, dental unite, turbine and mechanical handpieces, a set of dental instruments and accessories, dental materials.

Consumables - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, paper plates, plastic spatulas, glass ionomer cement of chemical hardening, applicators, articulation paper, fine grained (red marking) spherical and olive-shaped diamond heads for a turbine handpiece, carborundum and polishing heads for a mechanical handpiece.

- **3. Required simulation equipment** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

**Tasks and instructions for the student:** to perform I class carious cavity filling in a primary tooth in t child of a certain age (3-8 years) with chemical-curing glass ionomer cement on a simulation phantom, imitating work with the real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the accuracy of the student's filling of the first class carious cavity in the primary tooth with chemical-curing glass ionomer cement, fill a checklist, do not interfere.

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Алгоритми виконання стоматологічних і медичних маніпуляцій для підготовки до атестації студентів 5 курсу за спеціальністю «Стоматологія» (видання друге, доповнене і перероблене): Навчальний посібник для студентів стоматологічних факультетів, лікарів-інтернів, лікарів-стоматологів / Біденко Н.В., Борисенко ПА.В., Васильчук О.В. та ін. К.: Книга-плюс, 2018. С. 30 33.
- 2. Пропедевтика дитячої терапевтичної стоматології / Під ред. проф. Л.О. Хоменко. Київ: Книга плюс, 2021. С. 189 191.
- 3. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. – К.: Книга плюс, 2016. – С. 168 – 169.
- 4. Pediatric Therapeutic Dentistry: Text-book for students of dental faculties of higher educational institutions of IV accreditation level (Written record № 2, 1.06.2012) / Khomenko L. A., Savychuk A. V., Ostapko, Ye. I., Shmatko V. I., Bidenko N. V., Golubeva I. N., Kononovich Ye. F., Lubarets S. F. / Under Editorship prof. L.A. Khomenko. Kiev: "Book-plus", 2012, 2015. 240 p.

# Algorithm of task performance by applicant

" I class carious cavities filling in primary teeth with glass ionomer cements"

**Carious cavity filling** is a process of restoring the anatomical shape and function of the tooth with the help of dental filling materials to prevent further progression (recurrence) of caries

№	Sequence of actions	Criteria for monitoring proper performance
	Greet the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put on a medical mask	Medical mask is on
5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands treated with antiseptic
7.	Identify the patient	Addressing the patient by name

8.	Explain to the patient the essence of the procedure, taking into account age	Explain to the patient the essence of the procedure taking into account it
		cognitive abilities
9.	Choose a temporary tooth with a prepared class I carious cavity	Temporary tooth with a prepared class I carious cavity
10.	Choose the necessary dental materials, instruments and accessories	Dental kit, mirror, tweezers, probe, trowel, stopper, applicator, diamond heads for turbine handpiece spherical or olive-shaped fine-grained (red marking), polishing heads for a mechanical handpiece.  Chemical-curing glass ionomer cements.
11.	Isolate the tooth from saliva with wadded or cotton rolls and a saliva ejector	The tooth does not contact with saliva
12.	Rinse the carious cavity with water for 10 - 15 seconds	The carious cavity is clean
13.	Dry the carious cavity for 10 - 15 s	The carious cavity is slightly moistened
14.	Put a paper plate on the table	Paper plate clean, dry.
15.	Apply the required number of liquid drops on a paper plate. Hold the liquid vial high so that the drop falls freely	The number of applied drops of liquid corresponds to the instructions
16.	Shake the vial several times before collecting the powder.	The vial of powder is shaken
17.	Measure the required number of powder portions with a measuring spoon from the kit and apply them on a paper plate	The number of powder portions corresponds to the instructions
18.	Divide the measured amount of powder into 2 equal part	Observance equal distribution of powder
19.	Quickly add the first part of the powder to the liquid with a spatula and mix for 10 - 20 s	Observance of first portion mixing time. The mass is homogeneous.
20.	Add the second part of the powder to the homogeneous mass and mix it for 10 - 20 s	Observance of GIC mixing time (30 - 40 c). The mass is homogeneous, shiny.
21.	Apply the filling mass with a spatula into carious cavity in one portion	The filling mass is inserted into the carious cavity in one portion with an excess

