

**MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN
BUKHARA STATE MEDICAL INSTITUTE**

**DEPARTMENT OF PEDIATRIC SURGERY, NEUROSURGERY,
ANESTHESIOLOGY AND REANIMATION**

"APPROVED"
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_____ 2021.

**WORKING PROGRAMM
Clinical residency in the specialty:
"PEDIATRIC SURGERY"**

The clinical residency (CR) in pediatric surgery provides for the preparation of a graduate of a medical school with a basic bachelor's degree, for independent work as a specialist in pediatric surgery. The sphere of professional activity of a specialist is inpatient or outpatient medical institutions in a medical position in the specialty "pediatric surgery". This curriculum was compiled on the basis of the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 319 dated 12/18/2009, as well as Appendix No. 2 "Regulations on Clinical Residency" to this Decree, Order of the Ministry of Health of the Republic of Uzbekistan No. 204 dated July 12, 2012. "On the requirements for the content of training programs in the system of advanced training and retraining of medical workers and the procedure for their approval",

The term of study at CR is two years. During the course of study, a specialist prepares for independent practice as a pediatric surgeon, who fully possesses the necessary skills for diagnosing and treating children with various congenital and acquired surgical diseases of various organs. Carries out work to identify risk factors with congenital malformations of internal organs in children, develops preventive measures to reduce mortality in various malformations and diseases.

The CR is obliged to raise its ideological and political level, study the issues of deontology in the practice of a pediatric surgeon, and take an active part in the public life of the team.

INTRODUCTION

The standard curriculum is designed to train a narrow specialist in the specialty "Pediatric surgeon" on the basis of the bachelor's degree of higher medical educational institutions in the direction of "General Medicine", "Medico-Pedagogical Business" and "Pediatric Business".

The main curriculum of postgraduate professional education in the specialty "pediatric surgery" (clinical residency) is a regulatory and methodological document that regulates the content and organizational and methodological forms of education in the field of "pediatric surgery" in the postgraduate professional education of doctors.

1 of the main directions in the development of the theory and practice of pediatric surgery is the training and continuous professional development of pediatric surgeons. Implementation of the latest achievements of science into practice, the maximum expansion of the horizons of specialists not only in the field of pediatric surgery itself, but also in the fundamental problems of medical science, as well as in related clinical disciplines, modern methods of laboratory and instrumental diagnostics; strengthening the preventive focus of the work of a pediatric surgeon is of great importance.

The main goal of training in the system of postgraduate professional education is the preparation of a highly qualified pediatric surgeon specialist, who owns an extensive amount of theoretical knowledge; able to successfully solve professional problems; able to conduct a differential diagnostic search; provide full medical care; carry out all necessary preventive and rehabilitation measures to preserve the life and health of the patient.

The educational standard for postgraduate professional training determines the mandatory minimum of training in the specialty "pediatric surgeon" at various stages of education.

The purpose of the curriculum is the training of a qualified specialist who has a system of general cultural and professional competencies, capable and ready for independent professional activity in the conditions of: primary health care; urgent; ambulance, including specialized, medical care; specialized, including high-tech, medical care.

Main tasks curriculum are:

- improvement of practical training of a graduate of medical institutes;
- increasing the professional level and degree of readiness of a doctor for independent medical activity in surgical rooms and departments of polyclinics, surgical departments of hospitals and clinics;
- formation of the clinical thinking of a qualified doctor oriented in various sections of surgical pathology and related specialties (pediatrics, urology, orthopedics, traumatology, transfusiology, anesthesiology, resuscitation and intensive care, clinical pharmacology, laboratory, instrumental and radiation diagnostics, organization and economics of healthcare) .

Expected results:

-Training a highly moral and highly qualified specialist for practical healthcare, who has the skills to diagnose, treat and prevent children's surgical diseases, as well as complications using the latest achievements, surgery and modern medical technologies, with the ability to independently work as a pediatric surgeon and perform duties as an organizer in terms of managing the department.

-Teach preventive measures to reduce infant mortality in various malformations.

-Implementation of research to identify risk factors with congenital malformations of internal organs in children, the development of preventive measures to reduce mortality in various malformations.

-Preparation and participation in conducting thematic cycles, methodological seminars and consultations on new technologies, methods of diagnosis, treatment and prevention of surgical patients.

Academic plan Specialty – Pediatric surgery

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester			
				Classroom activities (hours)			Self-preparation	1 year		2 year	
		clock	%	Total	Theory	Practice		1	2	3	4
1	2	3	4	5	6	7	8	9	10	eleven	12
1	Related disciplines			648							
	Pat anatomy			72					72		
	Pathophysiology			90					90		
	Clinical pharmacology			90							90
	Valeology			36					36		
	Operative surgery with topographic anatomy			180							180
	Functional research methods. Radiation diagnostics			180					180		
2	Disciplines of the main and related specialties			2562							
	Pediatric surgery			2112				916	96	924	176
	Pediatric anesthesiology and resuscitation			144							144
	Pediatric traumatology and orthopedics			90							90
	Pediatric oncology			72					72		
	Pediatric plastic surgery			72					72		
	Neonatology			72					72		
	Total			3210				916	690	924	680

	elbow joint and forearm										
	Topographic anatomy of the chest wall and organs of the chest cavity			36	36						
	Topographic anatomy of the anterior abdominal wall and abdominal organs			36	36						

The content of the program for the section operative surgery with topographic anatomy.

Introduction. Subject and tasks of topographic anatomy and operative surgery. The subject and tasks of topographic anatomy and operative surgery, the place of discipline in the system of higher medical education. The role of Russian scientists in the formation and development of the national school of topographic anatomy and operative surgery. Domestic schools of topographic anatomists and surgeons. Basic concepts of topographic anatomy: area and its boundaries, projection of anatomical formations on the surface, holotomy, sclerotomy, syntopy of organs, fascial sheaths, neurovascular formations, cellular spaces, collateral circulation. The doctrine of individual variability of human organs and systems. Modern methods for studying topographic anatomy in clinical conditions and on a human corpse.

Operative surgery and its tasks. The doctrine of surgical operations. Classifications of surgical operations. Elementary surgical actions, surgical techniques, stages of the operation. Surgical instruments, and its classification, modern diagnostic and therapeutic equipment. Characteristics of the suture material. Methods of local anesthesia.

Topographic anatomy of the neck. Operative head surgery. Operative neck surgery.

Topographic anatomy of the upper and lower limbs. Topographic anatomy of the hand. Topographic anatomy of the gluteal region and thigh, hip joint. Topographic anatomy of the areas of the knee, lower leg, ankle joint of the foot. Operations on vessels, nerves and tendons of the upper and lower extremities. Operations on b1s and joints of extremities. Incisions for purulent diseases of the extremities.

Topographic anatomy of the chest wall and organs of the chest cavity. Operative surgery of the chest wall and lungs. Operative surgery of the mediastinal organs.

Topographic anatomy of the anterior abdominal wall and abdominal organs. Topographic anatomy of the organs of the upper floor of the abdominal cavity. Topographic anatomy of the organs of the lower floor of the abdominal cavity. Operative surgery of the anterior abdominal wall. Intestinal sutures. Operations on the small and large intestine. Operations on the stomach.

