



Pediatric dentistry and Dental Prophylaxis

1. IMPRINT	
Academic Year	2022/2023
Department	Faculty of Dental Medicine
Field of study	English Dentistry Division
Main scientific discipline <i>(in accord with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>	Medical sciences
Study Profile <i>(general academic / practical)</i>	General academic
Level of studies <i>(1st level / 2nd level / uniform MSc)</i>	Uniform MSc
Form of studies	Full-time program
Type of module / course <i>(obligatory / non-compulsory)</i>	Obligatory
Form of verification of learning outcomes <i>(exam / completion)</i>	Completion
Educational Unit / Educational Units <i>(and address / addresses of unit / units)</i>	<p>Department of Paediatric Dentistry of WUM Binieckiego 6 street 02-097 Warsaw, phone number 22 116 64 24 e-mail: pedodoncja@wum.edu.pl</p> <p>Department of Dental Microbiology, WUM Banacha 1a street</p>

	02-097 Warsaw, phone number 22 59 91 777 e-mail: zms1@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	prof. dr hab. n. med. Dorota Olczak-Kowalczyk Department of Paediatric Dentistry prof. dr hab. n. med. Marta Wróblewska Department of Dental Microbiology
Course coordinator (title, First Name, Last Name, contact)	prof. dr hab. n. med. Dorota Olczak-Kowalczyk dorota.olczak-kowalczyk@wum.edu.pl
Person responsible for syllabus (First name, Last Name and contact for the person to whom any objections concerning syllabus should be reported)	dr. n. med. Iwona Sobiech iwiasobiech@op.pl tel. 501-199-486 pedodoncja@wum.edu.pl
Teachers	Department of Paediatric Dentistry Dr hab. n. med. Anna Turska-Szybka anna.turska-szybka@wum.edu.pl Dr n. med. Iwona Sobiech iwona.sobiech@wum.edu.pl Dr n. med. Halszka Boguszewska-Gutenbaum halszka.boguszewska@wum.edu.pl Lek. stom. Piotr Sobiech piotr.sobiech@wum.edu.pl Dr n. med. Emil Korporowicz emil.korporowicz@wum.edu.pl Lek. dent. Małgorzata Dudek malgorzata.dudek@wum.edu.pl Lek. dent. Maja Lipiec maja.lipiec@wum.edu.pl Lek. dent. Sara Shamsa-Nieckula sara.shamsa@wum.edu.pl Lek. dent. Joanna Góra joanna.gora@wum.edu.pl Lek. dent. Magdalena Świątkowska-Bury magdalena.swiatkowska@wum.edu.pl Dr n. med. Paula Piekoszewska-Ziętek ppiekoszewska@wum.edu.pl Lek. dent. Andrzej Kołodziejczyk andrzej.kolodziejczyk@wum.edu.pl Lek. dent. Michał Gefrerer michal.gefrerer@wum.edu.pl Dr. n. med. Angelika Kobylińska angelika.kalinska@wum.edu.pl Lek. dent. Karolina Spodzieja karolina.spodzieja@wum.edu.pl Lek. dent. Anna Pantelewicz anna.pantelewicz@wum.edu.pl Lek. dent. Gabriela Grochowska gabriela.grochowska@wum.edu.pl Lek. dent. Wiktoria Schabowska wiktoria.schabowska@wum.edu.pl Department of Dental Microbiology dr n. med. Magdalena Sikora magdalena.sikora@wum.edu.pl mgr Dariusz Bańka dariusz.banka@wum.edu.pl

2. BASIC INFORMATION			
Year and semester of studies	2 nd year, 4 th semester	Number of ECTS credits	3.00
FORMS OF CLASSES		Number of hours	ECTS credits calculation
Contacting hours with academic teacher			
Lecture (L) (e-learning)		4	0,16

Seminar (S) (e-learning)	6	0,24
Discussions (D)	23	0,92
e-learning (e-L)	-	-
Practical classes (PC)	-	-
Work placement (WP)	-	-
Unassisted student's work		
Preparation for classes and completions	42	1,68