22.	Carefully condense the filling mass with a stopper or with a moistened and well squeezed thick cotton swab during the seal modeling.	The filling mass evenly fills the entire carious cavity with a slight excess and adheres to the edges of the enamel.  Observance of GIC seal modeling time (1 - 1.5 min).
23.	Check occlusal contacts with articulation paper. Perform preliminary processing (grinding) of the filling using carborundum heads for the mechanical handpiece/diamond heads of spherical or olive-shaped fine grain (red marking) for the turbine handpiece after the completion of the primary polymerization of the filling material: after 4 - 5 min	Grinding of the seal is started after 4 - 5 min The seal reproduces the anatomical shape of the occlusal surface, has a smooth surface and does not exceed occlusions or contacts
24.	Rinse the occlusal surface of the tooth with water for 10 - 15 seconds	The occlusal surface of the tooth is clean
25.	Replace wadded or cotton rolls	Wadded or cotton rolls are dry
26.	Dry the occlusal surface for 10 - 15 seconds	The occlusal surface is dry
27.	Apply isolative varnish on seal with an applicator	The occlusal surface of the tooth is shiny
28.	Evenly distribute the isolative varnish on the occlusal surface with air	The layer of isolative varnish is evenly distributed on the occlusal surface
29.	Give recommendations: do not eat for 2 hours	Relevant recommendations are given
30.	Wash hands and dispose of medical gloves	Hands are washed, gloves are disposed of in a special container with antiseptic solution

- Attachments to the passport:
   variants of tasks with an indication of a temporary tooth with a prepared carious cavity of the I class, which is subject to filling with glass ionomer cement (10);
- video presentation of clinical competence.

at a meeting of the Academic Council of the Dental faculty,
Protocol № 9 dated 13.04. 2023
Head of the Academic Council of the

Dental faculty prof. N.V. Bidenko

### APPROVED

at a meeting of the cyclic methodological commission on dental disciplines,

Protocol № 5 dated 13.04. 2023

Head of the cyclic methodological commission

prof. \_\_\_\_\_\_ V.P. Nespryadko

### APPROVED

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department

O.V. Savychuk

Passport of the examination station of the objective structured practical (clinical) exam for applicants of a higher education degree - master's degree in specialty 221

"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline - "Pediatric dentistry"

Station name - demonstration of I class carious cavities filling in primary teeth with componers on the simulation phantom of the child's head.

**Learning objective -** 5th year student fills 1st class carious cavities in primary teeth in children of different ages on simulation phantoms in the conditions of dental / study room using componers in accordance with Algorithms of dental and medical manipulations to prepare for State Certification of 5th year students in «Dentistry » for 10 minutes.

Names of competencies assessed at the station: the ability to abstract thinking, analysis and synthesis, knowledge and understanding of the subject area and understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally and in writing, the ability to analyze clinical data, the ability to diagnose: determine preliminary, clinical, final diagnosis, the ability to plan and carry out measures for

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading	Performance	Time warning
the task		
0.5 min	9.0 minutes	0.5 min

# **Station organization:**

**1. Requirements for the premises** - dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools** - task for students on forms(10), checklists according to the number of students, dental unite, turbine and mechanical handpieces, a set of dental instruments and accessories, dental materials.

Consumables - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, compomer, adhesive system, applicators, articulation paper, fine grained (red marking) spherical and olive-shaped diamond heads for a turbine handpiece, carborundum and polishing heads for a mechanical handpiece.

- **3. Required simulation equipment** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

**Tasks and instructions for the student:** to perform I class carious cavity filling in a primary tooth in t child of a certain age (3-8 years) with componer on a simulation phantom, imitating work with the real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the accuracy of the student's filling of the first class carious cavity in the primary tooth with componer, fill a checklist, do not interfere.

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Алгоритми виконання стоматологічних і медичних маніпуляцій для підготовки до атестації студентів 5 курсу за спеціальністю «Стоматологія» (видання друге, доповнене і перероблене): Навчальний посібник для студентів стоматологічних факультетів, лікарів-інтернів, лікарів-стоматологів / Біденко Н.В., Борисенко ПА.В., Васильчук О.В. та ін. К.: Книга-плюс, 2018. С. 36-38.
- 2. Пропедевтика дитячої терапевтичної стоматології / Під ред. проф. Л.О. Хоменко. Київ: Книга плюс, 2021. С. 194 195.
- 3. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. К.: Книга плюс, 2016. С. 168 169.
- 4. Pediatric Therapeutic Dentistry: Text-book for students of dental faculties of higher educational institutions of IV accreditation level (Written record № 2, 1.06.2012) / Khomenko L. A., Savychuk A. V., Ostapko, Ye. I., Shmatko V. I., Bidenko N. V., Golubeva I. N., Kononovich Ye. F., Lubarets S. F. / Under Editorship prof. L.A. Khomenko. Kiev: "Book-plus", 2012, 2015. 240 p.

