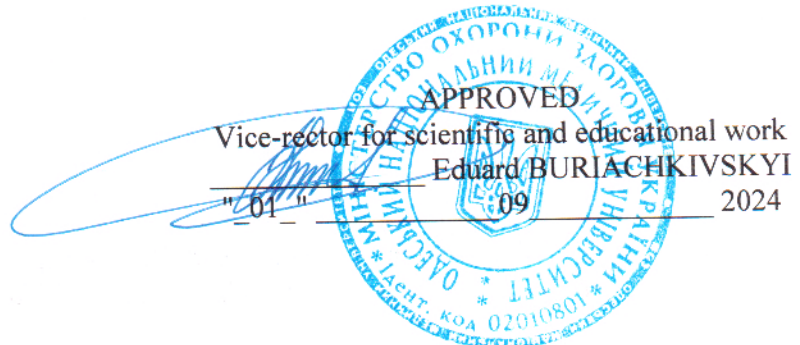


MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Faculty: international
(faculty name)

Department of Pediatrics
(name of department)



METHODICAL RECOMMENDATION
FOR PRACTICAL LESSON
FROM THE EDUCATIONAL COMPONENT

Faculty international, course 6

Educational component "PEDIATRICS"

Approved:
Meeting of the Department of Pediatrics _____
Odesa national medical university

Protocol № 1 of " 29 " 08 2024

Head of the department _____ (Mykola ARYAYEV)
(signature) (name, surname)

Перезатверджено:

Засідання кафедри педіатрії

Одеський національний медичний університет

Протокол № 1 від 26 08 2025 р.

Завідувач кафедри  Микола АРЯЄВ

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics

Developers: Prof. Mykola ARYAYEV, associate professor Victor BIRYUKOV, associate professor Larysa KAPLINA, associate professor Lyudmila SENKIVSKA, associate professor Roman PAPINKO, associate professor Maxim FEDIN, PhD Daria Kolomiets, assistant PhD Vera Koropets, assistant Liubov BRATKOVA

Note. In the case of publication of methodical developments as a self-published work, the academic council of the faculty provides a recommendation for publication in the presence of two reviews, one of which is external — from a reviewer of another institution of higher education.

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics

Practical lessons

Content module №1 “Dispensary care for healthy and sick children in outpatient settings. Emergency care for major emergencies”.

Practical lesson № 1-4

Topic 1. Integrated management of childhood diseases.

Practical lesson №5-8

Topic 2. Urgent conditions in children, including those caused by external factors in children.

Practical lesson №9-12

Topic 3. Medical observation of children in the first three years of life in a polyclinic.

Practical lesson №13-15

Topic 4. Differential diagnosis of jaundice in newborn children. Perinatal lesions of the central nervous system in children. Dispensary observation of children with perinatal pathology of the central nervous system.

Practical lesson №16-18

Topic 5. Pallor in children. Differential diagnosis. Tactics of the doctor. Emergency care for bleeding. Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Practical lesson №19-21

Topic 6. Peculiarities of medical monitoring of adolescent children. Differential diagnosis of arterial hypertension. Emergency care for hypertension and hypotension in adolescents.

Purpose: Acquisition by the applicant of higher education of knowledge and the formation of elements of professional competences in the field of pediatrics and improvement of skills and competences acquired during the study of previous disciplines:

Topic 1. Integrated management of childhood diseases

Strategy of Integrated management of childhood diseases and its purpose. General signs of danger of the child's condition. Assessment, classification, treatment, consultation and follow-up for cough, difficulty breathing, diarrhea, ear problems, sore throat, fever, nutritional disorders and anemia, in the presence of HIV infection in children aged 2 months to 5 years. Assessment, classification, treatment, consultation and follow-up in children under 2 months of age with jaundice, diarrhoea, feeding problems and low body weight, severe disease and local bacterial infection, need for classification for HIV infection, immunization status and appointment vitamin D.

Topic 2. Urgent conditions in children, including those caused by external factors in children.

Anaphylactic shock in children. Definition, causes, clinical manifestations, diagnosis, emergency care, prevention. Acute urticaria and angioedema in children. Causes, classification, diagnosis, differential diagnosis, treatment. Emergency care for angioedema in life-threatening areas in children. Clinical signs, diagnosis, emergency care for emergency conditions caused by the action of external factors in children (foreign body entry into the respiratory tract, insect bites, snake bites, electric shock, burns, poisoning with drugs, household chemicals).

