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

APPROVED by First Vice-Rector, Professor I.N.Moroz 1208. 2023 L. 03/2324 /edu. sub.

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# PEDIATRICS

Curriculum of educational institution in the educational discipline for the specialty 1-79 01 01 «General Medicine»

Sub-Residency «General Clinical Practice»

Minsk 2023

Curriculum is based on the educational program of educational institution in the educational discipline «Pediatric Infectious Diseases» for the Sub-Residency «General Clinical Practice (for foreign citizens)», approved 11.08.2023, registration  $\# \forall \Pi - \underline{L} \ o 3 / 23 \ a 4 / y \forall$ .cyб.

## **COMPILERS:**

I.A.Kazyra, Professor of the 1st Department of Pediatrics of the Educational Institution «Belarusian State Medical University», Doctor of Medical Sciences, Associate Professor;

E.K.Filipovich, Head of the 1st Department of Pediatrics of the Educational Institution «Belarusian State Medical University», Candidate of Medical Sciences, Associate Professor;

## **RECCOMENDED FOR APPROVAL:**

1st and 2nd Departments of Pediatrics of the Educational Institution «Belarusian State Medical University» (protocol # 16 of 30.06.2023);

by the Scientific Methodical Council of the Educational Institution «Belarusian State Medical University» (protocol # 7 of 10.08.2023)

## **EXPLANATORY NOTES**

«Pediatrics» – is an academic discipline containing systematized scientific knowledge about the anatomical, physiological and functional characteristics of a growing child's body, the course of diseases in children, methods of their diagnosis, treatment and prevention.

The purpose of the educational discipline «Pediatrics» of the sub-residency «General Clinical Practice (for foreign citizens)» is the formation of students' academic, social, personal and professional competencies to provide medical care to children and adolescents.

The tasks of teaching the discipline include the formation of students' scientific knowledge about the etiology, pathogenesis, pathological and pathophysiological features, clinical picture of the most common diseases in children and adolescents, rules of medical ethics and deontology in communication with a pediatric patient, skills and abilities necessary for:

establishing communication with the child and parents;

assessing the severity of the child's health condition;

prescribing examination of children and further interpretation of the results of physical, laboratory and instrumental methods of investigations;

treatment and prevention of the most common diseases in children and adolescents;

provision of emergency medical care in pediatric emergencies.

Teaching and successful learning of the academic discipline «Pediatrics» of the «General Clinical Practice (for foreign citizens)» is carried out on the basis of the knowledge and skills acquired by the student in the sections of the following academic disciplines:

Medical and biological physics. Medical devices and equipment used in pediatrics.

Medical biology and general genetics. Biological bases of human life. Heredity and variability. Biological aspects of human ecology.

Biological chemistry. Metabolism of proteins, fats, carbohydrates, microelements and vitamins in the human body. Fundamentals of molecular genetics.

Human anatomy. The structure of the human body, its constituent systems, organs, tissues, gender and age characteristics of the child's body.

Histology, cytology, embryology. Blood and lymph. Connective tissue. Epithelial tissue. Organs of hematopoiesis and immune defense (central and peripheral), structure, immunogenesis. Morphological bases of immune responses.

Normal physiology. Physiological features of organs and systems of the human body are normal. Basic principles of the formation and regulation of physiological functions.

Pathological anatomy. Morphological changes in organs and tissues of the human body in various diseases.

Pathological physiology. General patterns of occurrence and mechanisms of development of pathological processes, mechanisms of compensation for dysfunctions and structures of various organs and systems of the human body. Pharmacology. Principles of pharmacodynamics and pharmacokinetics of drugs. Factors that determine therapeutic efficacy, side effects and toxicity of drugs.

Propaedeutic of internal diseases. Physical examination of the patient, basic principles of diagnostics of diseases of internal organs.

Surgical diseases. Differential diagnosis of «acute abdomen» syndrome.

