

**MINISTRY OF HEALTH OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF PEDIATRIC SURGERY**



APPROVED BY

Vice-rector for scientific and pedagogical work

Eduard BURYACHKIVSKY

September 1, 2023

**WORK PROGRAM ON THE
PEDIATRIC SURGERY DISCIPLINE**

Higher education level: second (Master's)

Field of knowledge: 22 “Healthcare”

Specialty: 222 “Medicine”

Educational and professional program: Medicine

The work program is compiled based on the "Medicine" educational and professional program for training specialists of the second (Master's) higher education level in the 222 "Medicine" speciality of the 22 "Health care" knowledge field approved by the Scientific Council of ONMedU (protocol No. 8 from June 29, 2023).

Developers: head of the department, Doctor of Medical Sciences, professor Losev O.O.
head of the educational part of the department, Candidate of Medical Sciences, docent Aplevych V.M., Doctor of Medical Sciences, professor Melnychenko M.H., Candidate of Medical Sciences, docent Elii L.B., Candidate of Medical Sciences, assistant Pavlenko K.V., assistant Kvashnina A.A.

The work program is approved at the meeting of the Pediatric Surgery Department
Protocol No. 1 from 28.08.2023

Head of department  Oleksandr LOSEV

Agreed with the guarantor of the educational and professional program
 Valerya MARICHEREDA

Approved by the subject cyclical methodical commission for surgical disciplines of
ONMedU


Protocol No. 1 from "30" 08 2023

Head of the subject cycle methodical commission for surgical disciplines of ONMedU


Vasyl Mishchenko

Reviewed and approved at the department meeting *Department of general, pediatric and military surgery with a course of urology*

Protocol No. 1 from "04" 09 2023

Head of Department  (Signature) Mykhailo KASHTALYAN (First Name, Last name)

Reviewed and approved at the department meeting _____

Protocol No. ___ from "___" _____ 20___

Head of Department _____ (Signature) _____ (First Name, Last name)

1. Description of the academic discipline:

Name of indicators	Field of knowledge, speciality, specialisation, higher education level	Characteristics of the academic discipline
Total number: Credits: 1.5 Hours: 45 Content modules: 0	Field of knowledge 22 “Healthcare”	<i>Full-time education Mandatory discipline</i>
	Speciality 222 “Medicine”	<i>Year of training: 5</i>
	Higher education level second (Master's)	<i>Semesters IX - X</i>
		<i>Lectures (6 hours)</i>
		<i>Seminars (0 hours)</i>
		<i>Practical (24 hours)</i>
		<i>Laboratory (0 hours)</i>
		<i>Independent work (15 hours)</i>
		<i>including individual tasks (0 hours)</i> <i>The form of final control - credit</i>

2. The purpose and tasks of the educational discipline of competence, program learning outcomes.

Purpose: To acquire theoretical and practical knowledge of aetiology, pathogenesis, typical and atypical clinical manifestations, diagnosis methods, conservative and operative treatment, and rehabilitation of surgical pathology in children within limits corresponding to the training of a general practitioner, taking into account the peculiarities of their speciality.

Tasks:

1. Determine treatment tactics for a child suffering from major surgical diseases.
2. Diagnose emergency conditions in the pediatric surgery clinic and provide emergency medical care to the child.
3. Identify various clinical manifestations of complications and establish a preliminary diagnosis of surgical diseases and injuries in children.

The process of studying the discipline is aimed at forming elements of the following competencies:

- **General (GC):**

GC1- Ability to abstract thinking, analysis and synthesis

GC2 - Ability to learn and possess modern knowledge
GC3 - Ability to acquire knowledge in practical situations
GC4 - Knowledge and understanding of the subject field and understanding of professional activity
GC5 - Ability to adapt and act in a new situation
GC6 - Ability to make a reasoned decision
GC7 - Ability to work in a team
GC8 - Ability to interpersonal interaction
GC9 - Ability to communicate in a foreign language
GC10 - Ability to use information and communication technologies
GC11 - Ability to search, process and analyse information from various sources
GC12 - Determination and perseverance regarding the assigned tasks and responsibilities
GC13 - Awareness of equal opportunities and gender issues
GC14 - Ability to realize one's rights and responsibilities as a member of society, to be aware of the values of public (free democratic) society and the need for its sustainable development, the right of supremacy, the rights and freedoms of a person and a citizen in Ukraine
GC15 - Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, equipment and technologies; to use different types and forms of motor activities for active recreation and leading a healthy lifestyle
GC16 - Ability to work in an international context
GC17 - Ability to evaluate and ensure the quality of performed works
GC18 - Striving to preserve the environment

