

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
EDUCATIONAL INSTITUTION
BELARUSIAN STATE MEDICAL UNIVERSITY

Контрольный
экземпляр



APPROVED

by First Vice-Rector, Professor

I.N.Moroz

27.06.2023

Reg. # UD-091-25/23edu.

PEDIATRICS

Curriculum of educational institution
in the educational discipline for the specialty:

1-79 01 07 «Dentistry»

Curriculum is based on the educational program «Pediatrics», approved 27.06.2023, registration # УД-091-25/2324/уч.; on the educational plan in the specialty 1-79 01 07 «Dentistry», approved 17.05.2023, registration # 7-07-0911-03/2324/mf.

COMPILERS:

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O.N.Volkova, Associate Professor of the Department of Propedeutics of Childhood Diseases, Educational Institution «Belarusian State Medical University», MD, PhD, Associate Professor

RECOMMENDED FOR APPROVAL:

by the Department (name) of the educational institution «Belarusian State Medical University»
(protocol # 12 of 19.05.2023);

by the Scientific and Methodological Council of the educational institution «Belarusian State Medical University»
(protocol # 6 of 27.06.2023)

EXPLANATORY NOTE

«Pediatrics» is an academic discipline of the module «General Clinical Therapy Module # 1» that reflects current scientific data on the etiology, pathogenesis, clinical features, diagnosis, treatment and prevention of diseases in children.

Study of an academic discipline «Pediatrics» allows dentists to master the latest knowledge of the most common childhood diseases, to properly assess the clinical situation and to provide adequate medical care.

The aim of studying the discipline «Pediatrics» is to contribute to the formation of basic professional competencies for the use of scientific knowledge about modern mechanisms of the disease development, clinical features, diagnostic methods and treatment of childhood diseases in professional activities.

The objective of the discipline is to developing students' scientific knowledge about:

- goals, objectives, structure and organization of medical care for children in the Republic of Belarus;

- basic anatomical and physiological characteristics of organs and systems of the child's body at different ages;

- causes, mechanisms, risk factors of typical symptoms and syndromes of the studied diseases;

- clinical manifestations of common childhood diseases;

- factors, affecting the health of children and adolescents;

- basic diagnostic methods, principles of treatment, prevention of diseases in children;

- etiology and pathogenesis of the main nosological diseases in children and adolescents.

- skills and abilities required for:

- methods of examination of a child;

- assessment of the child's objective status;

- interpretation of the results of laboratory and instrumental research methods;

- providing medical care in emergency situations.

The knowledge, abilities, skills acquired in the study of the academic discipline «Pediatrics» are necessary for the successful study of the following academic disciplines: «Infectious Diseases», «Dermatovenereology», «Clinical Pharmacology», «Obstetrics and Gynecology», «Otorhinolaryngology».

A student who has mastered the content of the educational material of the academic discipline should have the following basic professional competency: use knowledge about etiology and pathogenesis, clinical manifestations, complications, diagnostic methods and differential diagnosis, apply the principles of treatment and prevention for diseases in children, provide medical care for emergency conditions.

As a result of studying the discipline «Pediatrics» the student should

know:

- goals, objectives, structure and organization of medical care in outpatient and inpatient institutions for children and adolescents in the Republic of Belarus;

- anatomical and physiological features of children's organs and systems;

etiology, pathogenesis, classification, clinical manifestation, methods of treatment in accordance with clinical protocols for the most common diseases in children and adolescents,

basic principles of prevention of the most common diseases in children and adolescents;

medical rehabilitation methods on an outpatient basis.

be able to:

collect and analyze the data of the history of the disease;

assess the child's objective status;

conduct a physical examination of the child;

assess the functional capabilities of the child's body;

evaluate and carry out the clinical interpretation of the results of the most common clinical and laboratory tests in pediatrics;

provide the first aid for the urgent conditions;

master:

perform physical examination of a child;

provide medical care in emergency situations in children.