As a result of studying the educational discipline «Pediatrics» of the «General Clinical Practice (for foreign citizens)» the student should

know:

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

structure of morbidity among children by age groups in the Republic of Belarus;

international classification of diseases and related health problems;

the structure of neonatal, infant, child mortality and ways to reduce it;

types of feeding a child in the first year of life, requirements for organizing rational nutrition for infants;

features of the course of neonatal and subsequent periods of child development;

classification, etiology, pathogenesis, clinical picture of the most common diseases in newborns, infants, early, junior and senior school children, adolescents;

methods of maintaining impaired and replacing lost functions of organs and functional systems of the child's body;

volumes of examination of patients at the stages of medical care;

indications and contraindications for spa treatment;

basics of medical check-up and rehabilitation of children;

principles of medical expertise;

rules of medical ethics and deontology;

be able to:

establish communications with the patient and his legal representatives based on an assessment of his age-related mental and personal characteristics, individual reaction to the disease;

assess the physical, neuropsychiatric and sexual development of the child;

conduct a comprehensive assessment of the child's health status;

conduct preventive examinations, organize dispensary observation of children and adolescents;

examine the newborn child, taking into account the data of the antenatal history, childbirth and the postpartum period of the mother;

examine the child taking into account his age characteristics (collection of anamnesis, complaints, examination, percussion, palpation, auscultation) using additional diagnostic methods;

determine indications for additional diagnostic methods and carry out clinical interpretation of the data obtained;

interpret the results of an electrocardiogram, ultrasound, computed tomography, magnetic resonance imaging, fibrogastroduodenoscopy, spirography, pneumotachometry, sternal puncture; carry out differential diagnosis of diseases;

establish a final clinical diagnosis, taking into account consultations with medical specialists;

conduct an examination of temporary disability to care for a child and issue a certificate of incapacity for work;

provide emergency medical care for acute heart failure, acute vascular failure, acute respiratory failure, convulsions, hyperthermic syndrome, acute allergic reactions in children and adolescents;

use medications taking into account the characteristics of the child's body, write a doctor's prescription;

draw up a program and calculate the volume of infusion therapy, determine indications for blood transfusion;

apply modern detoxification methods;

perform anthropometric measurements, gastric lavage, subcutaneous, intramuscular and intravenous injections and infusions, sanitation of the upper respiratory tract, measurement of blood pressure, pulse rate and respiratory rate;

## master:

methods of examining of a newborn child, children of all age groups;

skills in organizing feeding of premature and full-term newborns, rational nutrition of infants;

methods of clinical examination of a child for various diseases;

skills in interpreting the results of laboratory and instrumental research methods;

skills in organizing the treatment of diseases and medical rehabilitation of children in accordance with clinical protocols for examination and treatment approved by the Ministry of Health of the Republic of Belarus;

principles of emergency medical care;

skills of conducting examination of temporary disability;

skills in organizing sanitary and hygienic education to promote a healthy lifestyle.

Total number of hours for the discipline study is 120 academic hours. Classroom hours according to the types of studies: practical classes – 77 hours; student independent work (self-study) is 43 hours.

Intermediate certification is carried out in accordance with the curriculum of the institution of education in the form of a credit (12 semester).

Form of higher education – full-time.

## THEMATIC PLAN

	Section (topic) name	Number of class hours
		practical
1. Comprehens Basics of rations	7	
2. Physiology a	7	
3. Respiratory	7	
4. Heart diseas	7	
5. Systemic con	7	
6. Kidney dise:	7	
7. Diseases of t	7	
8. Diseases of t	7	
9. Emergency	21	
9.1. Differential conditions in chil	7	
9.2. Convulsive :	7	
9.3. Acute allerg shock). Acute va	7	
Total hours		77

## **CONTENT OF THE EDUCATIONAL MATERIAL**

1. Comprehensive assessment of the child's health status. Basics of rational feeding of children

Criteria that determine a child's health. Genealogical, biological and social anamnesis. Criteria characterizing the child's health.

Physical and sexual development of children. Measurement and assessment of body weight, height, head and chest circumference in children of the first year of life and other age groups. Assessment of the physical development of children of different ages using centile tables and somatograms.

Assessment of the neuropsychiatric development of children, leading lines of development. Determination of child behavior parameters.

Signs of puberty. Assessment of sexual development using the Tanner method.

Breast feeding and its benefits. Breastfeeding rules. Contraindications for breastfeeding for mother and child. Criteria for milk sufficiency. Features of nutrition of a nursing woman. Timing and rules for introducing complementary foods. Calculation of food volume. Mixed and artificial feeding. Classification and characteristics of baby's formulas, indications for their use. Rules for introducing supplementary feeding. Nutrition for children of the second and third year of life.