# Algorithm of task performance by applicant

" I class carious cavities filling in primary teeth with compomer materials"

Carious cavity filling is a process of restoring the anatomical shape and function of the tooth with the help of dental filling materials to prevent further progression (recurrence) of caries

№	Sequence of actions	Criteria for monitoring correct performance
	Greet the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put a medical mask on	Medical mask is on
5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands treated with antiseptic

7.	Identify the patient	Addressing the patient by name
8.	Explain to the patient the essence of the procedure, taking into account age	The essence of the procedure is explained to the patient taking into account his cognitive abilities.
9.	Choose a primary tooth with a prepared I class carious cavity	Primary tooth with a prepared I class carious cavity
10.	Choose the necessary dental materials, instruments and accessories	Dental kit, mirror, tweezers, probe, trowel, stopper, applicator, diamond heads for turbine hand -piece spherical or olive-shaped fine-grained (red marking), polishing heads for a mechanical handpiece.  Compomer material, adhesive system
11.	Isolate the tooth from saliva with wadded or cotton rolls and a saliva ejector	The tooth does not contact with saliva
12.	Wash the carious cavity with water for 10 - 15 seconds	The carious cavity is clean
13.	Dry the carious cavity for 10 - 15 s	The carious cavity is slightly moistened
14.	Apply a one-component adhesive system on the walls and bottom of the carious cavity using an applicator	Observance of duration of adhesive system applying into a carious cavity according to the instruction
15.	Evenly distribute the adhesive system with air	The walls and bottom of the carious cavity are evenly covered with a thin layer of adhesive system
16.	Polymerize the adhesive system for 10 - 20 s	Observance of the adhesive system polymerization time in accordance to instructions.  The walls and bottom of the carious cavity are shiny
17.	Consecutively apply a portion of compomer material into the carious cavity with a spatula	The thickness of each layer of compomer material does not exceed 2 mm
18.	Carefully condense each portion of the material with a stopper during seal modeling	Each layer of compomer material is close to the bottom and walls of the carious cavity  Compomer material evenly fills the entire carious cavity and adheres to the enamel edges
19.	Sequentially polymerize each portion of compomer for 40 s. It is necessary to begin polymerization from that	Observance of polymerization time of each portion of filling material.  Application of directional polymerization.

	wall of a carious cavity with attached portion of material.	
20.	After last portion of compomer polymerization, check the occlusal contacts with articulation paper.	Occlusal contacts were checked after last portion of the compomer material polymerization
21.	Pre-treat (grind) the seal with carborundum heads for the mechanical handpiece   fine grained (red marking) diamond heads spherical shape or olive-shaped turbine burs.	The seal reproduces the anatomical shape of the masticatory surface and does not exceed occlusions or contacts
22.	Final polish with polishing heads for mechanical handpiece	The seal has a smooth, shiny surface
23.	Wash hands and dispose of medical gloves	Hands are washed, gloves are disposed of in a special container with antiseptic solution

- variants of tasks with an indication of a temporary tooth with a prepared carious cavity of the I class, which is subject to filling with componer (10);
  video presentation of clinical competence.

at a meeting of the Academic Council of the Dental faculty,
Protocol № 9 dated 13.04. 2023

Head of the Academic Council of the

Head of the Academic Council of the

Dental faculty

prof. N.V. Bidenko

### **APPROVED**

at a meeting of the cyclic methodological commission on dental disciplines,

Protocol № 5 dated 13.04. 2023

Head of the cyclic methodological commission

prof. V.P. Nespryadko

### APPROVED

at a meeting of the department of Pediatric and preventive dentistry, protocol № 19 dated 12.04.2023

Head of the Department

O.V. Savychuk

# Passport of the examination station

of the objective structured practical (clinical) exam for applicants of a higher education degree - master's degree in specialty 221

"Dentistry"

in the field of knowledge 22 "Health care"

Name of discipline - "Pediatric dentistry"

Station name - demonstration of I class carious cavities filling in primary teeth with light-cure resin composite on the simulation phantom of the child's head

**Learning objective -** 5th year student fills 1st class carious cavities in primary teeth in children of different ages on simulation phantoms in the conditions of dental / study room using light-cure resin composite in accordance with «Algorithms of dental and medical manipulations to prepare for State Certification of 5th year students in «Dentistry»» for 10 minutes.