*depending on the epidemiological situation, classes will take place in the form of a stationary session in the seminar room of the Department of Paediatric Dentistry, room 3.74 or in the form of e-learning

3. COURSE OBJECTIVES	
O1	Acquiring knowledge about dental prophylaxis in children and youth taking into account the risk of caries disease.
O2	Preparation for the ability to perform clinical preventive procedures in patients of developmental age.
O3	Acquiring skills to conduct group and individual educational activities among children and adolescents.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING <i>(concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)</i>	
Code and number of effect of learning in accordance with standards of learning <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>	Effects of learning in time

Knowledge – Graduate* knows and understands:

A.W6.	anatomical justification for the physical examination
B.W6.	role and importance of body fluids, including saliva;
B.W13.	principles of operation of dental equipment;
C.W23.	dental office equipment and instruments used in dental procedures;
C.W24.	definition and classification of basic and auxiliary dental materials;
B.W5.	principles of calcium and phosphate balance;
F.W2.	principles of prophylactics and treatment of masticatory apparatus diseases at different stages of development;

F.W3.	viral, bacterial and fungal flora of the oral cavity and its importance;
F.W21.	prophylaxis of oral diseases
D.W30.	Basic nutrients, the body's need for them, their importance, physiological availability and metabolism, and nutritional sources.

Skills– Graduate* is able to:

F.U1.	conduct a medical interview with the patient or their family
F.U2.	conduct a dental physical examination of the patient;
F.U7.	determine indications and contraindications for a specific dental procedure;
F.U13.	present selected medical issues verbally or in writing in a manner appropriate to the level of recipients
F.U14.	assess the risk of dental decay using bacteriological and saliva tests
G.U7.	plan activities in the field of prevention and health promotion and implement promotional activities related to the health of the population
G.U15.	provide the patient with the necessary information in the field of oral health promotion

* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)

Number of effect of learning	Effects of learning in time
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Knowledge – Graduate knows and understands:

D.W4.	the importance of verbal and non-verbal communication in the process of communicating with the patient and the concept of trust in interaction with the patient;
G.W3.	basic concepts of prevention, health awareness and environmental hygiene;
G.W4.	basic concepts related to health, lifestyle and health status of the population;
G.W15	principles of disease prevention and health improvement;

Skills– Graduate is able to:

D.U31.	Provide information on the use of nutritional preparations and dietary supplements.
B.U14.	Prepare educational materials for the patient and his family as part of health counseling.

Social Competencies – Graduate is ready for:

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6. CLASSES		
Form of class	Class contents	Effects of Learning
Lectures	<p>L 1- *Lecture 1- Etiopathogenesis and epidemiology of carious disease at children and young people. Early childhood caries. General principles of preventing caries disease in children. Why should you assess the risk of caries and how to do it?</p> <ol style="list-style-type: none"> 1. Incidence and level of tooth decay in children in Poland. 2. Caries indicators. 3. Pathogenesis of the carious process - a dynamic balance between demineralization and remineralization. 4. Preventive factors and risk factors for dental caries. 5. Oral health of a pregnant woman and health behaviors and tooth decay in a child, i.e. primary and primary prevention. 6. Principles of personalized dental care planning based on risk assessment. 7. Caries risk assessment methods: CAMBRA, Cariogram, ICCMS, CariesCare assessment. 8. Interview, clinical evaluation and additional studies. <p>L2- *Lecture 2- Methods of limiting of the impact of cariogenic bacteria. Fluoride in prevention of caries (endo- and exogenous prophylaxis). Safety of fluoride prevention.</p> <ol style="list-style-type: none"> 1. Ecological hypothesis of caries microbiome dysbiosis. Interventions delaying the colonization of the child's oral cavity with cariogenic bacteria, reducing the number of caries and bacterial biofilm - mechanical plaque removal, antibacterial agents, probiotics and prebiotics, sugar substitutes. 2. Cariostatic mechanisms of fluoride action. The action of fluoride in the pre- and post-recovery period (depending on the fluoride concentration in the environment). 3. Fluorine sources. 4. Endogenous and exogenous fluoride prophylaxis methods. 5. Safety of professional fluoride prophylaxis. 6. Risk of dental fluorosis and acute poisoning. 7. Tooth fluorosis (risk, clinical picture of fluorosis and classification). 8. Acute and chronic intoxication (probable toxic F dose for children, symptoms of acute intoxication and treatment, extra-dental effects of chronic exposure to excessive doses of fluoride). <p>* lectures will be held in the form of e-learning, will be available to students in the period specified in the schedule</p>	<p>B.W6. D.W6. F.W2. F.W3. F.W21. F.U1. F.U2. F.U14. G.W5. G.W15. G.W17. B.U1. B.U2. C.U3. C.U4.</p> <p>F.W3. F.W21. F.U14. G.W3. G.W17. G.U7. B.U1. B.U2. D.W25. D.U31.</p>
Repetitive seminars	<p>*S1- Seminar1. The role of diet in prevention of tooth caries.</p> <ol style="list-style-type: none"> 1. Diet and odontogenesis- the importance of proteins, vitamins and trace elements. Nutrition pyramid and healthy lifestyle. Methods of feeding and quality of nutrition: breastfeeding / artificial, frequency of meals, consistency and type of food. 2. Cariogenic food products (carbohydrate content, consistency of the food, the rate of clearance from the oral cavity, retention). Cariostatic products (xylitol, dairy products, such as hard cheese containing arginine). Role of food in the stimulation of saliva secretion. Probiotics in prevention of tooth decay. Methods of rating the patient's diet (interview / calendar nutritional). Most common diet mistakes in different age groups. Dietary recommendations depending on the age of the child. 	<p>D.W.30 F.W2. F.W.3 F.W.21 F.U7. F.U14. G.W3. G.W4 G.U7. C.W24. C.W23. C.U3</p>

	<p>3. Limiting of cariogenic bacteria impact – decreasing the quantity of bacteria: mechanical, chemical and other methods, limiting access of bacteria to regions at risk of development of caries, i.e. sealing of anatomic pits and fissures</p> <p>4. Mechanical plaque removal (methods for home and professional use). Methods of brushing teeth in different age groups, manual and the electric toothbrushes - advantages and disadvantages, toothpaste, dental floss, cleaning of the tongue. Staining plaque methods used in assessment of oral hygiene (OHI, PI). Patient age-dependent methods of teaching of oral hygiene.</p> <p>5. Chemical and other methods of reducing of cariogenic bacterial flora (fluorine, chlorhexidine, baking soda, povidone-iodine, xylitol, ozone, silver nitrate). Means and methods of use for in patients at home and in the dental office.</p> <p>6. Sealing pits and anatomical fissures (eligibility criteria and indications for surgery, choice of material for sealing, method of performing the procedure using glass-ionomer cement and sealing wax polymer).</p> <p>*S2- Seminar 2.</p> <p>1. Types of fluoride prophylaxis (endogenous / exogenous, mass / group / individual). Individual fluoride prophylaxis - means and methods of application at home and in the dental office (drops / tablets, toothpastes, rinses, gels / foams and varnishes). Principles of their use in children and adolescents (home and professional prevention in accordance with age and the level of caries risk). Application procedures.</p> <p>2. Methods of remineralization support. White spot lesion definition, histological and clinical activity Mechanism and conditions needed for remineralization of caries lesions confined to enamel (reducing the impact of bacteria, increasing the pH of the mouth, supplying the necessary ions). Stimulation of saliva secretion (chewing gum, diet, pharmacological stimulation, etc.).</p> <p>3. Methods and measures used to remineralize the white spot carious lesions - fluorine (preparations containing low and high concentrations of fluorine ions), calcium and phosphate ions (ACP, CPP-ACP, CPP-ACPF, CSPS, TCP, hydroxyapatite).</p> <p>*S3- Seminar 3</p> <p>1. Caries risk assessment and dental care planning. The use of risk assessment forms assesses its level. Planning preventive activities depending on the level of caries risk, the child's age, his individual needs and the quality of cooperation with the child and parents. Clinical cases.</p> <p>2. Health education as an element of caries disease prevention. Definition and models of health education (oriented on health, risk factors, disease). Elements of education: transfer of knowledge, shaping skills and attitudes. Educational content and methods of their transmission to pregnant women, mothers of children under three years of age, kindergarten children, schoolchildren and adolescents. Principles of individual and group education, direct and indirect (educational tools). Motivation.</p> <p>Completion of the material from the seminars - credit takes the form of a final test. The test consists of twenty (20) single-choice questions. Passing the test allows you to take part to the practice part.</p> <p>* real-time e-learning classes</p>	<p>F.W2. F.W3. F.U1. G.W3. G.W4. G.U7. B.U1 B.U2 D.W30</p> <p>F.W2. F.W21. F.U13. F.U14. D.W4. D.W6. G.W3. G.W17. G.U7. E.U14.</p>
Practice	<p>Practice carried out in Department of Paediatric Dentistry</p> <p>P1, P2 - Practice 1, Practice 2.</p> <p>Basic instruments used in pediatric dentistry - types of drills, diagnostic tools, dental materials and work techniques.</p> <p>Collecting the correct interview - general medical, dental, dietary and hygiene.</p> <p>Performing an extraoral and intraoral examination. Drawing up a diagram. Rating caries risk.</p>	<p>F.U1. F.U2. F.U3. F.U7. F.U14. D.U4. G.U7.</p>