Operations on the liver, biliary tract, pancreas. Topographic anatomy of the lumbar region and retroperitoneal space. Operative surgery of the retroperitoneal space and small pelvis.

Recommended literature:

Main literature. Operative surgery and topographic anatomy / Ed. Sergeenko. - M. : GEOTAR, 2001

1. Operative zharrokhlik. Shomirzaev N. Kh. , Sadullaev N. S. , Botirova Z. B. , Tashkent, 1994

Additional literature.

1. Bobrik I. I. , Minakov V. I. , Atlas of the anatomy of the newborn. - Kiev, 1990.

2. Kovanov V. V. Operative surgery and topographic anatomy 2001. Moscow. 408 p.

3. Kovanov V. V. , Travin A. A. Surgical anatomy of human limbs. - M. , 1983.

4. Lopukhin Yu. M. Lectures on topographic anatomy and operative surgery. - M. , 1994.

5. Ostroverkhov G. E. , Bomash Yu. M. , Lubotsky D. N. Operative surgery and topographic anatomy. Moscow. 1996. 720 p.

6. Saks F. F. Atlas of topographic anatomy of the newborn. - M. , 1992.

7. Simbirtsev S. A. Basic operative surgery. 2002. Moscow. 632 p.

Functional research methods. Radiation diagnostics (180 hours)

The purpose and objectives of the discipline. The purpose of teaching the cycle of radiation diagnostics is the formation of important professional skills in examining a patient using radiation research methods, identifying symptoms and syndromes of the main diseases of the chest and abdominal organs, and injuries.

Place of discipline in the structure of postgraduate education. Radiation diagnostics refers to a clinical discipline that provides theoretical knowledge on the diagnosis of various diseases of human organs using x-rays, computed tomography, and magnetic resonance imaging. Radiation diagnostics is 1 of the main disciplines in the early diagnosis of diseases of human organs and systems in the clinic and is based on the following disciplines:

-normal and topographic anatomy;

-normal human physiology;

-pathological human physiology;

-pathological human anatomy;

The main provisions of radiation diagnostics should be used in the future when studying the following disciplines:

1. Surgery

2. Therapy
3. Obstetrics
4. Traumatology
5. Oncology
6. Urology
7. Neurology and Neurosurgery
8. extreme surgery

Model curriculum for the section “Functional research methods. Radiation diagnostics.

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester					
		clock	%	Classroom activities (hours)			Self-preparation	1 year		2 year			
				Total	Theory	Practice		1	2	3	4		
1	Functional and instrumental research methods. Radiation diagnostics			180					180				
2	Clinical and laboratory research			36									
3	Biochemical research			36									
4	Ultrasound diagnostics			36									
5	CT scan			36									
6	Endoscopy			36									

Biochemical studies of blood, urine and feces. Definitions of ALT, AST, bilirubin, urobilin, urea, creatinine, total protein and its fractions, K +, Ca 2+, Na +, KSS, etc. in the blood. Determination of biochemical analyzes in urine. Indications for use, norms of indicators in age aspects in children. Interpretation of clinical and laboratory studies of the main and common surgical diseases in abdominal, thoracic, purulent surgery and neonatal surgery.

Ultrasonic diagnostics in pediatric surgery. Preparation of patients for research methods in surgical pathologies in children. Indications, contraindications, benefits and reliability of studies in age-related aspects in children. Interpretation of X-ray, radioisotope and ultrasound data of the study in the main and common surgical diseases in abdominal, thoracic, purulent surgery and neonatal surgery.

X-ray (survey, contrast) and radioisotope research methods in pediatric surgery. Preparation of patients for radiological research methods in surgical pathologies in children. Indications, contraindications, benefits and reliability of studies in age-related aspects in children. Interpretation of radiological research methods in the main and common surgical diseases in abdominal, thoracic, purulent surgery and neonatal surgery.

Computed tomography (CT) and nuclear magnetic resonance imaging (NMRI). CT mechanism of work, features of the use of childhood, indications, contraindications. NMRI mechanism of work, features of the use of childhood, indications, contraindications. Preparation of patients for research methods in surgical pathologies in children. Indications, contraindications, benefits and reliability of studies in age-related aspects in children. Interpretation of CT and MRI study data in the main and common surgical diseases in abdominal, thoracic, purulent surgery and neonatal surgery.

Endoscopic research methods (EFGDES, sigmoidoscopy, colonoscopy, esophagoscopy, tracheobronchoscopy, urethrocystoscopy) in pediatric surgery. The structure of the apparatus and the technique of conducting (EFGDS, sigmoidoscopy, colonoscopy, tracheobronchoscopy, urethrocystoscopy, nephroscopy, laparoscopy, thoracoscopy) mechanism of work, features of the use of childhood, indications and contraindications. Preparation of patients, depending on the type of pathology and age of patients, for each research method in surgical pathologies in children. Indications, contraindications, benefits and reliability of studies in age-related aspects in children. Interpretation of endoscopic data of the study in the main and common surgical diseases in abdominal, thoracic, purulent surgery and neonatal surgery.

Recommended literature:

Main literature:

1. Mitkova V. V. A practical guide to ultrasound diagnostics. General ultrasound diagnostics. Vidar. 2011. 720 with illustrations.
2. Kushin A. A. Clinical laboratory diagnostics. GEOTAR-Media. 2010
3. Lindenbraten L. D. , Korolyuk I. P. , Medical Radiology. 2nd edition, revised and supplemented - M. : 2004. 235 p.

Additional literature:

1. Radiation safety standards of the Republic of Uzbekistan. Tashkent. 2005.
2. Lindenbraten L. D. , Korolyuk I. P. , Medical Radiology. 2nd edition, revised and supplemented - M. : 2004. 235 p.
3. Vasiliev A. Yu. "Rentgenology" Pocket Atlas. M. 2008
4. Vesnin A. G. , Semenov I. I. "Atlas of radiation diagnostics of tumors of the musculoskeletal system". M. 2002
5. Kishkovsky A. N. , Tyutin L. A. "Urgent X-Ray Diagnostics". M. 1989

6. Kushin A. A. Clinical laboratory diagnostics. GEOTAR-Media. 2010.
7. Medvedev V. V. Clinical laboratory diagnostics. Directory. M. 2006.
8. Mitkova V. V. A practical guide to ultrasound diagnostics. General ultrasound diagnostics. Vidar. 2011. 720 with illustrations.
9. Trufanov G. E. Guide to radiodiagnosis of the abdominal organs. Elbi-SPb. 2014. 432p.
10. Schmidt G. Differential diagnosis in ultrasound Med-press-inform. 2014. 816 p.

Internet sites:

1. www.radiomed.ru
2. www.radiography.ru
3. Website of a practical radiologist (http. zhuravlev. info)
4. www.wikipedia.ru

Disciplines of the main specialties pediatric surgery (2112 hours)

Target: the training program in clinical residency in the specialty "Pediatric Surgery" is the training of highly qualified pediatric surgeons who possess the proper amount of knowledge, skills, practical skills that meet the requirements of certification and licensing as specialists.