Names of competencies assessed at the station: the ability to abstract thinking, analysis and synthesis, knowledge and understanding of the subject area and understanding of professional activity, the ability to apply knowledge in practical activities, the ability to communicate in the national language both orally and in writing, the ability to analyze clinical data, the ability to diagnose: determine

preliminary, clinical, final diagnosis, the ability to plan and carry out measures for the prevention of diseases of the organs and tissues of the oral cavity and maxillofacial area of the child, the ability to treat the main diseases of the organs and tissues of the oral cavity and maxillofacial region, the ability to perform dental manipulations.

Passport prepared by: prof. Savychuk OV, prof. Bidenko NV, ass. prof. Golubeva IM, prof. Sorochenko GV

# Station duration and approximate time distribution

Reading the task	Performance	Time warning
0.5 min	9.0 minutes	0.5 min

### **Station organization:**

**1. Requirements for the premises** - dental / training room, table, chairs (2), sink for washing hands.

# 2. Material and technical support

**Required equipment, tools** - task for students on forms(10), checklists according to the number of students, dental unite, turbine and mechanical handpieces, a set of dental instruments and accessories, dental materials.

Consumables - detergents and antiseptics, non-sterile medical gloves, medical masks, wadded or cotton pads, saliva ejectors, light-cure resin composite, adhesive system, applicators, articulation paper, fine grained (red marking) spherical and olive-shaped diamond heads for a turbine handpiece, carborundum and polishing heads for a mechanical handpiece.

- **3. Required simulation equipment** simulation phantom heads of the child (minimum 2) with models of teeth of the upper and lower jaws, fixed in the occluder (depending on the number of students, minimum 10).
- 4. The need for support staff there is no need.
- 5. The need for a standardized patient there is no need.

**Tasks and instructions for the student:** to perform I class carious cavity filling in a primary tooth in t child of a certain age (3-8 years) with light-cure resin composite on a simulation phantom, imitating work with the real patient.

**Examiner's instruction:** identify and register the student, assign tasks to the student and instruct him, assess the accuracy of the student's filling of the first class

carious cavity in the primary tooth with light-cure resin composite, fill a checklist, do not interfere.

# Normative documents and literature, on the basis of which the tasks are given to the applicants and the algorithms for the tasks are specified:

- 1. Алгоритми виконання стоматологічних і медичних маніпуляцій для підготовки до атестації студентів 5 курсу за спеціальністю «Стоматологія» (видання друге, доповнене і перероблене): Навчальний посібник для студентів стоматологічних факультетів, лікарів-інтернів, лікарів-стоматологів / Біденко Н.В., Борисенко ПА.В., Васильчук О.В. та ін. К.: Книга-плюс, 2018. С. 36-38.
- 2. Пропедевтика дитячої терапевтичної стоматології / Під ред. проф. Л.О. Хоменко. Київ: Книга плюс, 2021. С. 191 194.
- 3. Терапевтична стоматологія дитячого віку Том І / Під ред. проф. Л.О. Хоменко. К.: Книга плюс, 2016. С. 168 169.
- 4. Pediatric Therapeutic Dentistry: Text-book for students of dental faculties of higher educational institutions of IV accreditation level (Written record № 2, 1.06.2012) / Khomenko L. A., Savychuk A. V., Ostapko, Ye. I., Shmatko V. I., Bidenko N. V., Golubeva I. N., Kononovich Ye. F., Lubarets S. F. / Under Editorship prof. L.A. Khomenko. Kiev: "Book-plus", 2012, 2015. 240 p.