- **Special (SC):**

SC1 - Ability to collect medical information about the patient and analyze clinical data
SC2 - Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results
SC3 - Ability to establish a preliminary and clinical diagnosis of the disease
SC4 - Ability to determine the necessary regime of work and rest in the treatment and prevention of diseases
SC5 - Ability to determine the nature of nutrition in the treatment and prevention of diseases
SC6 - Ability to determine the principles and nature of treatment and prevention of diseases
SC7- Ability to diagnose emergency conditions
SC8 - Ability to determine tactics and provide emergency medical care
SC9 - Ability to carry out medical evacuation measures
SC10 - Ability to perform medical manipulations
SC11- Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility
SC16 - Ability to maintain medical documentation including electronic forms
SC21- Ability to clearly and unambiguously convey one's knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying

- **Program learning outcomes (PLO):**

PLO1 - Have thorough knowledge of the professional activity structure. To be able to carry out professional activities that require knowledge updating and integrating. To be responsible for professional development, the ability for further professional training with a high level of

autonomy.

PLO2- Understanding and knowledge of fundamental and clinical biomedical sciences at a level sufficient for solving professional tasks in the field of health care.

PLO3 - Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and interdisciplinary problems related to it.

PLO4 - Select and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, patient's examination, knowledge about the person, their organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).

PLO5 - Collect complaints, history of life and diseases, assess patient's psychomotor and physical development, the state of body's organs and systems based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 4) taking patient's age into account.

PLO6 - Establish final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing relevant ethical and legal norms under control of the managing physician in the conditions of a health care institution (according to list 2).

PLO7 - Prescribe and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) for patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).

PLO8 - Determine the main clinical syndrome or symptom that determines the victim/injured's condition severity (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside), including conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.

PLO9 - Determine the nature and principles of treating patients (conservative, operative) with diseases (according to list 2) taking into account their age, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions based on a preliminary clinical diagnosis, observing the relevant ethical and legal norms by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme to be able to substantiate personalized recommendations under the control of the head physician in the conditions of a medical institution.

PLO10 - Determine necessary modes of work, rest and nutrition based on the final clinical diagnosis observing relevant ethical and legal norms by making a reasoned decision according to existing algorithms and standard schemes.

PLO12- Assess general condition of a newborn by making a reasoned decision according to existing algorithms and standard schemes observing relevant ethical and legal norms.

PLO13- Assess and monitor the child's physical and psychomotor development, provide recommendations on feeding and nutritional features depending on age, and organize preventive vaccinations according to the calendar.

PLO14- Determine tactics and provide emergency medical care in emergencies (according to list 3) in a limited time in accordance with existing clinical protocols and treatment standards.

PLO16- Form rational medical routes for patients; organize interaction with colleagues in their own and other institutions, organizations and establishments; apply tools for promoting medical services in the market based on the analysis of the population's needs, in the conditions of the health care institution functionality, its division, in a competitive environment.

PLO17- Perform medical manipulations (according to list 5) in the conditions of a medical

institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, and observing the relevant ethical and legal norms.

PLO21- Search for the necessary information in the professional literature and databases of other sources; analyze, evaluate and apply this information.

PLO24 - Organize the necessary level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

As a result of studying the academic discipline, the student of higher education must:

Know: Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, and prevention of common surgical diseases in children of different ages.

Be able to:

- collect anamnesis, carry out patient examination, palpation, auscultation, percussion, description of the objective status, and determination of clinical and radiological symptoms in case of major surgical diseases;
- substantiate the examination and treatment plan;
- draw up an examination and treatment plan;
- determine indications and contraindications for surgery and features of the postoperative period;
- determine the blood group and Rhesus factor;
- stop the bleeding temporarily;
- perform punctures of the pleural cavity, joints, hematoma, pus and long tubular bones, measure intraosseous pressure;
- apply aseptic, burn, and corrective plaster bandages;
- perform pus dissection, panaritium, primary surgical treatment of wounds, application and removal of sutures;
- carrying out a digital examination of the rectum, examining it with a mirror, and evaluating the data;
- provide emergency aid for shock, insects, colic, drowning, sudden cardiac arrest, bleeding;
- perform bladder catheterization;
- interpret the data of radiographs, blood tests, urine, stomach contents, etc.;
- draw up medical documentation of surgical patients;
- apply Pavlik's stirrups, Gnevkovsky's apparatus, and Wilensky's splint.