Tasks: Theoretical training of a clinical resident (CO) in accordance with the basic level within the framework of the bachelor's degree program 5A720202 "Pediatric Surgery".

Practical training of KO, independent activity as a highly qualified pediatric surgeon. Possessing in full the necessary practical skills within the framework of the State Standard of the educational professional program in the specialty 5A720202 "Pediatric Surgery".

Expected results:

-Prepare for independent practice as a pediatric surgeon who fully possesses the necessary skills for diagnosing and treating children with various congenital and acquired surgical diseases of the internal organs.

-Teach preventive measures to reduce infant mortality in various malformations.

-Implementation of research to identify risk factors with congenital malformations of internal organs in children, the development of preventive measures to reduce mortality in various malformations of diseases.

-Preparation and participation in conducting thematic cycles, methodological seminars and consultations on new technologies, methods of diagnosis, treatment and prevention of surgical patients.

-To develop at the present level knowledge on the basic concepts of the specialty of pediatric surgery as a discipline, a brief history of the specialty.

-To develop knowledge on the use of modern methods for diagnosing surgical diseases in children.

-To develop the skills of self-determination of the required volume and a set of medical and diagnostic measures for a pediatric surgical profile.

-To teach to carry out the necessary and adequate medical, diagnostic manipulations and procedures for patients on an outpatient and inpatient basis.

-To develop the ability to interpret the results of modern laboratory and instrumental studies of sick children with surgical diseases.

-To develop the skills of providing highly qualified assistance at the modern level in emergency conditions in children with surgical diseases.

-To develop skills in intensive care for surgical diseases of internal organs.

-To develop the ability to implement preventive measures to reduce the incidence rate, the most common surgical diseases and prevent their complications.

- Mastering the technique of surgical operations in accordance with the program and independent performance during the preparation of some operations in children.

- Mastering the knowledge of the legal base of the specialty of a pediatric surgeon, knowledge of the norms of medical ethics, deontology and their practical application in pediatric surgery.

Model curriculum for the specialty "Pediatric Surgery"

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester			
		clock	%	Auditory lessons (clock)			Self-preparation	1 year		2 year	
				Total	Theory	Practice		1	2	3	4
	Pediatric surgery			2112				916	96	924	176
1	Emergency Abdominal Surgery			232							
2	Emergency Thoracic Surgery			120							
3	Emergency Pediatric Urology			96							
4	Elective surgery			608							
5	Surgical infection			300							
6	Thoracic Surgery			96							

7	Urology			180							
8	Neonatal surgery			162							
9	Ambulatory surgery			318							

Pediatric emergency abdominal surgery (232 hours)

The purpose and objectives of the discipline. The purpose of the pediatric emergency abdominal surgery cycle is to acquire and consolidate modern professional knowledge on the etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of surgical diseases in children with lesions of the gastrointestinal tract and respiratory system. The resident must improve the general clinical examination of the patient (history, examination, palpation, percussion, auscultation of the abdomen and lungs); interpretation of data from X-ray and ultrasound examination of the gastrointestinal tract and respiratory system, laboratory studies; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Program content.

Modern provision of emergency abdominal operations in children. Normative legal acts regulating the provision of emergency surgical care to children.

Acute appendicitis and its complications. Clinical picture depending on age, duration of the disease, localization of the appendix, diagnosis, differential diagnosis, tactics, treatment. Causes and classification, clinic, diagnosis, differential diagnosis. Conservative and surgical treatment. Unlike adults, acute appendicitis in children is clinically more severe, and the diagnosis is much more difficult. These patterns are most pronounced in children of the first years of life, which is due to the anatomical and physiological characteristics of the child's body.

peritonitis in children. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics. Tactics depending on the etiology of peritonitis. Conservative and surgical treatment.

Foreign bodies of the stomach and gastrointestinal tract. Clinic, diagnostics, differential diagnostics. Conservative and surgical treatment.

Bleeding of the gastrointestinal tract. Etiology, pathogenesis of surgical bleeding of the gastrointestinal tract depending on the source. hemorrhagic shock. Clinic, diagnostics, differential diagnostics. Conservative and surgical treatment.

Trauma of the abdominal cavity and retroperital space. Causes, classification, clinical picture of damage to hollow and parenchymal organs, diagnosis, differential diagnosis, tactics, treatment.

Acute acquired intestinal obstruction. Classification, clinical picture, diagnosis, differential diagnosis, tactics, treatment of adhesive intestinal obstruction. Classification, clinical picture, diagnosis, differential diagnosis,

tactics, treatment of intussusception. Strangulated hernias: clinical picture, diagnosis, differential diagnosis, tactics, treatment.

Urgent anorectal anomalies (non-fistulous forms of atresia). Classification, clinical picture, diagnosis, differential diagnosis, tactics, treatment.

Acute pancreatitis. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment.

Acute cholecystitis. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment.

mechanical jaundice. Cholelithiasis, obstructive jaundice. Modern idea of etiology and pathogenesis. Classification. Clinical picture, diagnosis, differential diagnosis. Methods of treatment. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, radiography of the abdominal organs, CT, MRI). Indications for surgical methods of treatment. Laparoscopic methods of treatment. Forecast. Outcomes. Medical examination.

Emergency thoracic surgery for children (120 hours).

The purpose and objectives of the discipline. The purpose of the cycle of emergency thoracic surgery in children is to acquire and consolidate modern professional knowledge on etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of emergency thoracic diseases in children, methods of examining chest organs. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation); interpretation of the data of X-ray methods and ultrasound examination of patients with emergency pathologies of the chest organs; laboratory research; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Program content.

Trauma to the chest. Etiology, pathogenesis, classification, clinical picture, diagnosis, treatment, complications. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, chest x-ray, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Indications for spa treatment.

Diaphragmatic hernia in children. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, general urine analysis). Instrumental diagnostics (ultrasound, chest x-ray, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Acute lobar emphysema. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general

blood count, coagulogram, general urine analysis). Instrumental diagnostics (ultrasound, X-ray methods of research, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Burns of the esophagus. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, X-ray methods for examining the esophagus, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Destructive pneumonia (destruction with intrapulmonary and pleural complications). Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Treatment, complication. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, chest x-ray, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Pediatric emergency urology (96 hours)

The purpose and objectives of the discipline. The purpose of the pediatric emergency urology cycle is to acquire and consolidate modern professional knowledge on etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of emergency urological diseases in children with urinary system lesions, and methods for studying the urinary system. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation); interpretation of data from X-ray methods and ultrasound examination of the urinary system, laboratory tests; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Program content.

Urinary tract injury in children. Pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Acute urinary retention and anuria in children. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Syndrome of edematous scrotum in children. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Elective pediatric surgery (608 hours)

The purpose and objectives of the discipline. The purpose of the pediatric elective surgery cycle is to acquire and consolidate modern professional knowledge on the etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of surgical diseases in children with lesions of the gastrointestinal tract and anterior abdominal wall, methods of research of the gastrointestinal tract.

The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation of the abdomen); interpretation of data from X-ray and ultrasound examination of the gastrointestinal tract, laboratory studies; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Program content.

