

MINISTRY OF HEALTH PROTECTION OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Faculty of international
(faculty name)

Department of Pediatrics
(name of department)

APPROVED

Vice-rector for scientific and pedagogical work
Eduard BURIACHKIVSKYI

" 01 " 09 2024

METHODOLOGICAL RECOMMENDATION
FOR THE PRACTICAL LESSONS
OF PRACTICE

Faculty of international, course 5 _____

INDUSTRIAL POLYCLINIC MEDICAL PRACTICE, "PEDIATRICS" _____
(name of academic component)

Approved:

The meeting of the department of Pediatrics _____
Odesa National Medical University

Protocol No. 1 of "29" 08 2024

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

2024

Перезатверджено:

Засідання кафедри педіатрії

Одеський національний медичний університет

Протокол № 1 від 26 08 2025 р.

Завідувач кафедри  Микола АРЯЄВ

Methodological recommendations for the practical lesson of the Industrial policlinic medical practice, Pediatrics, educational and professional program Medicine, ONMedU, Department of Pediatrics

Developers:

(indicate surnames, scientific degrees, scientific titles and positions of developers; everyone who teaches the specified academic discipline must be among the developers)
___Prof. Mykola ARYAYEV, PhD, associate professor Viktor BIRYUKOV, PhD, associate professor Maxim FEDIN, PhD, PhD, associate professor Larysa KAPLINA, PhD, associate professor Lyudmila SENKIVSKA, associate professor Roman PAPINKO, PhD, Doctor of Philosophy associate professor Daria KOLOMIETS, assistant PhD, Vera KOROPETS, assistant Liubov BRATKOVA.

Note. In the case of publication of methodological developments as an independent printed 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.

PRACTICAL LESSONS

Practical lesson No. 1,2,3

Topic 1: Basic emergency conditions in children (convulsive and hyperthermic syndromes, bronchospasm, asthmatic status, acute heart failure, pulmonary edema, ketoacidotic coma, hypoglycemic coma, acute liver failure, infectious-toxic shock, acute adrenal insufficiency, bleeding, collapse, complications of drug therapy: urticaria, Quincke's edema, anaphylactic shock). Emergency medical assistance. Participation in conducting outpatient (polyclinic) consultations and in preparing the main documents used in the work of a family doctor.

Practical lesson No. 4,5,6

Topic 2: Assessment of the child's physical and neuropsychological development. Assessment of blood pressure indicators in children. Compiling the diet of a healthy child. Assessment of sexual development of children, girls and boys by Taner. Diagnosis of delayed and precocious puberty in children.

Practical lesson No. 7,8,9

Topic 3: Preventive vaccinations in children. Indications and contraindications for vaccination. Vaccination in case of violation of the vaccination schedule. Adverse situations and complications during vaccinations. Participation in the vaccination of children in the clinic. Participation in providing emergency care to children with adverse situations after vaccination.

Practical lesson No. 10,11,12

Topic 4: Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to newborns with feeding difficulties (maternal body position during feeding, infant position during feeding). Communication with the mother of a newborn with jaundice. Communication with the mother of a newborn with omphalitis.

Practical lesson No. 13,14,15

Topic 5: Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to children with acute ear infection, with acute (likely bacterial) tonsillopharyngitis. Communication with the mother of a child with cough or acute respiratory infection, with pneumonia, or with suspected pneumonia.

Purpose: Acquisition by the applicant of higher education of knowledge and the formation of elements of professional competences in the field of pediatrics from the

division of industrial practice:

Topic 1. Main emergency conditions in children (convulsive and hyperthermic syndromes, bronchospasm, asthmatic status, ketoacidotic coma, hypoglycemic coma, acute heart failure, acute liver failure, infectious-toxic shock, acute adrenal insufficiency, bleeding, collapse, pulmonary edema, complications drug therapy: urticaria, Quincke's edema, anaphylactic shock). Help with emergency situations in children. Participation in conducting polyclinic appointments and in the preparation of basic documents in the work of the family doctor.

Topic 2. Assessment of the child's physical and neuropsychological development. Assessment of blood pressure indicators in children. Compiling the diet of a healthy child. Assessment of sexual development of children, girls and boys by Tanner. Diagnosis of delayed and precocious puberty in children.