Total number of hours for the study of the discipline is 108 academic hours. Classroom hours according to the types of studies: lectures - 18 hours (including 6 hours of supervised student independent work), practical classes - 25 hours, student independent work (self-study) - 65 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit 5 semester).

Form of higher education – full-time.

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name of the speciality	semester	Number of academic hours						Form of intermediate assessment
		total	in-class	including			out-of-class self-studies	
				lectures (including supervised independent work)	supervised student independent work	practical classes		
1-79 01 07 «Dentistry»	5	108	43	18	6	25	65	credit

THEMATIC PLAN

Name of section (topic)	Number of class hours	
	lectures (incl. GIW)	practical
1. Organization of medical care for children in the Republic of Belarus	1	-
2. Anatomical and physiological features of organs and systems in children	1	-
3. Early infant feeding	2	3
4. Mineral metabolism disorders in children. Rickets, spasmophilia, hypervitaminosis of Vitamin D	2	-
5. Respiratory diseases in children	2	6
5.1. Acute respiratory infections. Acute bronchitis in children	1	3
5.2. Acute pneumonia in children. Acute respiratory failure	1	3
6. Allergic diseases in children	2	3
7. Cardiovascular diseases in children	2	3
8. Gastrointestinal tract diseases in children	2	3
9. Kidney and urinary tract diseases in children	2	3
10. Anemia in children	1	4
11. Emergency care in children	1	-
Total hours	18	25

CONTENT OF THE EDUCATIONAL MATERIAL

1. Organization of medical care for children in the Republic of Belarus

Structure and organization of medical care for the children's population in the Republic of Belarus (outpatient clinics and hospital healthcare organizations: district level - central district hospital; interdistrict level - consultative and diagnostic departments at hospital and polyclinic organizations in large district cities; regional level - regional children's hospitals, consultative diagnostic centers, prophylactic and rehabilitation centers; republican level - pediatric clinics (departments) of specialized republican scientific and practical centers, including «Mother and Child», republican hospitals and rehabilitation centers. General, sanatorium-type and specialized educational institutions, summer children's health institutions, children's health centers, sanatoriums.

The main regulatory legal acts guaranteeing the rights of the child: the Constitution of the Republic of Belarus, laws of the Republic of Belarus on public health, child's right law, Codex on Marriage and Family. Main tasks, areas of work, medical documentation. Hand hygiene.

2. Anatomical and physiological features of organs and systems in children

Basic ideas on the anatomical and physiological characteristics (APC) of the respiratory, circulatory, digestive, urinary and hematopoietic systems in children at different age periods. The relationship between some anatomical and physiological characteristics of children and the course of pathological processes in the child.

3. Early infant nutrition

Changes in the breast milk content: colostrum and mature milk, their characteristics.

Breastfeeding. Advantages. Main breastfeeding techniques.

Diet of lactating women. Specialized food products for nursing women.

Vitamins and minerals.

Hypogalactia. Types. Causes of secondary hypogalactia. Recommendations for a nursing mother.

Physiological engorgement of the mammary gland. Blockage of the milk duct. Clinical manifestations, recommendations.

Weaning. Types, rules and timing of introduction. Mixed and artificial feeding. Types of infant formulas. Rules for mixed and artificial feeding. Infant feeding regimen.

4. Mineral metabolism disorders in children. Rickets, spasmophilia, hypervitaminosis of vitamin D

The role of vitamin D in the human's body.

Rickets: etiological and predisposing factors, clinical features, laboratory diagnostic criteria, treatment. Antenatal and postnatal prophylaxis.

Hypervitaminosis of vitamin D: etiological and predisposing factors, clinical features, treatment, prophylaxis.

Spasmophilia: etiology, pathogenesis, clinical features, laboratory diagnostic criteria emergency care, prophylaxis.

5. Respiratory diseases in children

5.1. Acute respiratory infections. Acute bronchitis in children

Acute respiratory infections: etiology, pathogenesis, clinical manifestations, principles of treatment, prevention.

Examination of the oral cavity and pharynx. Inspection and palpation of the lymph nodes of the head and neck.