3. Academic discipline content:

Topic 1. Gastrointestinal tract bleeding in children. Portal hypertension. Clinical features and differential diagnosis of gastrointestinal bleeding in children with gastroesophageal reflux, hemorrhagic gastritis, portal hypertension, gastric ulcers, duodenal ulcer, Meckel's diverticulitis, intestinal polyps and polyps (Peitz-Egers disease). Variants of surgical interventions, reconstruction and transplantation of organs - liver and intestines.

Topic 2. Acute appendicitis, peritonitis in children.

Anatomical and physiological features of the abdominal cavity in children. Acute appendicitis in children. Complicated forms of acute appendicitis: appendicular abscess, peritonitis, infiltrate. Primary peritonitis. Neonatal peritonitis. Necrotizing enterocolitis. Causes, clinical classification. Surgical complications. Principles of surgical treatment. Features of necrotizing enterocolitis in newborns with extremely low body weight. Clinic. Rehabilitation after operative interventions. Intestinal obstruction. Lumpy obstruction. Intussusception. Classification, pathogenesis, and prevention of postoperative sebaceous

intestinal obstruction. Principles of sebaceous intestinal obstruction treatment. Aetiology, pathogenesis, clinic, and diagnosis of idiopathic intussusception in children. Differential diagnosis with infectious diseases. Indications for conservative and surgical treatment, prevention of complications. Short bowel syndrome. Principles of intestinal transplantation.

Topic 3. Injury of the chest and chest cavity organs. Definition of basic concepts. Aetiology. Pathogenesis. Classification. Clinic. Psychological features of patients. Course. Complication. Research methods, diagnosis, differential diagnosis. Surgical tactics. Principles of surgical treatment. Methods of operative interventions. Methods of the tracheobronchial tree rehabilitation. Pleural cavity puncture. Drainage of the pleural cavity. Damage to the oesophagus, burns and foreign bodies. Rehabilitation. Pediatric polytrauma: traumatic disease; traumatic shock. Syndrome of mutual aggravation, types of traumatic injuries. Degrees of traumatic shock severity: diagnostic criteria and emergency care. Closed injury of abdominal organs: hollow organs trauma: mechanism of injury, clinical manifestations, diagnostic algorithm, and emergency care. Surgical treatment principles. Parenchymal organs injury: pancreas, liver, and spleen. Pancreatic pseudocyst, traumatic pancreatitis. Signs of intra-abdominal bleeding. Indications for conservative and operative treatment. Hemobilia. Diagnosis, principles of treatment. Peculiarities of childhood traumatology.

Topic 4. Purulent diseases of lungs, pleura and interstitium. Acute destructive pneumonia (ADP), intra-pulmonary forms. Acute destructive pneumonia (ADP) (pulmonary-pleural form): pyothorax, pyopneumothorax, and pneumothorax. Classification, etiopathogenesis, diagnosis, conservative, instrumental and surgical treatment. Complications and their prevention. Mediastinitis. Causes, pathogenesis, clinical manifestations, diagnosis, conservative and surgical treatment, complications, prognosis. Acute hematogenous osteomyelitis. TBC-osteitis. Surgical sepsis. Acute hematogenous osteomyelitis, meta epiphyseal osteomyelitis of newborns, atypical forms of osteomyelitis (Brody's abscess, antibiotic osteomyelitis, Garret's sclerosing osteomyelitis), TBC-osteitis. Etiopathogenesis, classification, clinic, features of diagnosis, principles of treatment, features of surgical interventions in children of different age groups, prevention of complications. Surgical sepsis. Systemic response to inflammation syndrome. Sepsis. Septic shock. Multiple organ failure syndrome. Basics of antibacterial therapy in children.

Topic 5. Congenital intestinal obstruction, developmental defects of the anterior abdominal wall. Congenital hip dislocation. Congenital clubfoot. Congenital torticollis.