	<p>Preventive procedures.</p> <p>P3, P4 - Practice 3., Practice 4. Preparation and discussion of the presentation of the educational program for preschool children on the prevention of caries.</p> <p>P5- Practice 5. Presentation of the educational program on caries prevention and habits dietary and hygienic, in the form of games and activities for preschool children during lessons organized in kindergarten.</p> <p>P6- Practice 6. Final credit.</p> <p>Practice carried out in Department of Dental Microbiology</p> <p>P7- Practice 7. Bacterial factors in the caries risk assessment - current scientific research reports metagenomics in people with dental caries and healthy people.</p> <p>P8- Practice 8. Practical part: tests to be performed in dental offices (e.g. Saliva check buffer, CRT Buffer).</p>	<p>B.W13. C.W23. F.U13. G.U5. G.U7 G.U15 E.U14</p> <p>D.U4. G.U5. G.U7. E.U14</p> <p>F.W3 . B.U1. B.U2.</p> <p>F.U14. C.U3.</p>
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7. LITERATURE

Obligatory

1. Współczesna stomatologia wieku rozwojowego, pod red. D. Olczak-Kowalczyk, J. Szczepańskiej, U. Kaczmarek, Med Tour Press International, Otwock 2017
2. Pediatric Dentistry Cameron A.C., Widmer R.P., Polish second edition edited U. Kaczmarek, Urban & Partner, Wrocław 2013.
3. Prevention and Treatment of Caries in Children edited by D. Olczak-Kowalczyk and L. Wagner, Borgis Medical Publishing House, Warsaw, 2013.
4. Wprowadzenie do stomatologii dziecięcej pod red. D. Olczak-Kowalczyk i L. Wagnera, Warszawa, WUM, 2012.