Topic 3. Medical observation of children in the first three years of life in a polyclinic. The procedure for mandatory preventive examinations of a child under the age of three. Rational feeding and nutrition of a child under the age of three. Assessment of problems of natural feeding in the context of Integrated management of childhood diseases. Assessment of physical and psychomotor development of a child up to three years of age. Tactics of a general practitioner in case of physical and neuropsychological development disorders of children in the first three years of life. Principles of effective counseling. Differential diagnosis and prevention of the most common deficiency conditions (rickets, iron deficiency anemia, protein-energy deficiency) in young children. Peculiarities of observation of premature children and those born with low birth weight. Preventive vaccinations for

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics children under three years of age.

Topic 4. Differential diagnosis of jaundice in newborn children. Perinatal lesions of the central nervous system in children. Dispensary observation of children with perinatal pathology of the central nervous system.

Clinical variants and complications of the course of jaundice in newborns at the polyclinic stage of observation. Data of laboratory and instrumental studies in the diagnosis of hemolytic, conjugation, parenchymatous and mechanical jaundice in newborns. Differential diagnosis of jaundice in newborns. Tactics of management of newborns with manifestations of jaundice in the ward in the context of integrated management of childhood diseases.

Leading clinical symptoms and syndromes in children with perinatal pathology of the nervous system. Data of laboratory and instrumental studies in perinatal lesions of the nervous system in children. Differential diagnosis of perinatal CNS lesions in infants. Tactics of managing children with perinatal lesions of the central nervous system in polyclinic conditions. Emergency care for convulsions in children according to the algorithm of the Integrated management of childhood diseases.

Topic 5. Pallor in children. Differential diagnosis. Tactics of the doctor. Emergency care for bleeding. Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Pallor in children: a problem-oriented approach in pediatrics. Differential diagnosis of diseases and conditions accompanied by pallor in children. Treatment of diseases and conditions that are accompanied by pallor in children. Emergency care for acute bleeding. Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Indications for consultation with a pediatric hematologist. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Topic 6. Peculiarities of medical monitoring of adolescent children. Differential diagnosis of arterial hypertension. Emergency care for hypertension and hypotension in adolescents.

The procedure for mandatory preventive medical examinations of adolescent children. Rational nutrition: prevention of obesity, diabetes. Assessment of puberty. Medical and psychological counseling. Tactics of a general practitioner in arterial hypo- and hypertension. Differential diagnosis of primary and secondary arterial hypertension in adolescent children. Tactics of managing a patient with arterial hypo- and hypertension in outpatient conditions. Provision of emergency care for syncopal states and hypertensive crisis. Prevention of arterial hypo- and hypertension in children. Dispensary observation.

Basic concepts:

Topic 1. Integrated management of childhood diseases

Strategy of Integrated management of childhood diseases and its purpose. General signs of danger of the child's condition. Assessment, classification, treatment, consultation and follow-up for cough, difficulty breathing, diarrhea, ear problems, sore throat, fever, nutritional disorders and anemia, in the presence of HIV infection in children aged 2 months to 5 years. Assessment, classification, treatment, consultation and follow-up in children under 2 months of age with jaundice, diarrhoea, feeding problems and low body weight, severe disease and local bacterial infection, need for classification for HIV infection, immunization status and appointment vitamin D.

Topic 2. Urgent conditions in children, including those caused by external factors in children.

Anaphylactic shock in children. Definition, causes, clinical manifestations, diagnosis, emergency care, prevention. Acute urticaria and angioedema in children. Causes, classification, diagnosis, differential diagnosis, treatment. Emergency care for angioedema in life-threatening areas in children. Clinical signs, diagnosis, emergency care for emergency conditions caused by the action of external factors in children (foreign body entry into the respiratory tract, insect bites, snake bites, electric shock, burns, poisoning with drugs, household chemicals).

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics

Topic 3. Medical observation of children in the first three years of life in a polyclinic.