Hernia of the abdomen. Inguinal hernia clinic, diagnosis, differential diagnosis, tactics. Femoral hernia clinic, diagnosis, differential diagnosis, tactics, treatment. Umbilical hernia clinic, diagnosis, differential diagnosis, tactics, treatment. Hernia of the white line of the abdomen clinic, diagnosis, differential diagnosis, tactics, treatment.

Pathology of the vaginal process of the peritum in children. Clinic, diagnostics, differential diagnostics, tactics, treatment.

Abdominal cysts. Cyst of the greater omentum, clinic, diagnosis, differential diagnosis, tactics, treatment. Mesenteric cysts clinic, diagnostics, differential diagnostics, tactics, treatment. Enterocystoma clinic, diagnostics, differential diagnostics, tactics, treatment. Genital cysts in girls, clinic, diagnosis, differential diagnosis, tactics, treatment.

Chronic colostasis and Hirschsprung's disease in children. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment.

Duplication and polyps of the gastrointestinal tract in children. Syndromes of Peitz-Yegers, Gardner. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment.

Diseases of the umbilicus in children. Congenital fistulas of the navel. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment.

Intestinal fistulas. Causes, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, tactics. Conservative and surgical treatment. Social problems of entero- and colostomy.

Diseases of the liver and biliary tract. Atresia and hypoplasia of the biliary tract. Congenital cystic dilatation of the common bile duct. Modern idea of etiology and pathogenesis. Classification. Clinical picture, diagnosis, differential diagnosis. Methods of treatment. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis,). Instrumental diagnostics (ultrasound, X-ray methods for examining the abdominal organs, CT, MRI). Indications for surgical methods of treatment. Laparoscopic methods of treatment. Forecast. Outcomes. Medical examination.

Surgical infection in children (300 hours)

The purpose and objectives of the discipline. The purpose of the surgical infection cycle in children is to acquire and consolidate modern professional knowledge on the etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of surgical diseases in children, with lesions of the b1, gastrointestinal, respiratory, cardiovascular and lymphatic systems, skin and subcutaneous tissue, homeostasis. Methods for studying the b1, gastrointestinal, respiratory, cardiovascular and lymphatic systems, skin and subcutaneous tissue. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation); interpretation of X-ray data and ultrasound examination of the b1, gastrointestinal, respiratory, cardiovascular systems, skin and subcutaneous tissue,

Program content

General characteristics of purulent-inflammatory diseases in children. Principles and methods of local treatment of purulent wounds. Purulent diseases of the skin and subcutaneous tissue. Purulent diseases of the skin and subcutaneous tissue of newborns. Hematogenous osteomyelitis in children. Purulent arthritis. Purulent-inflammatory diseases of the hand and foot.

Acute hematogenous osteomyelitis. Acute hematogenous osteomyelitis in children under 3 years of age. Acute hematogenous osteomyelitis in older children. Epiphyseal osteomyelitis. Primary and secondary chronic hematogenous osteomyelitis. Acute hematogenous osteomyelitis of the b1s forming the hip joint. Modern idea of etiology and pathogenesis. Classifications. Clinic, diagnostics, differential diagnostics. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Immunological research methods. Instrumental diagnostics (ultrasound, radiography of b1s and joints, CT, MRI). Osteotometry. Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination.

Purulent diseases of the skin, subcutaneous tissue, lymphatic and blood vessels. Purulent mastitis, necrotic phlegmon, adipocrosis in newborns. Omphalitis in newborns. Furuncle, carbuncle. Abscess. Phlegmon. Erysipelas. Pyoderma, Finger's pseudofurunculosis, paronychia in young children. Purulent lymphadenitis. Adenophlegmon. Modern idea of etiology and pathogenesis. Classifications. Clinic, diagnostics, differential diagnostics. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Immunological research methods. Instrumental diagnostics (ECG, ultrasound, radiography, CT, MRI). Indications for surgical methods of treatment. Indications for conservative treatment methods. Forecast. Outcomes. Medical examination. Rehabilitation in an outpatient setting.

Sepsis. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Bacteriological methods for the study of blood, urine, wound contents. Immunological research methods. Performing screening tests (procalcitonin test). Instrumental diagnostics (ECG, ultrasound, radiography, CT, MRI, FGDS). Indications for the appointment of infusion, antibacterial, metabolic therapy. Modern methods of detoxification. Indications for conservative and surgical treatment. Forecast.

Pediatric Thoracic Surgery (96 hours)

The purpose and objectives of the discipline. The purpose of the pediatric thoracic surgery cycle is to acquire and consolidate modern professional knowledge on the etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of thoracic diseases in children, methods of examining chest organs. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation); interpretation of the data of X-ray methods and ultrasound examination of patients with pathologies of the chest organs; laboratory research; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Program content.

Congenital malformations of the lungs and sternum. (Agenesis, aplasia and hypoplasia of the lungs, lobar emphysema). Modern idea of etiology and pathogenesis. Classification, clinic, diagnostics, differential diagnostics. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, X-ray methods, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Diaphragmatic hernia in children. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, chest x-ray, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Congenital cysts of the lungs. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, X-ray methods of research, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Destructive pneumonia (destruction with intrapulmonary and pleural complications). Etiology, pathogenesis, classification, clinical picture, diagnosis, treatment, complications. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, chest x-ray, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Indications for spa treatment.

Pediatric Urology (180 hours)

The purpose and objectives of the discipline. The purpose of the cycle of pediatric urology is to acquire and consolidate modern professional knowledge on the etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of urological diseases in children with lesions of the urinary system, methods of studying the urinary system. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation); interpretation of data from X-ray methods and ultrasound examination of the urinary system, laboratory tests; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Program content.

Anomalies in the development of the kidneys and urinary tract in children. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Urolithiasis disease. Modern idea of etiology and pathogenesis. Classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Epispadias, hypospadias. Etiology, pathogenesis, classification, clinical picture, diagnosis, treatment, complications. Laboratory research methods

(general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Spa treatment.

Infravesical obstructive diseases in children. Etiology, pathogenesis, classification, clinical picture, diagnosis, treatment, complications. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Indications for surgical methods of treatment. Forecast. Outcomes.

Synechia of the preputial sac and labia minora. Phimosis. Paraphimosis. Etiology, pathogenesis, classification, clinical picture, diagnosis, treatment, complications. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Indications for surgical methods of treatment. Forecast. Outcomes.

Wilms tumor. Tumors of the bladder, testis, ovary. Modern idea of etiology and pathogenesis. Classification, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis, urinalysis according to Nechiporenko, Zimnitsky, daily protein loss). Instrumental diagnostics (ultrasound, X-ray methods for examining the organs of the genitourinary system, CT, MRI). Indications for surgical methods of treatment. Forecast. Outcomes. Medical examination. Indications for spa treatment. Rehabilitation in an outpatient setting.