Protein-energy deficiency: predisposing factors, pathogenesis, classification, clinical manifestations depending on the severity. Principles of treatment of proteinenergy deficiency: stages of diet therapy, calculation of the need for proteins, fats, carbohydrates, correction of disorders, drug therapy. Follow up of children with protein-energy deficiency.

Collection of complaints and medical history, objective examination of patients with protein-energy deficiency, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigations, substantiation of diagnosis and treatment.

## 2. Physiology and pathology of the newborn period

Sanitary and epidemiological requirements for the care of newborns.

Full-term and premature baby. Criteria for morphological and functional maturity of newborns. Petruss and Ballard scale. Borderline conditions of newborns. Newborn health groups. Dispensary observation of newborns depending on the health group.

Anatomical and physiological characteristics of a premature baby. Features of the physical development of a premature baby. Stages of nursing premature babies. Organization of medical care for a premature baby in an out-patient clinic.

Differential diagnosis of physiological and pathological jaundice, basic principles of treatment.

Localized forms of purulent-inflammatory diseases (skin, subcutaneous fat layer, glandular tissue, umbilical wound): classification, clinical picture, diagnosis, differential diagnosis, principles of treatment, prevention.

Sepsis of newborns: risk factors, classification, pathogenesis, clinical manifestations, diagnosis, treatment, outcomes, prevention.

Systemic inflammatory response syndrome: pathogenesis, diagnostic criteria, treatment principles. Differential diagnosis of systemic inflammatory response syndrome with skin manifestations of Covid-19.

Supervision of newborns: collection of anamnesis of pregnancy and childbirth, objective examination, assessment of morphological and functional maturity, substantiation of risk group and health, drawing up an examination plan, interpretation of the results of laboratory and instrumental research methods, substantiation of diagnosis and treatment.

# 3. Respiratory diseases in children

Anatomical and physiological features of the respiratory system in children.

Acute diseases of the upper respiratory tract (rhinopharyngitis, laryngitis), bronchitis: clinical and diagnostic criteria, treatment.

Acute pneumonia: etiology, pathogenesis, classification, clinical picture, complications (pulmonary and extrapulmonary), diagnosis, treatment. Clinical syndromes in children associated with Covid-19.

Clinical examination of children with respiratory diseases.

Obstructive syndrome: etiology, risk factors for development, pathogenesis, clinical picture, emergency medical care, indications for hospitalization.

Acute stenosing laryngotracheitis: etiology, classification, clinical picture, treatment.

Epiglotitis: clinical symptoms, treatment.

Acute bronchiolitis, acute obstructive bronchitis: clinical picture, diagnosis, differential diagnosis, treatment.

Bronchial asthma (BA): etiology, classification, features of the clinical course depending on the period of the disease, features of the course in young children. Peak flowmetry. Basic therapy for asthma and treatment during an attack. Principles of «stepped» therapy depending on the severity of asthma. Primary, secondary and tertiary prophylaxis of asthma. Asthma school. Follow up of children with bronchial asthma.

Collection of complaints and medical history, objective examination of patients with respiratory diseases, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigations, substantiation of diagnosis and treatment.

## 4. Heart diseases in children

Anatomical and physiological features of the cardiovascular system in children. Methods for examining children with diseases of the cardiovascular system. Assessment of pulse rate and blood pressure using centile scales. Features of electrocardiography and Holter monitoring in children.

Heart rhythm disturbances in children: classification, diagnosis, indications for tachycardia: hospitalization, prognosis. Sinus causes. clinical symptoms, complications, treatment, prevention. Sinus bradycardia: causes, clinical symptoms, treatment, prevention. Extrasystole (atrial, atrioventricular. complications, ventricular): causes, clinical symptoms, complications, treatment, prevention. Paroxysmal tachycardia: causes, clinical symptoms, complications, treatment, prevention. Atrial flutter and fibrillation: causes, clinical symptoms, complications, treatment, prevention.

Carditis in children: etiology, pathogenesis, classification. Congenital carditis: clinical picture, diagnosis, course, prognosis. Acute myocarditis: features of the course in young and older children, outcome. Subacute and chronic myocarditis: clinical picture, diagnosis. Differential diagnosis of rheumatic and non-rheumatic carditis, cardiac lesions in multisystem inflammatory syndrome (MIS-C) and Kawasaki disease. Treatment, prevention, prognosis.