The procedure for mandatory preventive examinations of a child under the age of three. Rational feeding and nutrition of a child under the age of three. Assessment of problems of natural feeding in the context of Integrated management of childhood diseases. Assessment of physical and psychomotor development of a child up to three years of age. Tactics of a general practitioner in case of physical and neuropsychological development disorders of children in the first three years of life. Principles of effective counseling. Differential diagnosis and prevention of the most common deficiency conditions (rickets, iron deficiency anemia, protein-energy deficiency) in young children. Peculiarities of observation of premature children and those born with low birth weight. Preventive vaccinations for children under three years of age.

Topic 4. Differential diagnosis of jaundice in newborn children. Perinatal lesions of the central nervous system in children. Dispensary observation of children with perinatal pathology of the central nervous system.

Clinical variants and complications of the course of jaundice in newborns at the polyclinic stage of observation. Data of laboratory and instrumental studies in the diagnosis of hemolytic, conjugation, parenchymatous and mechanical jaundice in newborns. Tactics of management of newborns with manifestations of jaundice in the ward in the context of Integrated management of childhood diseases. Leading clinical symptoms and syndromes in children with perinatal pathology of the nervous system. Data of laboratory and instrumental studies in perinatal lesions of the nervous system in children. Differential diagnosis of perinatal CNS lesions in infants. Tactics of managing children with perinatal lesions of the central nervous system in polyclinic conditions. Emergency care for convulsions in children according to the algorithm of the Integrated management of childhood diseases.

Topic 5. Pallor in children. Differential diagnosis. Tactics of the doctor. Emergency care for bleeding. Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Pallor in children: a problem-oriented approach in pediatrics. Differential diagnosis of diseases and conditions accompanied by pallor in children. Treatment of diseases and conditions that are accompanied by pallor in children. Emergency care for acute bleeding.

Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Indications for consultation with a pediatric hematologist. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Topic 6. Peculiarities of medical monitoring of adolescent children. Differential diagnosis of arterial hypertension. Emergency care for hypertension and hypotension in adolescents.

The procedure for mandatory preventive medical examinations of adolescent children. Rational nutrition: prevention of obesity, diabetes. Assessment of puberty. Medical and psychological counseling. Assessment of the degree of arterial hypertension according to centile tables taking into account the centile assessment of height. Tactics of a general practitioner in arterial hypo- and hypertension. Differential diagnosis of primary and secondary arterial hypertension in adolescent children. Tactics of managing a patient with arterial hypo- and hypertension in outpatient conditions. Provision of emergency care for syncopal states and hypertensive crisis. Prevention of arterial hypo- and hypertension in children. Dispensary observation.

Equipment: multimedia presentation on the topic of the lesson, laptop. A patient according to the topic of the lesson (if available).

The duration of each lesson is 2 hours.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge:

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Topic 1. Integrated management of childhood diseases.

Strategy of Integrated management of childhood diseases and its purpose. General signs of danger of the child's condition. Assessment, classification, treatment, consultation and follow-up for cough, difficulty breathing, diarrhea, ear problems, sore throat, fever, nutritional disorders and anemia, in the presence of HIV infection in children aged 2 months to 5 years. Assessment, classification, treatment, consultation and follow-up in children under 2 months of age with jaundice, diarrhoea, feeding problems and low body weight, severe disease and local bacterial infection, need for classification for HIV infection, immunization status and appointment vitamin D

Topic 2. Urgent conditions in children, including those caused by external factors in children.

Anaphylactic shock in children. Definition, causes, clinical manifestations, diagnosis, emergency care, prevention. Acute urticaria and angioedema in children. Causes, classification, diagnosis, differential diagnosis, treatment. Emergency care for angioedema in life-threatening areas in children. Clinical signs, diagnosis, emergency care for emergency conditions caused by the action of external factors in children (entry of a foreign body into the respiratory tract, insect bites, snake bites, electric shock, burns, poisoning with drugs, household chemicals).

Topic 3. Medical observation of children of the first three years of life in a polyclinic.

The procedure for mandatory preventive examinations of a child under the age of three. Rational feeding and nutrition of a child under the age of three. Assessment of problems of natural feeding in the context of Integrated management of childhood diseases. Assessment of physical and psychomotor development of a child up to three years of age. Tactics of a general practitioner in case of physical and neuropsychological development disorders of children in the first three years of life. Principles of effective counseling. Differential diagnosis and prevention of the most common deficiency conditions (rickets, iron deficiency anemia, protein-energy deficiency) in young children. Peculiarities of observation of premature children and those born with low birth weight. Preventive vaccinations for children under three years of age.