4. Academic discipline structure

Topic title	Number of hours					
	Total	Including				
		Lectures	Seminars	Practical	Laboratory	Independent
Topic 1. Gastrointestinal tract bleeding in children.	5	-	-	4	-	2

Topic 2. Acute appendicitis, peritonitis in children. Intestinal obstruction.	7	2	-	4	-	2
Topic 3. Injury of the chest, thoracic and abdominal organs. Peculiarities of pediatric traumatology.	5	-	-	4	-	2
Topic 4. Purulent diseases of the lungs, pleura and interstitium. Acute hematogenous osteomyelitis. TBC-osteitis. Surgical sepsis. Purulent diseases of soft tissues. Swollen portal syndrome.	6	2	-	6	-	4
Topic 5. Congenital intestinal obstruction, developmental defects of the anterior abdominal wall. Congenital hip dislocation. Congenital clubfoot. Congenital torticollis.	4	2		6	-	5
Total hours	45	6	-	24	-	15

5. Topics of lectures/seminars /practical / laboratory classes

5.1. Topics of lectures

№	Topic title	Number of hours
1.	Acute surgical diseases of the abdominal cavity. Inflammatory diseases of the abdominal cavity: acute appendicitis, complications (infiltrate, peritonitis). Acquired intestinal obstruction: adhesion obstruction, intussusception. Bleeding from the digestive system. Peculiarities of the clinical picture and diagnostic methods. Indications for conservative and surgical treatment.	2
2.	Osteomyelitis in children.	2
3.	Peculiarities of pediatric surgery. Congenital malformations in children.	2
	Total	6

5.2. Topics of seminar classes

Seminar classes are not provided.

5.3. Topics of practical classes

№	Topic title	Number of hours
1	Topic 1. Practical lesson 1. Bleeding of the gastrointestinal tract in children.	2
2	Topic 1. Practical lesson 2. Portal hypertension.	2
3	Topic 2. Practical lesson 3. Anatomical and physiological features of the abdominal cavity in children. Acute appendicitis in children. Complicated forms of acute appendicitis: appendicular abscess, peritonitis, infiltrate. Primary peritonitis. Neonatal peritonitis. Necrotizing enterocolitis. Causes, clinical classification. Surgical complications. Principles of surgical treatment.	2
4	Topic 2. Practical lesson 4. Intestinal obstruction. Lumpy obstruction. Intussusception.	2
5	Topic 3. Practical lesson 5. Injury of the chest and chest cavity organs. Closed injury of abdominal organs.	2
6	Topic 3. Practical lesson 6. Peculiarities of childhood traumatology.	2
7	Topic 4. Practical lesson 7. Purulent diseases of the lungs. Purulent pleura and interstitium.	2
8	Topic 4. Practical lesson 8. Acute hematogenous osteomyelitis. Surgical sepsis.	2
9	Topic 4. Practical lesson 9. Purulent diseases of soft tissues. Swollen portal vein syndrome.	2
10	Topic 5. Practical lesson 10. Congenital intestinal obstruction.	2
11	Topic 5. Practical lesson 11. Congenital hip dislocation.	2
12	Topic 5. Practical lesson 12. Congenital clubfoot. Congenital torticollis.	2
	Total	24

5.4. Topics of laboratory classes

Laboratory classes are not provided.

6. Independent work of a higher education seeker

№	Topic title /assignment type	Number of hours
1	Complications of purulent-inflammatory diseases in infants.	2
2	Possibilities of laparoscopy in children.	2
3	Possibilities of ultrasound in children.	2
4	Treatment of abdominal gunshot wounds.	4
5	Treatment of pelvic gunshot injuries.	5
	Total	5

7. Teaching methods

Lectures.

Practical classes: conversations, role-playing, solving clinical situational problems, practising patient examination skills, practising manipulation skills according to list 5,

instructions and practising skills on simulation dummies, training exercises on differential diagnosis of the most common diseases in children.

Independent work: independent work with recommended basic and additional literature, electronic information resources, independent work with the bank of test tasks Step-2, independent mastering of communication algorithms with a sick child and their parents.

8. Forms of control and evaluation methods (including criteria for evaluating learning outcomes)

Current control: oral surveys, testing, evaluation of practical skills performance, evaluation of communication skills during role-plays, solution of situational clinical tasks, evaluation of in-class activities.