Neonatal surgery (162 hours)

The purpose and objectives of the discipline. The purpose of the neonatal surgery cycle is to acquire and consolidate modern professional knowledge on the etiology, pathogenesis, diagnosis, differential diagnosis, treatment and prevention of urological diseases in children, with lesions of the gastrointestinal tract, respiratory and cardiovascular systems, methods of studying the gastrointestinal tract, respiratory and cardiovascular systems. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation of the abdomen, lungs, heart); interpretation of data from X-ray methods and ultrasound examination of the gastrointestinal tract, respiratory and cardiovascular systems, laboratory studies; Familiarize yourself with the indications and contraindications for surgical methods of treatment,

Contents of the neonatal surgery program

Congenital malformations of the esophagus. Esophageal atresia. Congenital narrowing of the esophagus, tracheoesophageal fistulas, diverticula. Modern idea of etiology and pathogenesis. Classification. Clinic, diagnostics,

differential diagnostics. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, radiography of the abdominal and thoracic organs, CT, MRI). Rules for transportation to a surgical hospital, preoperative preparation. Methods of surgical treatment. Forecast. Outcomes. Medical examination.

Congenital intestinal obstruction. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment. Congenital intestinal obstruction.

Embryonic hernia of the umbilical cord, gastroschisis. Anomalies of the vitelline and urinary ducts. Etiology, pathogenesis, classification, clinic, diagnostics, differential diagnostics, tactics. Conservative and surgical treatment. Diseases of the umbilical cord, umbilical wound and umbilical vessels. Non-infectious and infectious: omphalitis, thrombophlebitis of the artery of the umbilical vessels, gangrene of the umbilical cord.

Congenital malformations of the diaphragm. Diaphragmatic hernia in children. Classification. Decompensated course of diaphragmatic hernia. Modern idea of etiology and pathogenesis. Classifications. Clinic, diagnostics, differential diagnostics. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Instrumental diagnostics (ultrasound, radiography of the abdominal and thoracic organs, CT, MRI). Rules for transportation to a surgical hospital, preoperative preparation. Methods of surgical treatment. Laparoscopic methods of treatment. Forecast. Outcomes. Medical examination.

Congenital pathology of the anterior abdominal wall. Omphalocele. Gastroschisis. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Methods of surgical treatment. Rules for transportation to the surgical hospital. Forecast. Outcomes. Medical examination.

Necrotizing enterocolitis of newborns. Concept. Etiology and pathogenesis. Classification. Clinical picture, diagnosis, tactics. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Indications and contraindications for instrumental diagnostic methods (ultrasound, radiography of the abdominal and thoracic organs, CT, MRI, FGDS). Indications for conservative and surgical treatment. Methods of operations.

Anorectal malformations. Classification. Clinical picture, diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urine analysis). Indications for instrumental research methods (ultrasound, radiography of the abdominal organs, fistulography, CT, MRI). Methods of surgical treatment. Methods of operations. Rules for transportation to the surgical hospital. Surgical tactics. Mistakes in treatment.

Pediatric outpatient surgery (318 hours)

Purpose: to teach students the basic classical methods of examining a surgical patient: correctly conduct an objective examination, percussion, palpation, auscultation; correct differential diagnosis of surgical diseases; correctly formulate a diagnosis according to existing classifications; determine treatment tactics in a polyclinic.

Pediatric outpatient surgery

Organization of the work of a pediatric surgeon in a polyclinic.

Consultative-diagnostic, therapeutic, preventive, organizational, methodological, sanitary-educational and psychotherapeutic functions of a pediatric surgeon in a polyclinic. Medical documentation.

Preventive checkups. Dispensary registration groups for surgical pathology. Medical examination and rehabilitation treatment.

Self-administration of patients. Surgical interventions in children on an outpatient basis. Treatment of purulent wounds.

Bite wounds, debridement, emergency tetanus and rabies vaccinations.

Recommended literature:

Main literature:

1. Atlas of Pediatric Operative Surgery. Ed. P. Puri, M. Golvarta. Translation from English under the general editorship of T. K. Nemilova. Moscow "MEDpress-inform", 2009.
2. Ashcraft K. W, Holder T. M. Children's surgery. v. 1,2,3. Saint Petersburg. 1996-1997.
3. Bairov G. A. Roshal. Purulent surgery of childhood. St. Petersburg 1991.
4. Bairov G. A. Urgent surgery for children. L. Medicine. 1997
5. Pediatric surgery national guidelines edited by acad. RAMS Yu. F. Isakova, prof. F. F. Dronova. Moscow. "GEOTAR-Media" 2014, 604 p.
6. Dronov A. F. Endoscopic surgery in children. M. 2002.
7. Isakov Yu. F. , Razumovsky A. Yu. Children's surgery. M. : "GEOTAR-Media" 2014, 604 p.
8. Isakov Yu. F. , Lopukhin Yu. M. Operative surgery and topographic anatomy of childhood. M. M. 1989.
9. Isakov Yu. F et al. Guidelines for thoracic surgery in children. M. 1984
10. Lenyushkin A. I. Guidelines for pediatric polyclinic surgery. L. 1986
11. Lectures on Pediatric Surgery: Textbook. Edited by V. V. Podkamenev-M. ; Medical book, 2010. 368 p.
12. Lopatkin N. A. , Pugachev A. G. Pediatric urology. Management. M. ; The medicine. 1986. 496 p.
13. Podkamenev V. V. Surgical diseases in children. Tutorial. - M. : "GEOTAR-Media" 2012. 432 p.
14. Razumovsky A. Yu. , Mitupov Z. B. Endosurgical operations in thoracic surgery in children. M. : "GEOTAR-Media" 2010. 304 p.

15. Sulaymonov A. S. etc. Bolalar surgery. Tashkent 2000

Additional literature:

1. Bozhenkov Yu. G. , Storozhenko I. N. , Chernyshev A. K. Intensive care in emergency abdominal surgery. Moscow; Medical book 2001.
2. Derzhavin V. M. , Kazanskaya I. V. , Vishnevsky E. L. , Gusaev B. S. Diagnosis of urological diseases in children with GSV. M Leningrad. 1984
3. Kotovich L. E. Acute purulent diseases of the chest cavity in young children. Minsk Highest School 1979
4. Lopatkin N. A. , Pugachev A. G. , Rodoman V. E. Pyel1phritis in children. M. Medicine 1979.
5. Tereshchenko A. V. Surgery for malformations of the ureters in children. Kiev Healthy 1981.
6. Sleptsov I. V. , Chernyakov R. A. Knots in surgery. St. Petersburg 2000.
7. Struchkov V. I. , Pugachev A. G. Guide to pediatric thoracic surgery. M. Medicine. 1975.
8. Shamsiev A. M. Acute destructive pneumonia in children. Tashkent.
9. Gillenwater J. et al. Adult ant pediatric urology/1-2/1987

Magazines:

1. Russian Bulletin of Pediatric Surgery, Anesthesiology and Resuscitation. (Moscow).
2. Pediatric surgery (Moscow).
3. Pediatrics (Uzbekistan).
4. New day in medicine (Uzbekistan).
5. Surgery in Uzbekistan

Electronic sources:

-Standards of medical care: <http://www.rspor.ru/index.php?mod1=standards3&mod2=db1>

- Patient management protocols:

<http://www.rspor.ru/index.php?mod1=protocols3&mod2=db1>

-State register of medicines:

<http://www.drugreg.ru/Bases/WebReestrQuery.asp>

Electronic versions of journals:

- "Consilium medicum" -<http://www.consilium-medicum.com/media/consilium>

- "Russian Medical Journal" - <http://www.rmj.ru>

- "Difficult patient" - <http://www.t-patient.ru>

Pediatric anesthesiology and resuscitation (144 hours)

The purpose and objectives of the discipline. Raising the level of theoretical knowledge and practical skills of residents in the most important

sections of pediatric anesthesiology and intensive care during planned and emergency surgical interventions.