Topic 4. Differential diagnosis of jaundice in newborn children. Perinatal lesions of the central nervous system in children. Dispensary observation of children with perinatal pathology of the central nervous system.

Clinical variants and complications of the course of jaundice in newborns at the polyclinic stage of observation. Data of laboratory and instrumental studies in the diagnosis of hemolytic, conjugation, parenchymal and mechanical jaundice in newborns. Differential diagnosis of jaundice in newborns. Tactics of management of newborns with manifestations of jaundice in the ward in the context of integrated management of childhood diseases.

Leading clinical symptoms and syndromes in children with perinatal pathology of the nervous system. Data of laboratory and instrumental studies in perinatal lesions of the nervous system in children. Differential diagnosis of perinatal CNS lesions in infants. Tactics of managing children with perinatal lesions of the central nervous system in polyclinic conditions. Emergency care for convulsions in children according to the algorithm of the Integrated management of childhood diseases.

Topic 5. Pallor in children. Differential diagnosis. Tactics of the doctor. Emergency care for bleeding. Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Pallor in children: a problem-oriented approach in pediatrics. Differential diagnosis of diseases and conditions accompanied by pallor in children. Treatment of diseases and conditions that are accompanied by pallor in children. Emergency care for acute bleeding. Lymphadenopathy in children. Differential diagnosis. Tactics of the doctor. Indications for consultation with a pediatric hematologist. Hepatomegaly in children. Differential diagnosis. Tactics of the doctor. Splenomegaly in children. Differential diagnosis. Tactics of the doctor.

Topic 6. Peculiarities of medical monitoring of adolescent children. Differential diagnosis of

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics **arterial hypertension. Emergency care for hypertension and hypotension in adolescents.**

The procedure for mandatory preventive medical examinations of adolescent children. Rational nutrition: prevention of obesity, diabetes. Assessment of puberty. Medical and psychological counseling. Assessment of the degree of arterial hypertension according to centile tables taking into account the centile assessment of height. Tactics of a general practitioner in arterial hypo- and hypertension. Differential diagnosis of primary and secondary arterial hypertension in adolescent children. Tactics of managing a patient with arterial hypo- and hypertension in outpatient conditions. Provision of emergency care for syncopal states and hypertensive crisis. Prevention of arterial hypo- and hypertension in children. Dispensary observation

3. Formation of professional skills, skills (mastery of communication skills, clinical examination, determination of treatment scheme, laboratory research, etc.) mastery of skills:

1. Survey, examination and clinical examination of the patient.
2. Assessment of the child's physical development according to sigma and centile nomograms.
3. Evaluation of the child's neuropsychological development.
4. Calculation and compilation of the child's nutrition list.
5. Providing assistance in emergency situations in children.
6. Palpation of the skin, subcutaneous tissue, soft tissues, abdomen, blood vessels.
7. Percussion of lungs, heart, stomach.
8. Auscultation of lungs, heart, stomach.
9. Measurement of arterial pressure on the upper and lower extremities with assessment according to centile nomograms, according to height.
10. Assessment of the degree of arterial hypertension according to centile tables, taking into account the centile assessment of height.
11. Determination of pulse characteristics and frequency.
12. Assessment of the state of consciousness.
13. Evaluation of laboratory research data (general blood analysis, general urine analysis, liver tests, indicators of hemostasis, blood glucose, oxygen saturation, blood proteins).
14. Possession of patronage skills in children.
15. Diagnosis of the most common diseases in children.
16. Provision of emergency care for the main critical conditions in children.
17. The ability to determine the tactics of prevention of infectious diseases in children.
18. Skills of organizing preventive vaccinations in children.
19. Solving clinical situational problems, practicing patient examination skills, demonstrating and practicing the skills of performing manipulations according to list 5, instruction and practicing skills on simulation dummies, training exercises on the diagnosis of the most common emergency conditions in children.