Congenital and acquired heart defects: classification, clinical picture, diagnostic criteria, features of hemodynamic disorders. Principles of conservative therapy, timing and indications for surgical treatment. Complications, medical prevention and rehabilitation.

Acute heart failure in infants: clinical variants and features of clinical manifestations. Principles of treatment of acute heart failure in children, emergency medical care.

Chronic heart failure: clinical picture, diagnosis. Basic therapy of chronic heart failure in children.

Collection of complaints and medical history, objective examination of patients with heart disease, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigations, substantiation of diagnosis and treatment.

#### 5. Systemic connective tissue diseases in children

Joint diseases. Reactive arthritis, juvenile rheumatoid arthritis: classification, clinical picture, diagnosis, treatment. Systemic lupus erythematosus: classification, clinical picture, diagnosis, treatment.

Differential diagnosis of articular syndrome in children with systemic connective tissue diseases. Medical examination, follow up and rehabilitation.

Scleroderma, dermatomyositis: classification, clinical picture, diagnosis, treatment.

Collection of complaints and medical history, objective examination of patients with systemic connective tissue diseases, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigations, substantiation of diagnosis and treatment.

## 6. Kidneys diseases in children

Anatomical and physiological features of the urinary system in children. Methods of kidney research, assessment of kidney function tests in children.

Tubointerstitial nephritis: etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis, treatment. Prevention. Follow up of children.

Glomerulonephritis: etiology, pathogenesis, classification. Acute poststreptococcal glomerulonephritis. Clinical and laboratory picture of nephritic syndrome, nephrotic syndrome, nephrotic syndrome with hematuria and arterial hypertension, isolated urinary syndrome. Chronic glomerulonephritis. Differential diagnosis of glomerulonephritis. Basic, pathogenetic and symptomatic treatment of glomerulonephritis. Follow up of children with glomerulonephritis.

Nephrotic syndrome: definition, classification, clinical picture, diagnosis. Definitions of primary and secondary nephrotic syndrome. Treatment of nephrotic syndrome (basic, pathogenetic and symptomatic therapy), principles of corticosteroid therapy, medical rehabilitation.

Definition of acute kidney injury, etiology (prerenal, renal and postrenal causes), pathogenesis, clinical diagnostic criteria by stage, principles of treatment by stage, indications for renal replacement therapy, prevention, medical rehabilitation.

Definition of the concept of chronic kidney disease, risk factors, etiology, syndromes, morphological picture, classification, principles of conservative treatment, indications for renal replacement therapy, characteristics of renal replacement therapy methods, medical rehabilitation.

Collection of complaints and medical history, objective examination of patients with kidney diseases, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigations, substantiation of diagnosis and treatment.

## 7. Diseases of the blood system in children

Age-related characteristics of blood in children. Changes in blood parameters in children in different diseases.

Anemia in children, classification. Iron deficiency anemia: etiology, clinical syndromes, diagnosis, differential diagnosis, treatment, prevention. Medical examination of children with anemia.

Age-related features of hemostasiogram in children. Hemorrhagic diathesis.

Hemorrhagic vasculitis: etiology, pathogenesis, classification, clinical and laboratory diagnosis, treatment.

Immune thrombocytopenic purpura: etiology, pathogenesis, clinical picture, diagnosis, treatment.

Hemophilia: etiology, pathogenesis, clinical and laboratory diagnosis, treatment, prevention.

Acute lymphoblastic leukemia: classification, clinical syndromes, diagnosis, treatment principles.

Differential diagnosis of hemorrhagic syndrome. Clinical examination of children with hemorrhagic syndrome.

Collection of complaints and medical history, objective examination of patients with diseases of the blood system, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigation, substantiation of diagnosis and treatment.

# 8. Diseases of the digestive system in children

Gastroesophageal reflux disease: clinical picture in children of the first year of life and in older age, diagnosis, differential diagnosis.

Chronic gastritis, gastroduodenitis: etiology, pathogenesis, classification, clinical manifestations, instrumental methods and their role in diagnosis, treatment.