Supplementary

1. Professional prevention in dentistry. Z. Jańczuk, PZWL, Warsaw, 2004.
2. The Endodontics of the Developmental and Mature Age by Maria Baranska-Gachowska, edited by Lidia Postek-Stefanska, Czelej, Lublin, 2011, issue.2.
3. New Dentistry, Quarterly, Borgis Medical Publishing House. Warsaw
4. Dental Carries edited by Ole Fejerskov and Edwina A.M. Kidd ; Blackwell Munksgaard 2015
5. Textbook and color atlas of traumatic injuries to the teeth (4th edition) (2018) J. Andreasen, F. Andreasen & L. Andersson UK: Blackwell Munksgaard
6. Pediatric Dentistry: A Clinical Approach, 3rd Edition (2017) G. Koch, S. Poulsen, I. Espelid, D. Haubek
7. Journal Of Stomatology, Termedia

8. VERIFYING THE EFFECT OF LEARNING		
Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
<p>A.W6. B.W6. B.W13. C.W23. D.W4. D.W6. F.W2. F.W3. F.W21. G.W3. G.W4. G.W5. G.W15 G.W17. D.W25. D.W30. B.U2. C.U3. D.U4. D.U14. F.U1. F.U2. F.U3. F.U7. F.U13. F.U14. G.U5. G.U15. E.U14. G.U7. D.U31.</p>	<p>Oral examination of preparation for the seminar</p> <p><i>Written shorttests checking substantive preparation for Exercise at the beginning of the exercise.</i></p> <p>Test colloquium regarding knowledge gained during lectures and seminars.</p> <p>The first and second dates of the test have a test form. In the event of failure, the commission test may take place only with the consent of Head of the Department of Pediatric Dentistry.</p> <p><i>Preparing and conducting educational activities in kindergarten concerning the prevention of caries disease, proper habits dietary and hygienic.</i></p> <p>Group (2-person) presentation Components of the presentation:</p> <ol style="list-style-type: none"> 1. Presentation of dietary recommendations 2. Presentation of preventive recommendations 3. Presentation of hygiene recommendations 4. Presentation method and ability to talk to children <p>The final grade for the subject is the arithmetic average of the grades for presentations and tests (arithmetic average of the number of points, based on which the grade according to the given criteria is calculated) and is included in the final grade of the subject for the fifth year of study.</p>	<p>Active participation in practice.</p> <p>Test > 55% correct answers</p> <p><u>Assessment - criteria</u> 2.0 (ndst) <12 points 3.0 (acc.) 12-13 points 3.5 (ddb) 14-15 points 4.0 (db) 16-17 points 4.5 (pdb) 18-19 points 5.0 (very good) 20 points</p> <p>Preparing a presentation. The content, method of presentation and ability to discuss are assessed. 20 points in total, 5 points for each component of the presentation.</p> <p><u>Assessment - criteria</u> 2.0 (ndst) <12 points 3.0 (acc.) 12-13 points 3.5 (ddb) 14-15 points 4.0 (db) 16-17 points 4.5 (pdb) 18-19 points 5.0 (very good) 20 points</p>

9. ADDITIONAL INFORMATION <i>(information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)</i>
<p>1. The subject "Paediatric dentistry and Dental Prophylaxis" is carried out at the Department of Pediatric Dentistry of the Medical University of Warsaw.</p> <p>2. The lectures convey the latest consensus reports and the latest standards in pediatric dentistry. Attendance at lectures is an essential element for acquiring modern knowledge and at the same time is part of the exam questions. At lectures, the attendance list is verified.</p> <p>3. Person responsible for teaching in the second year – dr. n. med. Iwona Sobiech</p> <p>4. Information on consultation hours is placed on the notice board in the Department and on the Department's website http://pedodoncja.wum.edu.pl/</p> <p>5. The student shall enter the classes in protective clothing (including footwear for a change) and with an identifier containing the information: student, year, name, surname. Bags must be stored in cabinets located in clinical rooms.</p> <p>Non-compliance with occupational health and safety rules is unacceptable.</p>

6. Please arrive at the class on time. Being late 15 min is treated as absence.

7. Student Scientific Circle at the Department of Pediatric Dentistry, Medical University of Warsaw:

Trustee SSC – dr. hab. n. med. Anna Turska – Szybka

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