Topic 3. Preventive vaccinations in children. Indications and contraindications for vaccination. Vaccination in case of violation of the vaccination schedule. Adverse situations and complications during vaccinations. Participation in the vaccination of children in the clinic. Participation in providing emergency care to children with adverse situations after vaccination. Drawing up a diary and a report.

Topic 4: Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to newborns with feeding difficulties (maternal body position during feeding, infant position during feeding). Communication with the mother of a newborn with jaundice. Communication with the mother of a newborn with omphalitis.

Topic 5: Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to children with acute ear infection, with acute (likely bacterial) tonsillopharyngitis. Communication with the mother of a child with cough or acute respiratory infection, with pneumonia, or with suspected pneumonia.

Basic concepts:

Topic 1. Definition of the concept and clinic of the main emergency conditions in children (convulsive and hyperthermic syndromes, bronchospasm, asthmatic status, ketoacidotic coma, hypoglycemic coma, acute heart failure, acute liver failure, infectious-toxic shock, acute adrenal insufficiency, bleeding, collapse, pulmonary edema, complications of drug therapy: urticaria, Quincke's edema, anaphylactic shock). Determination of the principles of providing assistance in emergency situations in

children.

Topic 2. Rules for assessing the child's physical and neuropsychological development. Algorithm for assessing blood pressure indicators in children. Algorithm for drawing up a healthy child's diet. Participation in preventive measures and examination of children with diseases of various body systems. Carrying out sanitary and educational work. Assessment of sexual development of girls and boys according to Tanner.

Topic 3. Defining the concept of preventive vaccinations in children. Determination of indications and contraindications for vaccination. Drawing up a schedule of vaccinations in case of its violation. Determination of adverse events and complications during vaccination. Taking part in the vaccination of children in the polyclinic. Participation in providing emergency care to children with adverse situations after vaccination. Drawing up a diary and a report.

Topic 4. Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to newborns with feeding difficulties (maternal body position during feeding, infant position during feeding). Communication with the mother of a newborn with jaundice. Communication with the mother of a newborn with omphalitis.

Topic 5. Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to children with acute ear infection, with acute (likely bacterial) tonsillopharyngitis. Communication with the mother of a child with cough or acute respiratory infection, with pneumonia, or with suspected pneumonia.

Equipment: maneken of a child of the first year of life, dummy for intramuscular, subcutaneous and intradermal injection, syringes, needles, antiseptic wipes, box for safe disposal, gloves. Nomograms for assessing the physical development of children from 0 to 2 years, from 2 to 5 years, from 5 to 18 years. Centile nomograms for height assessment of children from 1 to 18 years. Centile tables for assessing blood pressure in children.

Study time every 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:

Topic 1. Organization of pre-hospital and hospital care for emergency conditions in children. Diagnostic criteria for the main emergency conditions. Clinic, diagnosis and

treatment of convulsive and hyperthermic syndromes, bronchospasm, asthmatic status, ketoacidotic coma, hypoglycemic coma, acute heart failure, acute liver failure, infectious-toxic shock, acute adrenal insufficiency, bleeding, collapse, pulmonary edema, urticaria, Quincke's edema, anaphylactic shock. Features of assistance. Calculation of doses of basic pharmaceuticals in emergency care for children. Emergency medical care is a new clinical protocol.

Topic 2. The concept of physical and neuropsychological development of a child. Assessment of the physical development of first-born children according to z-score and centile nomograms. Disorders of physical development in children. Evaluation of psychomotor development of children. Differential diagnosis of psychomotor development disorders in children. Assessment of sexual development of girls and boys according to Tanner. Differential diagnosis of disorders of sexual development in children. Peculiarities of breastfeeding. Support of long-term breastfeeding. Algorithm for drawing up a healthy child's diet. Management of polyclinic appointments. Basic polyclinic documentation. Basic preventive measures. Examination of children with diseases of various body systems. Sanitary and educational work.

Topic 3. Vaccination calendar. Types of vaccines. Vaccination with mandatory and recommended vaccines. Rules for drawing up a vaccination schedule for children with a violation of the vaccination calendar. Vaccine administration technique. Rules for combining different types of vaccines for vaccination. Practicing communication skills during vaccination of children. Reasons for the development of adverse events during vaccination. Classification of adverse events. Prevention of NPIs. Tactics of the doctor when detecting adverse events during vaccination. Informed consent for vaccination.