Acute bronchitis in children: etiology, pathogenesis, clinical manifestations, principles of treatment, prevention.

5.2 Acute pneumonia in children. Acute respiratory failure

Acute pneumonia in children: etiology, pathogenesis, clinical manifestations, principles of treatment, prevention.

Acute respiratory failure in children: etiology, pathogenesis, clinical manifestations, principles of treatment, prevention.

Interpretation of a general blood count test. Auscultation of the lungs.

6. Allergic diseases in children

Food allergy. Atopic dermatitis: etiology, pathogenesis, clinical manifestations, principles of treatment, prevention.

Bronchial asthma in children: etiology, pathogenesis, classification, clinical course of bronchial asthma depending on the period of the disease, principles of treatment depending on the severity and period of the disease.

Allergic rhinitis: etiology, pathogenesis, clinical manifestations, principles of treatment, prevention.

Acute pneumonia in children: etiology, clinical manifestations, principles of treatment, prevention.

Interpretation of a general blood count test.

Interpretation of a biochemical blood count test.

7. Cardiovascular diseases in children

Acute rheumatic fever in children: etiology, pathogenesis, clinical picture. The value of x-ray examination of the heart, electrocardiogram data and ultrasound examination in the diagnosis of acute rheumatic fever in children. Complications, principles of treatment, prognosis. Prevention of acute rheumatic fever in children.

Congenital heart defects in children: etiology, classification, hemodynamics, clinical manifestations, diagnostic methods, treatment tactics.

Acute cardiovascular failure in children.

Determination and counting of the pulse in the radial and carotid arteries. Blood pressure measurement. Registration of medical records. Auscultation of the heart. Interpretation of a general blood count test.

Interpretation of biochemical blood count test.

8. Gastrointestinal tract diseases in children

Epidemiology of gastrointestinal diseases of non-infectious etiology.

Chronic gastritis, gastric and duodenal ulcers in children: clinical features, modern diagnostic methods, principles of treatment, prevention.

Examination of the oral cavity and pharynx.

9. Kidney and urinary tract diseases in children

Acute and chronic pyelonephritis in children: etiology, pathogenesis, clinical picture, diagnostic methods, complications and outcomes, principles of treatment.

Acute glomerulonephritis in children: etiology, pathogenesis, clinical picture, diagnostic methods, principles of treatment.

Chronic glomerulonephritis in children: etiology, pathogenesis, clinical picture, diagnostic methods, principles of treatment.

Urinary tract infection: etiology, pathogenesis, clinical picture, diagnostic methods, treatment principles.

Acute and chronic renal failure in children: definition of the concept, clinical picture, diagnostic methods, principles of treatment.

Interpretation of a general blood count test.

Interpretation of biochemical blood count test.

Interpretation of general urine analysis; urine analysis according to Nechiporenko; urine analysis according to Addis-Kakovsky; urine analysis according to Zimnitsky.

10. Anemia in children

Anemia in children: definition, classification. Iron deficiency anemia: etiology, pathogenesis, clinical and hematological characteristics, principles of treatment,

prevention. Interpretation of a general blood count test. Interpretation of biochemical blood count test.

11. Emergency care in children

Hyperthermic and convulsive syndrome in children: emergency medical care.

Acute allergic reactions in children (anaphylactic shock, acute urticaria, Quincke's edema): emergency medical care, prevention.