4. Summary: testing, structured exam (at the end of the module).

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Nelson Textbook of Pediatrics, 2-Volume Set, 22nd Edition, 2024. Robert M. Kliegman, Joseph W. St. Geme III, Nathan J. Blum, et al.
2. Nelson Textbook of Pediatrics / R. M. Kliegman [et al.]; ed. R. E. Behrman. - 21th ed. - Edinburgh [etc.]: Elsevier, 2020. - Vol. 1. - LXXV.
3. Nelson Textbook of Pediatrics [Text] / R. M. Kliegman [et al.]; ed. R. E. Behrman. - 21th ed. - Edinburgh [etc.]: Elsevier, 2020. - Vol. 2. - LXXV.
4. Nelson textbook of pediatrics, 2 volume set. Edition: 21st, PDF format. <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/> - 2019.

Additional:

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics

1. **Integrated management of childhood illness** <https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/child-health/integrated-management-of-childhood-illness>
2. Aryayev M., Senkivska L., Lowe J.B. Psycho-Emotional and Behavioral Problems in Children With Growth Hormone Deficiency. *Front. Pediatr.* 2021. 9:707648. doi: 10.3389/fped.2021.707648
3. Biryukov V., Orlova A., Sabzalieva E. Risk assessment of drug interactions in polypharmacy in children/The XVII International Scientific and Practical Conference «Multidisciplinary academic notes. Theory, methodology and practice», May 03 – 06, 2022, Tokyo, Japan. P.414-420. DOI – 10.46299/ISG.2022.1.17 Approach to a child with bleeding in the emergency room (2013 URL: <https://pubmed.ncbi.nlm.nih.gov/23269640/>)
4. Senkivska L, Aryayev M. Compliance and barriers to growth hormone therapy in children. *Pediatrics Polska - Polish Journal of Paediatrics.* 2021. № 96(3). P. 181-184. <https://doi.org/10.5114/polp.2021.109303>
5. Pediatric Dilated Cardiomyopathy (2019) URL: <https://emedicine.medscape.com/article/895187-overview>
6. Congenital heart defects in children (2021) URL: <https://www.mayoclinic.org/diseases-conditions/congenital-heart-defects-children/diagnosis-treatment/drc-20350080>
7. Stop the Bleed Training: Rescuer Skills, Knowledge, and Attitudes of Hemorrhage Control Techniques (2020) URL: <https://pubmed.ncbi.nlm.nih.gov/31525629/>
8. How to stop bleeding URL: <https://theprepared.com/survival-skills/guides/stop-bleeding/>
9. Acquired Heart Conditions in Children (2022) URL: <https://www.ohsu.edu/doernbecher/acquired-heart-conditions-children>

Electronic information resources

1. <http://moz.gov.ua> – Міністерство охорони здоров'я України
2. www.ama-assn.org – Американська медична асоціація / American Medical Association
3. www.oapn.od.ua – ГО "Одеська Асоціація лікарів-педіатрів та неонатологів"
4. www.who.int – Всесвітня організація охорони здоров'я
5. www.dec.gov.ua/mtd/home/ - Державний експертний центр МОЗ України
6. <http://bma.org.uk> – Британська медична асоціація
7. www.gmc-uk.org - General Medical Council (GMC)
8. www.bundesaerztekammer.de – Німецька медична асоціація
9. https://www.who.int/workforcealliance/members_partners/member_list/ipa/en/ - Міжнародна асоціація педіатрів / International Pediatric Association (IPA).
10. https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24_05_22_WMS.pdf GINA Global Initiative For Asthma. 2024
11. https://kdigo.org/wp-content/uploads/2017/02/KDIGO-2021-Glomerular-Diseases-Guideline_English_LN-2024-Update.pdf KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases
12. <https://aamsmedacademy.com/> American Academy of Medical Sciences (AAMS)
13. <https://nam.edu/> The National Academy of Medicine (NAM)
14. <https://cutt.ly/utqqt7I> Підручник Нельсона з педіатрії - електронна книга Elsevier на VitalSource, 21-ше видання
15. <https://www.amazon.com/Averys-Neonatology-Pathophysiology-Management-Pathophysiology/dp/1451192681>

Methodical recommendations for a practical class in the educational component "Pediatrics" of the educational and professional program "Medicine" of the ONMedU of the department of Pediatrics