

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

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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.

Practical lessons

Content module №2 “Differential diagnosis of the most common respiratory diseases in children. Emergency care for major emergencies”.

Practical lesson №22-25

Topic 7. Cough and fever in children. Differential diagnosis. Tactics of the doctor. Differential diagnosis of pneumonia in children. Complications of pneumonia. Emergency care for acute respiratory failure in children.

Practical lesson №26-29

Topic 8. Differential diagnosis of bronchial obstruction syndrome in children. Emergency care for a severe attack of bronchial asthma in children.

Practical lesson №30-33

Topic 9. Differential diagnosis of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.

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 pulmonology department.

Topic 7. Differential diagnosis of pneumonia in children. Complications of pneumonia. Emergency care for acute respiratory failure in children.

Topic 8. Differential diagnosis of bronchial obstruction syndrome in children. Emergency care for a severe attack of bronchial asthma in children.

Topic 9. Differential diagnosis of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.

Basic concepts:

Topic 7. Leading clinical symptoms and syndromes, data of laboratory and instrumental studies in various clinical variants of pneumonia and its complications in children. Differential diagnosis of pneumonia in children. Establishing a preliminary diagnosis. Tactics of patient management in different clinical variants of the course of pneumonia and its complications. Emergency care for acute respiratory failure depending on the cause and degree of severity. Management of pneumonia in children in the context of Integrated management of childhood diseases. Prevention of pneumonia and its complications in children.

Topic 8. Leading clinical symptoms and syndromes in bronchial asthma, bronchiolitis and acute obstructive bronchitis in children. Data of laboratory and instrumental studies in bronchial asthma, bronchiolitis and acute obstructive bronchitis in children. Peculiarities of the course of bronchial asthma in children depending on the degree of severity and level of control. Differential diagnosis of bronchial obstruction syndrome in children of different ages. Establishing a preliminary diagnosis. Patient management tactics for various clinical variants of the course of broncho-obstructive syndrome and its complications in children. Emergency care for a severe attack of bronchial asthma. Helping children with bronchial obstruction syndrome according to the Integrated Management of Childhood Diseases system. Prevention of bronchial asthma and bronchial obstruction syndrome in children of different ages. Dispensary observation. Communication with the child in order to determine the probability of development of bronchial asthma in the child.

Topic 9. Leading clinical symptoms and syndromes in hereditary and congenital diseases of the bronchopulmonary system (cystic fibrosis, idiopathic hemosiderosis of the lungs, primary ciliary dyskinesia, Wilms-Campbell syndrome, bronchomalacia, aplasia and hypoplasia and instrumental studies in hereditary and congenital diseases of the bronchopulmonary system and their complications. Differential diagnosis of hereditary and Congenital diseases of the bronchopulmonary system and their complications in children.

Differential diagnosis of chronic diseases of the bronchopulmonary system in children.

Leading clinical symptoms and syndromes in chronic bronchitis, bronchiectasis, in children. Data of laboratory and instrumental studies in chronic bronchitis, bronchiectasis, and their complications. Differential diagnosis of chronic diseases of the bronchopulmonary system and their complications in children. Patient management tactics for chronic diseases of the bronchopulmonary system and their complications in children. Prevention of chronic diseases of the bronchopulmonary system in children. Dispensary observation.

Equipment: a child's mannequin, a patient according to the subject of the lesson.

The duration of each lesson is 2 hours.

Plan

1. Organizational moment (greetings, checking the audience, the message of the topic, the purpose of the lesson, the motivation of applicants of higher education to study the topic).

2. Control of basic knowledge:

Topic 7. Leading clinical symptoms and syndromes, data of laboratory and instrumental studies in various clinical variants of pneumonia and its complications in children. Differential diagnosis of pneumonia in children. Establishing a preliminary diagnosis. Tactics of patient management in different clinical variants of the course of pneumonia and its complications. Emergency care for acute respiratory failure depending on the cause and degree of severity. Management of pneumonia in children in the context of Integrated management of childhood diseases. Prevention of pneumonia and its complications in children.