DISCIPLINE CURRICULAR CHART OF THE EDUCATIONAL DISCIPLINE

Name of section, topic	Name of section, topic	Number of classroom hours				Student's self-study	Forms of control
		lectures (including supervised independent work)	supervised student work	Practical classes			
	5 semester						
1.	Organization of medical care for children in the Republic of Belarus	1	0,5	-	5	Interview; control reports at practical classes; electronic tests	
2.	Anatomical and physiological features of organs and systems in children	1	0,5	-	5	Interview	
3.	Early infant feeding	2	0,5	3	6	Interview; control survey; electronic tests; essay	
4.	Mineral metabolism disorders in children. Rickets, spasmophilia, hypervitaminosis of vitamin D	2	0,5	-	6	Interview; essay	
5.	Respiratory diseases in children	2	0,5	6	10	Interview; control survey; electronic tests; essay	
5.1	<i>Acute respiratory infections. Acute bronchitis in children.</i>	2	-	3	5	Interview; control survey; electronic tests; essay	
5.2	<i>Acute pneumonia in children. Acute respiratory failure</i>	2	-	3	5	Interview; control survey; electronic tests; essay	
6.	Allergic diseases in children	2	1	3	5	Interview; control survey; electronic tests; essay	
7.	Cardiovascular diseases in children	2	0,5	3	5	Interview; control survey; electronic tests; essay	

8.	Gastrointestinal tract diseases in children	2	0,5	3	5	electronic tests; essay Interview; control survey; electronic tests; essay
9.	Kidney and urinary tract diseases in children	2	0,5	3	5	Interview; control survey; electronic tests; essay
10.	Anemia in children	1	0,5	4	5	Interview; control survey; electronic tests; essay
11.	Emergency care in children	1	0,5	-	8	Interview; control survey; electronic tests; Credit
	Total number of hours	18	6	25	65	

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Педиатрия = Pediatrics : учебник / Парамонова, Нэлла Сергеевна [и др.]. - Минск : Новое знание, 2021. - 597 с.
2. Ровбуть, Т. И. Педиатрия : пособие для студ. учрежд. высшего обр., обуч. по спец. 1-79 01 01 «Лечебное дело» [на англ. яз.] = Pediatrics : the manual for the students of the faculty of international students. – Гродно : ГрГМУ, 2020. – 204 с.

Additional:

3. Козарезов С.Н. Геморрагические болезни у детей = Hemorrhagic diseases in children : учеб.-метод. пособие / Козарезов, Станислав Николаевич ; Белорус. гос. мед. ун-т, 2-я каф. дет. болезней. – Минск : БГМУ, 2023. – 20 с.
4. Spasmophilia and hypervitaminosis D : учеб.-метод. пособие. – Минск : БГМУ, 2022. – 21 с.
5. Козарезов, С. Н. Анемии у детей = Anemia in children : учеб. - метод. пособие. – Минск : БГМУ, 2021. – 20 с.
6. Козыро, И. А. Острая и хроническая почечная недостаточность (острое повреждение почки и хроническая болезнь почек) у детей = Acute and chronic renal failure (acute kidney injury and chronic kidney disease) in children. - Минск : БГМУ, 2020. - 30 с.
7. Безлер, Ж. А. Пневмония у детей = Pneumonia in children : учеб.-метод. пособие – Минск : БГМУ, 2016. – 27 с.
8. Козыро, И. А. Аритмии у детей = Cardiac arrhythmias in children учеб.-метод. пособие.- Минск : БГМУ, 2017. – 32 с.
9. Козыро, И. А. Инфекция мочевой системы у детей = Urinary trakt infection in children : учеб.-метод. пособие .- Минск : БГМУ, 2016.- 14 с.
10. Гломерулонефриты у детей = Glomerulonephritis in children : учеб.-метод. пособие / И. А. Козыро [и др.]; - Минск : БГМУ, 2017. - 20 с.
11. Безлер, Ж. А. История болезни ребенка = Pediatric history: учеб.-метод. пособие.- Минск: БГМУ, 2015. - 26 с.
12. Robert, M. Kliegman, St. Geme Nelson Textbook Josepof Pediatrics - 21th Edition.- Elsevier, 2019.- 4112 p.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allocated for independent work can be used by students to:

- preparation for lectures and practical classes;
- preparation for testing in an academic discipline;
- elaboration of topics (questions) submitted for independent study;
- preparation of thematic reports, abstracts, presentations.

Basic forms of organizing independent work:
 writing and presentation of an abstract;
 giving a report;
 studying topics and problems that are not covered in lectures and practical classes;
 computer testing;
 preparation and participation in active forms of learning.