Model curriculum for the section of Pediatric anesthesiology and resuscitation

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester					
		clock	%	Classroom activities (hours)			Self-preparation	1 year		2 year			
				Total	Theory	Practice		1	2	3	4		
1	Pediatric anesthesiology and resuscitation			144									144
	Acute respiratory failure in children			24									
	Acute circulatory disorders in children			24									
	Changes in the functions of vital organs and systems during anesthesia and surgery			24									
	Basic principles of respiratory support in children			24									
	Anesthesia and intensive care in newborns with congenital and acquired surgical pathology			24									
	Resuscitation and intensive care in case of accidents in children			24									

Program content

Acute respiratory failure (ARF) in surgical pathology in children. Classification, physiological mechanisms of respiratory failure. Hypoxia and hypercapnia, their physiological effects. Diagnostic criteria for ARF. Tasks, methods and means of respiratory, antihypoxic intensive therapy.

Acute circulatory disorders in surgical pathology. Physiology of volemic and rheological disorders. Diagnostic criteria, the concept of the hemodynamic situation (diagnosis). hemorrhagic shock. Methods and

preparations for intensive regulation of hemodynamics, correction of disorders. Compensation for blood loss.

Diagnosis and methods of correction of metabolic changes (substrate-energy, hydroionic imbalance, changes in the active reaction of the internal environment. Technique of venipuncture, venesection, percutaneous catheterization of central veins. Indications and contraindications. Dangers and complications. Rules for caring for a venous catheter. Methods of intensive detoxification therapy for surgical pathology, Calculation algorithm and features infusion therapy in newborns.

Acute respiratory failure in children: etiology, pathogenesis, intensive therapy. Acute obstruction of the airways, methods of ensuring their patency. Acute respiratory failure (ARF) in children (definition, pathogenesis, classification). The most common causes of ARF in the postoperative period. Determining the severity of ARF. Basic principles of intensive care. Acute airway obstruction. Main reasons. Airway management methods: tracheal intubation; installation of a laryngeal mask, combitube, conicotomy.

Acute cardiovascular insufficiency, shock conditions in children, diagnostics, intensive care. Acute cardiovascular insufficiency: definition, etiology, pathogenesis, diagnosis. Basic principles of intensive care. Pulmonary edema: the main causes of development, prevention and intensive care. Shock conditions: etiology, pathogenesis, diagnosis, basic principles of intensive care. Classification of shock: cardiogenic, hypovolemic, distributive (distributive), obstructive. Burn shock: classification, intensive care. Anaphylactic shock in emergency surgery.

Basic principles of respiratory support in children. The concept of respiratory support. Respiratory support methods (inhalation with humidified oxygen, nasal cannula, non-invasive ventilation, high-frequency ventilation, traditional ventilation). Indications for IVL. Basic principles of IVL in newborns and infants. Oscillatory IVL in newborns. Dangers and complications of mechanical ventilation, methods of their prevention. Monitoring during IVL.

Preparing a child for surgery and anesthesia for planned and emergency operations. Infusion-transfusion therapy in the perioperative period. Preparing a child for surgery. Criteria for assessing the initial state. The value of concomitant pathology. Premedication: main tasks, methods, effectiveness evaluation. Medicines for premedication. Basic infusion therapy in children. Indications for infusion therapy. Basic principles for determining the volume and qualitative composition of infusion therapy in the intra- and postoperative period. Classification of infusion media. Blood products: (plasma, erythrocyte mass): indications, contraindications, complications.

Anesthesia and intensive care in emergency operations in children. Peculiarities of anesthesia in emergency surgical interventions in children. Anesthesia and intensive care in children with peritonitis, intestinal obstruction, traumatic brain injury. Intraoperative monitoring. Possible complications of anesthesia and ways to prevent them.

Anesthesia and intensive care in newborns with congenital and acquired surgical pathology. Features of preoperative preparation, anesthesia and intensive care of newborns with malformations: congenital diaphragmatic hernia, esophageal atresia, high and low intestinal obstruction, necrotizing enterocolitis. Monitoring standards. Possible complications and ways of their prevention.

Features of the postoperative period in children. Postoperative anesthesia. Standard for monitoring hemodynamics, respiration, electrolyte imbalance and CBS. Scale assessment of pain in children respiratory support in the postoperative period. Methods of postoperative pain relief in children: narcotic and non-narcotic analgesics. Place of regional anesthesia in postoperative anesthesia.

Recommended literature.

1. Anesthesiology: national guidelines / ed. A. A. Bunatyan, V. M. Mizikov. –M. : GOETAR-Media, 2011. 114p.

2. Intensive care: national guidelines: in 2 volumes / ed. B. R. Gelfand, A. I. Saltanov. - M. : GOETAR-Media, 2009. - T. I. -960s. - (Series "National Guidelines").

3. Intensive care: national guidelines: in 2 volumes / ed. B. R. Gelfand, A. I. Saltanov. - M. : GOETAR-Media, 2009. - T. I. -784p. - (Series "National Guidelines").

Optional:

1. Zilber A. P. Sketches of critical medicine / A. P. Zilber. - M. : MEDpress-inform, 2006. -568 p.

2. Zilber A. P. Sketches of critical medicine / A. P. Zilber. - M. : MEDpress-inform, 2007. -792 p.

Electronic sources

-www.niiorramn.ru-Website of the Institute of General Resuscitation of the Russian Academy of Medical Sciences

-IT-MEDICAL. RU-Scientific medical Internet project. A large amount of literature in Russian for specialists.

Pediatric traumatology and orthopedics (90 hours)

The purpose and objectives of the discipline is the training of residents in the modern provisions of the theoretical and practical sections of traumatology and orthopedics of childhood. It is necessary to pay attention to the etiology, pathogenesis of major orthopedic diseases, injuries, methods of prevention, diagnosis, treatment of the pathology of the musculoskeletal system. The resident must improve the general clinical examination of the patient (anamnesis, examination, palpation, percussion, auscultation); interpretation of X-ray and ultrasound examination data, laboratory tests; Familiarize yourself with the indications and contraindications for surgical methods of treatment.

Model curriculum for the section Pediatric Traumatology and Orthopedics

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester				
		clock	%	Classroom activities (hours)			Self-preparation	1 year		2 year		
				Total	Theory	Practice		1	2	3	4	
	Pediatric traumatology and orthopedics			90								90
	Introduction to Traumatology and Orthopedics			12								
	Methods of clinical examination			14								
	Congenital malformations of limbs			sixteen								
	Congenital deformities of the lower extremities			sixteen								
	Scoliosis			14								
	Rehabilitation of orthopedic patients			18								

Program content

Methods of clinical examination(survey, inspection, palpation, anthropometry, h8 measurement, limb length measurement technique, limb circumference measurement, study of joint function, measurement of range of motion in joints, foot measurement, recording measurement results, determination of range of motion, determination of muscle strength). X-ray diagnostics, CT, angiography, biomechanical and electromyographic diagnostic methods, functional diagnostic methods.