Peptic ulcer: etiology, pathogenesis, classification, clinical picture, diagnosis, complications, differential diagnosis, treatment. Treatment effectiveness criteria. Primary and secondary prevention of peptic ulcer in children. Follow up of children with peptic ulcer disease.

Dysfunctional disorder of the biliary tract in children (functional gallbladder disorder, functional biliary disorder of Oddi's sphincter, functional pancreatic disorder of Oddi's sphincter): clinical picture, diagnosis, differential diagnosis, treatment.

Chronic inflammatory bowel diseases: ulcerative colitis and Crohn's disease: etiology, pathogenesis, classification, clinical manifestations, complications. Endoscopic and histological signs of ulcerative colitis and Crohn's disease, their role in diagnosis; treatment, prognosis.

Differential diagnosis of functional disorders of the digestive organs in children with chronic diseases of the stomach and intestines.

The concept of acute and chronic abdominal pain, causes taking into account the age of the child. Types of abdominal pain. Algorithm for examination of children with pain syndrome, selection of immediate and delayed measures.

Collection of complaints and medical history, objective examination of patients with diseases of the digestive system, drawing up an examination plan, interpretation of the results of laboratory and instrumental methods of investigations, substantiation of diagnosis and treatment.

## 9. Emergency conditions in children

# 9.1. Differential diagnosis of coma in children. Emergency conditions in children with endocrine system diseases

Coma: definition, types and severity, stages of disturbance of consciousness depending on the depth of damage to the central nervous system. Glasgow scale.

Comas in diabetes mellitus: differential diagnosis, emergency medical care. Principles of therapy for various types of coma.

Thyrotoxic crisis: clinical picture, diagnostic and treatment algorithm.

Acute and chronic adrenal insufficiency: diagnostic criteria, emergency medical care.

Collection of complaints and medical history, objective examination of patients with diabetes mellitus, diseases of the thyroid gland and adrenal glands, drawing up an examination plan, interpretation of the results of laboratory and instrumental examination methods, substantiation of diagnosis and treatment.

# 9.2. Convulsive and hyperthermic syndromes in children

Causes of convulsive syndrome in children, characteristics of seizures of various natures, clinical picture, emergency laboratory tests. Algorithm for the treatment of convulsive syndrome in children. Anticonvulsant drugs, mechanism of action, indications and contraindications for use.

Acute fever: definition, classification. Hyperthermic syndrome: definition, clinical picture. Criteria for prescribing antipyretic drugs to children. Antipyretics. Algorithm for emergency medical care for acute fever in children.

Collection of complaints and medical history, objective examination of young patients with acute respiratory diseases, drawing up an examination plan, interpretation of the results of laboratory and instrumental examination methods, substantiation of diagnosis and treatment.

# 9.3. Acute allergic reactions (urticaria, angioedema, anaphylactic shock). Acute vascular insufficiency

Acute allergic reactions (urticaria, angioedema, anaphylactic shock), emergency medical care.

Clinical manifestations of acute vascular insufficiency, emergency medical care.

Collection of complaints and medical history, objective examination of patients with allergic pathology, drawing up an examination plan, interpretation of the results of laboratory and instrumental examination methods, substantiation of diagnosis and treatment.

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	<b>«GENERAL CLINICAL PRACTICE (FOR FOREIGN CITIZENS)»</b>	E (FO	R FOREI	GN CITI	ZENS)»	-	
# ၁		Numl clas	Number of in- class hours	S	st		
Section, topi	Section (topic) name	lectures	practical	əibutz-HəS	ois gninisrT	Literature	Form of conrol
	Comprehensive assessment of the ehild's health status. Basics of rational feeding of children	I	7	c,	1-8	1-12, 15, 21	1-4, 5-6, 8-9
2.	Physiology and pathology of the newborn period	1	7	S	1-8	1-7,12-16, 22	1-4, 5-6, 8-9
<del>к</del> ,	Respiratory diseases in children	I	٢	5	1-8	1,2,8-9, 13,16-20, 26,29	1-4, 5-6, 8-9
4	Heart diseases in children	, I	7	ŝ	1-8	1,2,8-9,17-21, 23-25,27	1-4, 5-6, 8-9
5.	Systemic eonneetive tissne diseases in ehildren	1	7	e	1-8	1,2,8-9,17- 19,21, 23, 24	1-4, 5-6, 8-9
6.	Kidney diseases in children		7	3	1-8	1-3, 8-9, 17- 21, 23, 24, 27	1-4, 5-6, 8-9
7.	Diseases of the blood system in children	I	7	5	1-8	1-3,6-9,17- 24,28	1-4, 5-6, 8-9
90	Diseases of the digestive system in ehildren	I	7	2	1-8	1,2,4,8-10, 15, 18-24	1-4, 5-6, 8-9
.6	Emergeney eonditions in children		21	12			