# Algorithm of task performance by applicant

# «I class carious cavities filling in primary teeth with light-cure resin composite»

Carious cavity filling is a process of restoring the anatomical shape and function of the tooth with the help of dental filling materials materials to prevent further progression (recurrence) of caries

№	Sequence of actions	Criteria for monitoring correct performance
1.	Greet the patient	
2.	Present yourself	
3.	Wash and dry your hands	Hands are washed and dried
4.	Put a medical mask on	Medical mask is on

5.	Wear medical gloves	Medical gloves are on
6.	Treat hands with antiseptic	Hands treated with antiseptic.
7.	Identify the patient	Addressing the patient by name.
8.	Explain to the patient the essence of the procedure, taking into account age	The essence of the procedure is explained to the patient taking into account his cognitive abilities.
9.	Choose a primary tooth with a prepared I class carious cavity	Primary tooth with a prepared I class carious cavity.
10.	Choose the necessary dental materials, instruments and accessories.	Dental kit, mirror, tweezers, probe, trowel, stopper, applicator, diamond heads for turbine hand -piece spherical or olive-shaped fine-grained (red marking), polishing heads for a mechanical handpiece.  Light-cure resin composite, adhesive system.
11.	Isolate the tooth from saliva with wadded or cotton rolls and a saliva ejector	The tooth does not contact with saliva.
12.	Wash the carious cavity with water for 10 - 15 seconds	The carious cavity is clean.
13.	Dry the carious cavity for 10 - 15 s.	The carious cavity is slightly moistened.
14.	Apply etching gel containing 37% orthophosphoric acid on the enamel, wait 15 seconds,	The etching gel is evenly distributed on the surface of the enamel.
15.	Apply etching gel on the dentin and wait 15 seconds	The etching gel is evenly distributed on the surface of the dentine.  Etching time was observed: the etching time of enamel is 30 s, dentin - 15 s.
16.	Rinse the carious cavity with water for 45-60 s to remove the etching gel	The etching gel rinsing time was observed. Carious cavity does not contain etching gel residues
17.	Replace cotton rolls with dry ones	Tooth is isolated.
18.	Dry the carious cavity for 10 –15 s.	The surface of the properly etched enamel acquired a chalky matte

		appearance. Dentin should remain slightly moist, sparkle in the light.
19.	Apply a one-component adhesive system (the 5th generation ) on the walls and bottom of the carious cavity using an applicator with a light scrubbing motion for 10-15 seconds	The duration of application of the adhesive system in the carious cavity was observed in accordance with the instructions.
20.	Evenly distribute the adhesive system with air for 10 s.	The walls and bottom of the carious cavity are evenly covered with a thin layer of adhesive system.
21.	Polymerize the adhesive system for 10 - 20 s.	The polymerization time of the adhesive system was observed according to the instructions. The walls and bottom of the carious cavity are shiny.
22.	Consecutively apply a portions of light-cure resin composite into the carious cavity with a spatula	The thickness of each layer of light-cure resin composite does not exceed 2 mm.
23.	Carefully condense each portion of the material with a stopper during seal modeling	Each layer of light-cure resin composite material is tightly adjacent to the bottom and walls of the carious cavity.  Light-cure resin composite evenly fills the entire carious cavity and adheres to the enamel edges.
24.	Sequentially polymerize each portion of light-cure resin composite for 20-40 s. Polymerization must begin with the wall of the carious cavity to which a portion of the material was attached.	The polymerization time of each portion of filling material was observed.  Application of directional polymerization.
25.	After last portion of light-cure resin composite polymerization, check the occlusal contacts with articulation paper	Occlusal contacts were checked after last portion of the light-cure resin composite polymerization.
26.	Pre-treat (grind) the seal with carborundum heads for the mechanical handpiece   fine grained (red marking) diamond heads	The seal reproduces the anatomical shape of the masticatory surface and does not exceed occlusions or contacts.

	spherical shape or olive-shaped turbine burs	
27.	Final polishing with diamond points, polishing discs and rubber cups with fine abrasive polishing paste	The restoration has a smooth surface and natural luster.
28.	Carry out finishing light polymerization of the seal surface for 10-20 s. The light of the lamp should be directed perpendicular to the surface of the seal at the closest possible distance	Observance of finishing polymerization time.
29.	Wash hands and dispose of medical gloves	Hands were washed, gloves were disposed of in a special container with antiseptic solution.

- variants of tasks with an indication of a temporary tooth with a prepared carious cavity of the I class, which is subject to filling with light-cure resin composite (10);
- video presentation of clinical competence.

# Video materials for preparation for OSC(P)E in the discipline "Pediatric therapeutic dentistry" for students of the 5th year 2022-2023 n.y. can be viewed at the link:

 $https://www.youtube.com/playlist?list=PLJsY4jS9pgRtNxuxP3JqzNCs\\ AFNrGlwqU$