Upper limb injuries. Frequency and prevalence of injuries of the upper extremity. Causes of occurrence, features of injuries and their treatment in different age groups. Injury prevention.

Lower limb injuries. Frequency and prevalence of injuries of the lower extremity. Causes of injuries at home and at work. Features of injuries and their treatment in different age groups. Injury prevention.

Congenital malformations of the limbs. Congenital deformities of the lower extremities. Classification of congenital orthopedic pathology. Frequency, prevalence of congenital diseases. Causes contributing to the occurrence of congenital orthopedic pathology (endogenous, exogenous,

genetic). Classification of orthopedic congenital pathology. Congenital underdevelopment of the limbs, amniotic constriction, congenital shortening of the limb, congenital false joints. Their clinical manifestations and specialized treatment.

Scoliosis. Concept definition. Etiopathogenesis. Pathological anatomy. Classification. Clinic. X-ray diagnostics. Determination of the scoliotic deformity arc according to Kob and Ferguson-Risser. Changes in the cardiovascular and respiratory systems in patients with scoliotic disease. Signs of possible progression of spinal deformity. Modern conservative and surgical treatment. The role of boarding schools in the treatment of patients with scoliotic disease.

Rehabilitation of orthopedic patients. Definition of the concept of "rehabilitation". Basic principles of rehabilitation. Sections included in the content of rehabilitation. Purpose of rehabilitation. Types of rehabilitation (medical, social, household and professional). Organization and organization of the rehabilitation department. Applied methods and methods of rehabilitation of orthopedic trauma patients.

List of recommended literature.

Main literature.

1. Traumatology and orthopedics: a textbook for students of higher educational institutions; ed. G. M. Kavalersky. - M. , Publishing Center "Academy", 2008.
2. Traumatology: national guidelines / ed. G. P. Kotelnikova, S. P. Mironova. - M. : GEOTAR-Media, 2008, - 808 p.
3. Bairov G. A. Pediatric traumatology. - St. Petersburg: St. Petersburg, 2000

Additional literature.

1. Sokov L. P. Course of Traumatology and Orthopedics: Textbook for universities / Number of authors: Sokov L. P. and etc. ; Under total Red L. P. Sokova; Responsible ed. S. L. Sokov; Ros. University of Friendship of Peoples. -2 ed. , revised. And extra. - M. , 2007. -388 p.
2. Ovdenko A. G. Gunshot wounds and gunshot osteomyelitis of the extremities: monograph / A. G. Ovdenko. - St. Petersburg: Publishing and polygraph. Enterprise "Art of Russia", 2010. - 238 p.
3. Dolinin V. A. Operations for wounds and injuries. – 4th ed. , revised. II add. -St. Petersburg: Folio, 2005. -182 p.
4. Traumatology and Orthopedics: Proc. manual for universities / Ed. N. V. Kornilova. - St. Petersburg: Hippocrates, 2005. -537 p.
5. Operations for wounds and injuries. – 4th ed. , revised. and additional - St. Petersburg: Folio, 2005. -182 p.
6. D. Yu. Madai; Research Institute of Emergency Medicine. I. Iyu Dzhanelidze, Novgorod. State. un-t im. Yaroslav the Wise, Dept. Surgeon. and an orthopedist. Dentistry. - St. Petersburg, 2006. -33 p.
7. Movshovich I. A. Operative Orthopedics: A Guide for Irachi. - 3rd ed. , revised. and additional – M. : Medical inform. agency, 2006. -447 p.

8. Nadeev A. A. Endoprostheses of the hip joint in Russia: Philosophy of construction, review of implants, rational choice. – M. : BINOM. Knowledge Laboratory, 2006. -177 p.

9. Paul Bragg on the spine / Ed. Sergienko Yu. V. – M. : Ripol Classic, 2005. -63 p.

10. Essays on the history of Russian military field surgery in portraits of outstanding surgeons / Ed. E. K. Gumanenko. - St. Petersburg: Folio, 2006. -342 p.

Pediatric oncology (72 hours)

The purpose and objectives of the discipline: clinical manifestations of tumor diseases, examination methods that allow them to be diagnosed or excluded, the algorithm for using examination methods, as well as the procedure for referring patients with established oncological pathology to specialized institutions. Choose the most informative methods of physical, instrumental and laboratory examination, summarize and correctly evaluate their results, document the information received in accordance with modern requirements.

Model Curriculum for Pediatric Oncology

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester					
		clock	%	Classroom activities (hours)			Self-preparation	1 year		2 year			
				Total	Theory	Practice		1	2	3	4		
1	Oncology of childhood			72					72				
2	Introduction			6									
3	Research methods (CT, MRI, etc. research)			18									
4	Benign extracavitary tumors.			18									
5	Teratoma of the sacrococcygeal region			12									
6	Tumors of the abdominal organs			18									

Program content

Benign extracavitary tumors. Benign soft tissue tumors in children (hemangioma, lymphangioma, pigmented nevi, dermoid cysts, lipomas,

pilomatrixomas, teratomas). Etiology, pathogenesis, classification, clinical picture, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis). Immunological research methods. Instrumental diagnostics (ultrasound, radiography of the abdominal organs, CT, MRI). Data from additional examination methods: cytology, histology. Indications for surgical methods of treatment. Indications for conservative treatment methods. Forecast. Outcomes. Medical examination.

Teratoma of the sacrococcygeal region. Clinic, diagnosis, treatment.

Tumors of the retroperitoneal space and abdominal organs. Clinic, diagnosis, treatment.

B1 tumors in children. Osteogenic sarcoma. Ewing's sarcoma. Etiology, pathogenesis, classification, clinical picture, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis). Immunological research methods. Instrumental diagnostics (ultrasound, radiography of the abdominal organs, CT, MRI). Data from additional examination methods: cytology, histology. Indications for surgical methods of treatment. Indications for conservative treatment methods. Forecast. Outcomes. Medical examination.

Tumors of the abdominal organs. Lymphosarcoma. Hepatoblastoma. Splenomegaly. Wilms tumor (nephroblastoma). Neuroblastoma of the retroperitoneum. Etiology, pathogenesis, classification, clinical picture, differential diagnosis. Laboratory research methods (general blood count, coagulogram, blood biochemistry, general urinalysis). Immunological research methods. Instrumental diagnostics (ultrasound, radiography of the abdominal organs, CT, MRI). Data from additional examination methods: cytology, histology. Indications for surgical methods of treatment. Indications for conservative treatment methods. Forecast. Outcomes. Medical examination.

List of recommended literature

Main literature:

1. I. A. Turabov, M. P. Razin. Oncological and tumor-like diseases of childhood. Tutorial. – Arkhangelsk, 2013. -96 p.

additional literature

1. Ed. Chistyakova S. S. Oncology for practitioners M 2009.

Electronic sources:

2. -Standards of medical care: <http://www.rspor.ru/index.php?mod1=standards3&mod2=db1>

3. - Patient management protocols:

4. <http://www.rspor.ru/index.php?mod1=protocols3&mod2=db1>

5. m-State Register of Medicines:

6. <http://www.drugreg.ru/Bases/WebReestrQuery.asp>

Plastic surgery for children (72 hours)

The purpose of the task of discipline. Acquisition by medical residents of the skills of examining patients aimed at identifying congenital and acquired defects of integumentary tissues and skeleton, establishing the clinical features of the identified pathology and the objective status of patients, assessing the diagnostic, prognostic value of detected symptoms to select the optimal method of surgical intervention.