-		Form of conrol		1-4, 5-6, 8-9	1-4, 5-6, 8-9	1-9	
		Literature		1,2, 8-9 17,18,23, 27	1,2, 8- 9,17,18,23, 27	1,2,8-9,27,29	
	s	Jraining aic		1-8	1-8	1-8	
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	Number of in- class hours	practical		7	L	L	
13	Numb class	lectures		I	, I	I	1
		Section (topic) name		Differential diagnosis of coma in children. Emergency conditions in children with endocrine system diseases	Convulsive and hyperthermic syndromes in children	Acute allergic reactions (urticaria, angioedema, anaphylactic shock). Acute vascular insufficiency	Total hours
	# :	Section, topic		9.1.	9.2.	9.3.	
				1		I	L

## **INFORMATION AND METHODIC CHAPTER**

#### LITERATURE

#### Main (basic):

1. Pediatrics : textbook for students / N. S. Paramonova [et al.]. – Minsk : Novoie znanie, 2021. - 597 p.

Additional:

2. Introduction to pediatrics : the manual/ N.S. Paramonova.- Grodno : GSMU, 2015.- 360 p.

3. Nelson textbook of pediatrics. In 2 vol. Vol. 1 / Kliegman, Robert M., Stanton, Bonita F., St Geme III, Joseph W., Schor, Nina F.; emer. ed. R. E. Behrman. – 20th ed. – [Philadelphia] : Elsevier, 2016.

4. Nelson textbook of pediatrics. In 2 vol. Vol. 2 / Kliegman, Robert M., Stanton, Bonita F., St Geme III, Joseph W., Schor, Nina F. ; emer. ed. R. E. Behrman. – [Philadelphia] : Elsevier, 2016.

5. Pediatrics : guidance aid / ed. O. Tiazhka. - Kyiv : AUS Medicine Publishing House, 2015. - 240 p.

6. Pediatrics : [textbook] / ed. by O. Tiazhka. - 2nd ed., reprint. - Vinnytsia : Nova Knyha, 2016. - 544 p.

7. Pediatrics : textbook / Т. О. Kryuchko [и др.] ; eds. : Т. О. Kryuchko, O. Y. Abaturov. - Kyiv : AUS Medicine Publishing, 2017. - 208 p. : 2 p. color insert.

8. Pediatrics: the manual for the students of the faculty of international students/ T. I. Rovbut.– Grodno : GSMU, 2020.– 204 c.

9. Bezler, J. A. Pneumonia in children : the manual. – Minsk : BSMU, 2016. – 27 p.

10. Kazyra, I. A. Cardiac arrhythmias in children : the manual. - Minsk : BSMU, 2017. - 32 p.

11. Glomerulonephritis in children : the manual / I. A. Kazyra [et al.]. - Minsk : BSMU, 2017. - 20 p.

12. Инфекция мочевой системы у детей = Urinary tract infection in children : учеб-метод. пособие./ И. А. Козыро, Ж. А. Безлер. / Минск : БГМУ, 2016 – 14 с.

13. Врожденные пороки сердца у детей = Congenital heart diseases in children : учеб-метод. пособие./ И. А Козыро, Ж. А. Безлер. / Минск : БГМУ, 2015 – 24 с.

14. Kazyra, I. A. Acute and chronic renal failure (acute kidney injury and chronic kidney disease) in children. – Minsk : BSMU, 2020. - 30 p.

15. Kozarezov, S. N. Anemia in children : the manual . – Minsk : BSMU, 2021. - 20 p.

## **CHARACTERISTICS OF THE USED TRAINING METHODS**

When organizing the educational process, traditional methods of teaching the academic discipline are used: practical classes, as well as elements of controlled independent work of students (self-study) using information technology, electronic textbooks, and comprehensive teaching booklets.