Topic 8. Leading clinical symptoms and syndromes in bronchial asthma, bronchiolitis and acute obstructive bronchitis in children. Data of laboratory and instrumental studies in bronchial asthma, bronchiolitis and acute obstructive bronchitis in children. Peculiarities of the course of bronchial asthma in children depending on the degree of severity and level of control. Differential diagnosis of bronchial obstruction syndrome in children of different ages. Establishing a preliminary diagnosis. Patient management tactics for various clinical variants of the course of broncho-obstructive syndrome and its complications in children. Emergency care for a severe attack of bronchial asthma. Helping children with bronchial obstruction syndrome according to the Integrated Management of Childhood Diseases system. Prevention of bronchial asthma and bronchial obstruction syndrome in children of different ages. Dispensary observation. Communication with the child in order to determine the probability of development of bronchial asthma in the child.

Topic 9. Leading clinical symptoms and syndromes in hereditary and congenital diseases of the bronchopulmonary system (cystic fibrosis, idiopathic hemosiderosis of the lungs, primary ciliary dyskinesia, Wilms-Campbell syndrome, bronchomalacia, aplasia and hypoplasia and instrumental studies in hereditary and congenital diseases of the bronchopulmonary system and their complications. Differential diagnosis of hereditary and Congenital diseases of the bronchopulmonary system and their complications in children.

Differential diagnosis of chronic diseases of the bronchopulmonary system in children.

Leading clinical symptoms and syndromes in chronic bronchitis, bronchiectasis, in children. Data of laboratory and instrumental studies in chronic bronchitis, bronchiectasis, and their complications. Differential diagnosis of chronic diseases of the bronchopulmonary system and their complications in children. Patient management tactics for chronic diseases of the bronchopulmonary system and their complications in children. Prevention of chronic diseases of the bronchopulmonary system in children. Dispensary observation.

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

1. Survey, collection of complaints, data of the life history and illness, physical examination of patients with pneumonia.
2. Providing emergency care for acute respiratory failure in children.
3. Survey, collection of complaints, data of the life history and illness, physical examination of patients with bronchial obstruction syndrome in children.
4. Providing emergency care for a severe attack of bronchial asthma in children.

5. Survey, collection of complaints, data of the life history and illness, physical examination of patients with hereditary diseases of the bronchopulmonary system in children.
6. Survey, collection of complaints, data of the life history and illness, physical examination of patients with congenital diseases of the bronchopulmonary system in children.
7. Survey, collection of complaints, data of the life history and illness, physical examination of patients with chronic diseases of the bronchopulmonary system in children.
8. Assessment of laboratory and instrumental research data necessary for diagnosis and differential diagnosis of pneumonia, bronchial obstruction syndrome, hereditary, congenital and chronic diseases of the bronchopulmonary system in children.
15. Solving clinical situational tasks, role-playing games, practicing patient examination skills, demonstrating and practicing the skills of performing manipulations, instruction and practicing skills on simulation dummies, training exercises on the diagnosis of the most common pulmonological diseases in children.

4. Summary: testing, structured exam.

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

Basic literature

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, 2019. PDF format.
<http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>
5. Nelson Textbook of Pediatrics. Expert Consult Premium Edition. Enhanced Online Features and Print 19th Edition ISBN-13: 978-1437707557
https://www.amazon.com/s?i=stripbooks&rh=p_27%3ARobert+M.+Kliegman+MD&s=relevancera nk&text=Robert+M.+Kliegman+MD&ref=dp_byline_sr_book_1

Additional literature

1. Chang A.B., Marchant J.M. Approach to chronic cough in children. - Literature review: Nov 18, 2020.
https://www.uptodate.com/contents/approach-to-chronic-cough-in-children?search=chronic%20cough%20in%20children&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1
2. Diagnosis and treatment of bronchial asthma in children aged 5 years and younger: Global Initiative for Asthma - GINA, review 2019.
3. Usenko D.V. The efficacy of high-frequency chest wall oscillation in children with community-acquired pneumonia // *Fundamentalis scientiam*. 2018. Vol.1. No.19. P. 29–33. Режим доступу: <http://fundamentalis-scientiam.com/>
4. Usenko D.V., Shevchenko I.M., Kaplina L.E. High-frequency chest wall oscillation modes in the treatment of children suffering from the community-acquired pneumonia // *Colloquium-journal* #12(36), 2019 / Medical sciences. 54 – 59. Режим доступу: <http://www.colloquium-journal.org/ru/>

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>