Model Curriculum for Pediatric Plastic Surgery

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester					
		clock	%	Classroom activities (hours)			Self-preparation	1 year		2 year			
				Total	Theory	Practice		1	2	3	4		
	Pediatric plastic surgery			72					72				
	Principles of asepsis and antisepsis			24									
	Surgery of organs and abdominal cavities			24									
	Surgery of the anterior abdominal wall. Modern methods of hernioplasty.			24									

Program content

A plastic surgeon must have the following practical skills:

- Assessment of the local status of the patient with the correct filling of the working documentation.

- Carrying out instrumental research methods in the sections of plastic, reconstructive and aesthetic surgery.

- Carrying out monitoring of the patient's condition and the area of surgical intervention after performing reconstructive plastic and aesthetic operations.

- Skin plasty

- Fence of the main composite flaps used for the reconstruction of integumentary tissues.

- Regional anesthesia.

- Basic operative techniques used in aesthetic surgery

- Contour plastic

- Non-surgical correction of age-related changes in the face, neck, torso.

Recommended literature:

	Peculiarities of newborn care. Active detection of surgical pathology in newborns			18							
	Birth trauma in newborns			18							
	Congenital malformations of the biliary tract			18							

Program content

Examination of newborns with surgical pathology of various organs and systems. Clinical examination, indications for various research methods (ultrasound, X-ray diagnostics, clinical and laboratory research), the sequence of diagnostic methods.

Peculiarities of newborn care. Active detection of surgical pathology in newborns. Preoperative preparation of newborns with pathology of various organ systems. Features of the introduction of the postoperative period, depending on the nature of the surgical intervention. Alertness to surgical pathology in newborns, determination of the optimal timing of surgical treatment.

Birth trauma in newborns. Birth injuries of soft tissues, b1s, internal organs. Birth injuries of the brain, spinal cord. Perinatal lesions of the central nervous system. Intracranial hemorrhages. brain ischemia. Intranatal spinal cord injury.

Congenital malformations of the biliary tract.

Recommended literature:

Main:N. P. Shabalov. Neonatology, St. Petersburg, 2004.

1. A. V. Alimov. Neonatology, Tashkent, 2012.

Additional:Fundamentals of caring for a healthy and sick newborn baby. Kamilov A. I. , Tashkent. 2007

1. Pathology of premature babies. N. A. Prokoptseva. , E. F. Starykh. , R. A. Avdeeva. , E. G. Neiman. Rostov-on-Don. 2007.

2. Guidelines for neonatal resuscitation. UNICEF, 2006.

3. Neonatology. National leadership. N. N. Volodin. , E. N. Baybarin.

Bioethics (16 hours)

The purpose and objectives of the discipline. This course will explore fundamental moral issues that arise in medicine, health, and biotechnology. Some are as old as life itself: the vulnerability of illness, the fact of death. Some are new, brought on by a dizzying pace of technology that can unsettle our core ideas about human nature and our place in the world. And nearly all intersect

with issues of racial and gender equality, as well as policies affecting the world’s most vulnerable populations.

Designed to introduce students to the range of issues that define bioethics, together with core concepts and skills, this course should be of interest to undergraduates, health care professionals, policy makers, and anyone interested in philosophy or ethics.

Model curriculum for the Bioethics section

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester				
		hours	%	Classroom activities (hours)			Self-preparation	1 year		2 year		
				Total	Theory	Practice		1	2	3	4	
	Bioethics			16				16				
	Recognize core philosophy concepts in bioethics debates, including well-being, justice, and autonomy			4				4				
	Develop scientific literacy relevant to core bioethics topics such as abortion, genetic enhancement, and euthanasia			4				4				
	Understand key bioethics terms such as informed consent and medical futility			4				4				
	Practice engaging in reflective, respectful conversations with others on polarizing issues			4				4				

Informatics (32 hours)

The purpose and objectives of the discipline. That program aims to give trainees the tools to make sense of big data while working in a broad spectrum of entities across the health care industry. Physicians—who bring an in-depth knowledge of the operational parameters and constraints of a clinical environment—can make a unique contribution.

Designed to introduce students to the range of issues that define informatics, together with core concepts and skills, this course should be of interest to undergraduates, health care professionals, policy makers, and anyone interested in informatics.

Model curriculum for the Informatics section

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester			
		hours	%	Classroom activities (hours)			Self-preparation	1 year		2 year	
				Total	Theory	Practice		1	2	3	4
	Informatics			32				16	16		
	Clinical Informatics Introduction			2	2			2			
	Introduction Computer Hardware & Software			2		2		2			
	Medical Data			1	1			1			
	Medical Data: The Vocabulary and Semantics			1		1		1			
	Medical Decision Making			2	2			2			
	Knowledge Based Systems			4	2	2		4			
	Database Management Systems			4	2	2		4			
	Clinical Information Systems			4	2	2			4		
	Ambulatory Information Systems			4	2	2			4		
	Medical Literature Databases			2		2			2		
	Laboratory Support Systems			4	2	2			4		
	Computer Assistance in Medical Education			2		2			2		

Genetics (32 hours)

The purpose and objectives of the discipline. The genetic revolution has resulted in a paradigm shift that is changing contemporary medical practice and

requires that we provide educational resources in medical genetics. A fundamental concept is that both health and disease are produced by the interaction of the individual's genome and the environment.

The program involves evaluation of patients, presentation of clinical cases, coursework, presenting at conferences, and assigned readings that cover a broad spectrum of medical genetics information and terminology. Exposure to dysmorphology and teratology, prenatal diagnosis and newborn screening, inborn errors of metabolism, cancer genetics, neurogenetics, cardiovascular, hematopoietic, dermatologic and neurologic disorders and laboratory rotations in genetics biochemical, molecular and cytogenetic laboratories are important components of the training as well as participation in class lectures, post clinic presentations, seminars

Model curriculum for the Genetics section

No.	Name of blocks and objects	General labor intensity		The total workload of the student				Distribution of classroom hours by semester			
		hours	%	Classroom activities (hours)			Self-preparation	1 year		2 year	
				Total	Theory	Practice		1	2	3	4
	Genetics			32						16	16
	Genetics Inpatient Consult Service			2	1	1				2	
	Metabolic/Skeletal Dysplasia			2	1	1				2	
	Pediatric Hematology-Oncology			2	1	1				2	
	Neurogenetics			2	1	1				2	
	Genetics Elective/Individualized			2	1	1					2
	Prenatal Genetics			2	1	1					2
	Diagnostic Laboratory			2	1	1					2
	Adult Genetics			2	1	1					2

**Head of Pediatric surgery
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Assistant professor:**



F.S. Raupov

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A.T. Akhmedov