It is recommended to organize the educational process using traditional and modern educational technologies (simulation learning technologies, the «standardized patient» technique, various forms of communication, variable models of independent work, test and simulation systems for assessing the level of competencies, etc.).

Practical classes are conducted on the basis of children's departments of healthcare institutions, children's out-patient clinics, and in a simulation center. In practical classes under the supervision of a teacher, students independently collect complaints from patients and their parents, medical history, conduct a physical examination, learn to draw up a plan for laboratory and instrumental examination, including functional and radiation studies (ultrasound, computer, magnetic resonance imaging, etc.); interpret the results of laboratory and instrumental methods of investigations, formulate a diagnosis, draw up a treatment and rehabilitation plan, draw up medical documentation. Practical training is provided by students solving situational problems, test tasks, developing skills in examining patients, using the case method for a deep understanding of complex medical situations by the student, diagnosing and differential diagnosis of diseases, conducting medical interventions using electronic-mechanical, virtual and multi-component simulators, communication skills competence using a standardized (simulated) patient.

Independent self-study work consists of studying basic and additional literature, monographs and periodicals, preparing reports, abstracts, presentations and short reports on the most actual problems of pediatrics, studying topics (questions) submitted for self-study, preparing for practical classes, and testing.

Students learn safe working conditions, international requirements and ethical standards during examinations of children and adolescents.

#### LIST OF TRAINING AIDS

- 1. Multimedia presentations.
- 2. Video films.
- 3. Medical records of inpatient (outpatient) patients.
- 4. Results of laboratory tests.
- 5. Results of instrumental studies.
- 6. Test tasks.
- 7. Case assignments with a set of clinical situations.
- 8. Simulation equipment

## LIST OF AVAILABLE DIAGNOSTIC TOOLS

Assessment of a student's educational achievements is carried out using the fund of assessment tools and technologies of a higher education institution. The fund for assessing student educational achievements includes:

standard tasks in various forms (oral, written, test, situational, simulation); topics of abstracts;

medical records of an inpatient (outpatient) patient and the results of additional methods of investigations (laboratory, instrumental).

To diagnose competencies, the following forms of knowledge control are used:

Oral form:

1. Interview.

Written form:

2. Tests.

3. Quizzes.

4. Abstract.

Oral and written form:

5. Business game.

6. Case assignments with a set of clinical situations.

7. Credit.

Technical form:

8. Electronic tests.

Simulation form:

7. Assessing communication skills using a standardized (simulated) patient.

#### LIST OF PRACTICAL SKILLS

1. Carrying out basic anthropometric measurements.

2. Calculation of basic anthropometric indicators in children of different ages.

3. Assessing the level and harmony of the child's physical development using centile tables and somatograms.

4. Assessing the level and harmony of the child's neuropsychical development.

5. Conducting a physical examination of the child.

6. Calculation of daily and one-time amounts of food for children of different ages.

7. Drawing up a menu for children of different ages who are breastfed, mixed, or bottle-fed.

8. Performing subcutaneous, intramuscular and intravenous injections and infusions.

9. Recording of the electrocardiogram and its evaluation.

10. Conducting peak flowmetry and its evaluation.

11. Interpretation of the results of laboratory and radiation methods of investigations.

12. Providing emergency medical care for the following conditions:

hyperthermic syndrome;

convulsive syndrome;

acute heart failure;

acute vascular insufficiency;

heart rhythm disturbances (sinus tachycardia, bradycardia, extrasystole, paroxysmal tachycardia);

diabetic hypoglycemic coma;

diabetic ketoacidotic coma;

infectious-toxic shock;

an attack of bronchial asthma and developing status asthmaticus;

vomiting; urticaria; angioedema; anaphylactic shock.

#### **COMPILERS:**

Professor of the 1<sup>st</sup> Department of Pediatrics of the Educational Institution «Belarusian State Medical University», Doctor of Medical Sciences, Associate Professor

Head of the 1<sup>st</sup> Department of Pediatrics of the Educational Institution «Belarusian State Medical University», Candidate of Medical Sciences, Associate Professor

И.А.Козыро

Е.К.Филипович

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

Dean of the Medical Faculty for International Students of the educational institution «Belarusian State Medical University» 2023

Methodologist of the educational institution «Belarusian State Medical

University»

O.S.Ishutin

3 and

S.V.Zaturanova