Control of independent work can be carried out in the form of:
 test work;
 final lesson, discussion of abstracts;
 assessment of an oral answer to a question, message, report in practical classes;
 checking abstracts, written essays;
 individual conversation.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms are used to diagnose competencies:

Oral form:

interviews;
 reports at practical classes.

Written form:

control surveys.

Oral and written form:

credit.

Technical form:

electronic tests.

LIST OF AVAILABLE TEACHING METHODS

Linear (traditional) method (lecture, practical exercises).

Active (interactive) methods:

- problem-based learning PBL (Problem-Based Learning);
- team-based learning TBL (Team-Based Learning);
- case-based learning CBL (Case-Based Learning).

LIST OF PRACTICAL SKILLS

1. Examination of the oral cavity and pharynx.
2. Inspection of the skin and subcutaneous fat.
3. Inspection and palpation of the lymph nodes of the head and neck.
4. Determination and counting of the pulse in the radial and carotid arteries.
5. Interpretation of a general blood count test.
6. Interpretation of biochemical blood count test.
7. Interpretation of general urine analysis.
8. Interpretation of urine analysis according to Nechiporenko.
9. Interpretation of urine analysis according to Addis-Kakovsky.

10. Interpretation of urine analysis according to Zimnitsky.
11. Measuring blood pressure.
12. Hand hygiene.
13. Maintaining medical records.
14. Auscultation of the lungs and heart.

LIST OF EQUIPMENT USED

1. Manipulation table.
2. Container for disinfection and pre-sterilization.
3. Antiseptic (imitation).
4. Disinfectant (imitation).
5. Electronic thermometer.
6. Mechanical tonometer.
7. Pulse oximeter.
8. Disposable spatulas.
9. Pocket inhaler (imitation).
10. Spacer.

LIST OF LECTURES

5 semester

1. Organization of medical care for children in Belarus. Anatomical and physiological features of organs and systems in children.
2. Early infant feeding.
3. Mineral metabolism disorders in children. Rickets, spasmophilia, hypervitaminosis of vitamin D.
4. Respiratory diseases in children.
5. Allergic diseases in children.
6. Cardiovascular diseases in children.
7. Gastrointestinal tract diseases in children.
8. Kidney and urinary tract diseases in children.
9. Anemia in children. Emergency care in children.

LIST OF PRACTICAL CLASSES

5 semester

1. Early infant feeding.
2. Acute respiratory infections, acute bronchitis in children.
3. Acute pneumonia in children. Acute respiratory failure.
4. Allergic diseases in children.
5. Cardiovascular diseases in children.
6. Gastrointestinal tract diseases in children.
7. Kidney and urinary tract diseases in children.
8. Anemia in children.

**PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS**

Related subject name	Name of the department	Content of the suggested changes in the curriculum	Decision approved by the developer chair (date, report, number)
1. Infectious diseases	Department of the infectious diseases	No changes	19.05.2023 protocol № 12
2. Dermatovenerology	Department of skin and venereal diseases	No changes	19.05.2023 protocol № 12
3. Clinical pharmacology	Department of clinical pharmacology	No changes	19.05.2023 protocol № 12
4. Obstetrics and gynecology	Department of obstetrics and gynecology	No changes	19.05.2023 protocol № 12
5. Otorhinolaryngology	Department of Ear, Nose and Throat Diseases	No changes	19.05.2023 protocol № 12

COMPILERS/AUTHORS:

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V.V.Stroy

Associate Professor of the Department of Propedeutics of Childhood Diseases, of the Educational Institution «Belarusian State Medical University», PhD, Associate Professor

O.N.Volkova

Curriculum content, composition and the accompanying documents comply with the established requirements.

Dean of the Medical Faculty for International Students of the educational institution «Belarusian State Medical University»

25.06.23

O.S.Ishutin

Methodologist of the educational institution «Belarusian State Medical University»

25.06.23

S.V.Zaturanova