Final control: credit.

Assessment is carried out by scientific and pedagogical workers who hold practical classes in an academic group or give lectures on this educational component. Assessment takes place during the last lesson of the educational component, taking into account the cyclical system of education.

The educational discipline ends with a credit and only an average score of the current performance is calculated. That is the arithmetic average of all received grades according to the traditional scale rounded to two decimal places, which is converted into a 200-point scale. At the same time, the average current score, a score on a 200-point scale and an assessment on a 2-point scale: "passed" or "not passed" are displayed in the relevant documentation.

Assessment of current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the lesson's subject:
 - methods: surveys, solving a situational clinical problem
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.
2. Evaluation of practical skills and manipulations on the lesson's subject:
 - methods: evaluating the correctness of practical skills
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.
3. Evaluation of work with a patient on the lesson's subject:
 - methods: assessment of: a) communication skills when interacting with the patient and their parents, b) the correctness of prescribing and evaluating laboratory and instrumental studies, c) compliance with the differential diagnosis algorithm, d) substantiation of the clinical diagnosis, e) drawing up a treatment plan;
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.

The grade for one practical session is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Current evaluation criteria in practical training

Grade	Evaluation criteria
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Excellent «5»	The applicant is fluent in the material, takes an active part in discussing and solving situational clinical problems, confidently demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data, expresses their opinion on the subject of the lesson, demonstrates clinical thinking.
Good «4»	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses their opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactory «3»	The applicant does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactory «2»	The applicant does not know the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data.

Credit is awarded to an applicant who has completed all the tasks of the academic discipline's work program, actively participated in seminar classes, completed an individual assignment, and has an average current grade of at least 3.0 and no academic debt.

Assessment is carried out: at the last lesson before the beginning of the examination session - with the tape system of learning, at the last lesson - with the cyclical system of learning. The credit score is the arithmetic average of all components according to the traditional four-point scale and has a value that is rounded according to the statistics method with two decimal places after the decimal point.

9. Distribution of points received by higher education seekers

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional five-point scale to points on a 200-point scale, as shown in the table:

Table of conversion of traditional assessment to multi-point assessment

National assessment for discipline	The sum of points for the discipline
Excellent («5»)	185 – 200
Good («4»)	151 – 184
Satisfactory («3»)	120 – 150
Unsatisfactory («2»)	Below 120

A multi-point scale (200-point scale) characterizes the actual success rate of each applicant from the established educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of applicants are evaluated on the ECTS rating scale. Further placement on the ECTS rating scale allows us

to evaluate the achievements of applicants on the educational component who are studying in the same course of this speciality, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of the best or worst among the reference group of fellow students (faculty, speciality). An "A" grade on the ECTS scale cannot be compared to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting into a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who held "FX" and "F" ("2") ratings are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. The grade "F" is assigned to students who attended all discipline classes, but did not receive an average score (3.00) for the current educational activity and were not admitted to the final examination.

Applicants studying in one course (one speciality), based on the number of points selected from the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional grade for a discipline and the sum of points on the ECTS scale

The ECTS scale score	Statistical indicator
A	Best 10% applicants
B	Following 25% applicants
C	Following 30% applicants
D	Following 25% applicants
E	Following 10% applicants

10. Methodological provision

- Working program of the academic discipline
- Syllabus
- Methodical developments for practical classes
- Methodical recommendations for independent work of higher education applicants
- Multimedia presentations

11. Questions for the final control preparation

1. Name the main causes and clinical manifestations of bleeding from the upper parts of the digestive system.
2. Name the main causes and clinical manifestations of bleeding from the lower parts of the digestive system.
3. Specify the classification and causes of occurrence and main clinical manifestations of portal hypertension in children.
4. Name diagnostic methods of gastrointestinal bleeding in children and the main principles of providing medical care at the pre-hospital and hospital stages.
5. Clinical features of acute appendicitis in children under 3 years of age.
6. Clinical features of acute appendicitis in older children.
7. Differential diagnosis of acute appendicitis in children under 3 years of age.
8. Clinical features of acute appendicitis in older children.
9. Name the causes and main clinical symptoms of neonatal peritonitis.