Topic 4. Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to newborns with feeding difficulties (maternal body position during feeding, infant position during feeding). Communication with the mother of a newborn with jaundice. Communication with the mother of a newborn with omphalitis.

Topic 5. Communication skills according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to children with acute ear infection, with acute (likely bacterial) tonsillopharyngitis. Communication with the mother of a child with cough or acute respiratory infection, with pneumonia, or with suspected pneumonia.

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 z-score 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 state of consciousness.
11. Evaluation of laboratory research data (general blood analysis, general urine analysis, liver tests, indicators of hemostasis, blood glucose, oxygen saturation, blood proteins).
12. Provision of emergency care for the main critical conditions in children (bronchospasm - administration of drugs through a spacer, anaphylactic shock, convulsive syndrome, hyperthermic syndrome)
13. The ability to determine the tactics of prevention of infectious diseases in children.
14. Skills of organizing preventive vaccinations in children.
15. 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.
16. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to newborns with feeding difficulties (maternal body position during feeding).
17. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to newborns with feeding difficulties (infant position during feeding).
18. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Communication with the mother of a newborn with jaundice.
19. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Communication with the mother of a newborn with omphalitis.

20. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to children with acute ear infection.
21. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Provision of medical care to children with acute (likely bacterial) tonsillopharyngitis.
22. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Communication with the mother of a child with cough or acute respiratory infection.
23. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Communication with the mother of a child with pneumonia.
24. Communication skill according to the Integrated Management of Childhood Illness (IMCI) algorithm, hybrid patient. Communication with the mother of a child with suspected pneumonia.

Summary: differential assessment, clinical practical exam (at the end of the module).

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

Main sources:

Basic:

1. Nelson Textbook of Pediatrics / R. M. Kliegman [et al.] ; ed. R. E. Behrman. 21th ed. - Edinburgh [etc.] : Elsevier, 2020. - Vol. 1. – LXXV.
2. Nelson textbook of pediatrics, 2 volume set. Edition: 21st, 2019. PDF format. <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>.
3. Nelson Pediatric Abx 2022 URL: <https://apps.apple.com/ru/app/nelson-pediatric-abx-2022/id1611269134>
4. Clinical Pediatrics: Textbook in 2 volumes. Vol. 2 / M. L. Aryayev, L. I. Senkivska, N. H. Lotysh et al. – Odesa: Oldi+, 2025. – 222 p.
5. Neonatology: Textbook in 3 volumes / [T. K. Znamenska, Yu. H. Antypkin, M. L. Aryayev et al.]; edited by T. K. Znamenska. – Lviv: Publisher Marchenko T.V., 2020. Vol. 1. – 407 p.; Vol. 2. – 455 p.; Vol. 3. – 379 p.

Additional sources:

1. Emergency medical aid: new clinical protocol (order of the moh of Ukraine from 06.05.2019 No. 1269).

2. Order of the Ministry of Health of Ukraine dated 09/14/2021 No. 1945 “On approval of the Unified Clinical Protocol of Primary Medical Care “Integrated Management of Childhood Diseases”.
3. Appendix to the Unified Clinical Protocol of Primary Medical Care “Integrated Management of Childhood Diseases”. 2021 https://www.dec.gov.ua/wp-content/uploads/2021/09/dodatok-do-ukpmd_ivhdv.pdf
5. Senkivska L, Aryayev M. Compliance and barriers to growth hormone therapy in children. *Pediatrica Polska - Polish Journal of Paediatrics*. 2021;96(3). – С.181-184. DOI: <https://doi.org/10.5114/polp.2021.109303>
5. Feeding Guidelines for Infants and Young Toddlers: A Responsive Parenting Approach February 2017
6. Annex to the Unified clinical protocol of primary health care: Integrated Management of Childhood Illness (IMCI). 2021. https://www.dec.gov.ua/wp-content/uploads/2021/09/dodatok-do-ukpmd_ivhdv.pdf

Electronic information resources:

1. <http://moz.gov.ua>– Міністерство охорони здоров'я України
2. www.ama-assn.org – Американська медична асоціація / [American Medical Association](http://www.ama-assn.org)
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://www.amazon.com/Averys-Neonatology-Pathophysiology-Management-Pathophusiology/dp/1451192681>