10. Name the causes and main clinical symptoms of intussusception in children.
11. List the indications for conservative and operative treatment of intussusception.
12. Specify the classification and main clinical symptoms of sebaceous intestinal obstruction.
13. X-ray diagnosis of acquired intestinal obstruction (intussusception, dynamic, adhesion).
14. Name the causes and main clinical symptoms of dynamic obstruction in newborns and older children.
15. Main symptoms of parenchymal organ damage.
16. Main symptoms of hollow organ damage.
17. What chest organ injuries lead to respiratory failure?
18. Name the causes and main clinical manifestations of oesophageal injuries in children.
19. Name the diagnostic methods and clinical manifestations of kidney damage in children.
20. Name the causes, diagnostic methods, and clinical manifestations of bladder damage in children.
21. Specify the classification of destructive pneumonia in children.
22. X-ray diagnosis of destructive pneumonia in children.
23. Describe the phases and stages of acute hematogenous osteomyelitis development in children.
24. Name clinical manifestations and diagnosis of metaepiphyseal osteomyelitis in children.
25. Describe the principles of acute hematogenous osteomyelitis treatment in children.
26. Peculiarities of omphalitis treatment depending on the form and stage of the disease.
27. Clinical manifestations and treatment of congenital hip dislocation.
28. Clinical manifestations and treatment of clubfoot in children.
29. Name the main clinical manifestations and treatment of torticollis in children.

12. Recommended literature

Main:

1. Children's surgery: teaching manual / O.O. Losev, M.H. Melnychenko, I.R. Dilanyan, D.O. Samofalov; under the editorship of O. O. Loseva. – Odesa: ONMedU, 2012. — 224 p.
2. Pediatric surgery (Textbook / Grif of the Ministry of Health of Ukraine / Odesa: ONMedU, 2019, 224 p.) O.O. Losev, M.H. Melnychenko, and others, 7 people in total.
3. Pediatric surgery. Tutorial. Part 2. Edited by Tolstanova O. K., Rybalchenko V. F., Danilova O. A. and others. Zhytomyr "POLISYA": - 2016. - p. 225, 322-331
4. Emergency surgery of the abdominal organs (standards of organization and professionally oriented algorithms for the provision of medical care) / Edited by: Fomina P.D., Usenko O.Y., Berezhnyskyi J.S. - K.: "Health of Ukraine" library, 2018. — 354 p.
5. Age aspects of acute appendicitis in children and the key to its recognition. Tutorial. 2019. 260 p. Edited by: Bodnar B.M., Rybalchenko V.F., Bodnar O.B., Melnychenko M.H. and other. Issued ISBN 978-966-697-828-1

Additional:

1. Children's surgery: teaching manual / O.O. Losev, M.H. Melnychenko, I.R. Dilanyan, D.O. Samofalov; under the editorship of O. O. Loseva. – Odesa: ONMedU, 2012. — 224 p.
2. Nedelska S. M. Diseases of the hepatobiliary system and pancreas in children, a study guide for higher education seekers of the 6th year of the medical faculty, interns, paediatricians, and family doctors / Nedelska S. M, Mazur V. I., Shumna T. E. - Zaporizhia: [ZDMU], 2017. - 113 p.
3. Disorders of defecation in children: constipation and encopresis: Study guide / V.F. Rybalchenko, V.V. Berezhny, V.S. Konoplitskyi and others; Under the editorship of professor V.F. Rybalchenko, V.V. Berezhny, V.S. Konoplitskyi, P.S. Rusaka — K.: "VIT-A-POL" LLC, 2018. —548 p.: illustrations.
4. Intestinal malrotation in children: consequences of embryogenesis/ Monograph. Edited by: Pereyaslova A.A., Rybalchenko V.F., Loseva O.O. - K.: PP "INPOL LTM" "000000000" Printing House, 2019. - 226 p.: illustrations.

5. Intestinal obstruction in children: a study guide for higher education seekers of the 5th year of medical faculties (specialities: 'Treatment' and 'Pediatrics'). Spahi O.V., Barukhovich V.Y., Kokorkin O.D., Lyaturinska O.V., Pakholchuk O.P., Zaporozhchenko A.H. - Zaporizhzhia. -2015.- 75 p.

13. Electronic information resources

1. <http://moz.gov.ua> – Ministry of Health of Ukraine
2. www.ama-assn.org - American Medical Association
3. www.who.int - World Health Organization
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. www.appsu.academy - Association of children's doctors of surgical specialties