MINISTRY OF EDUCATION AND SCIENCE
OF THE KYRGYZ REPUBLIC
International School of Medicine

"APPROVED"
Rector of the International School of Medicine,
Doctor of Medical Sciences, Professor
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«____» ________________2017

EDUCATIONAL PROGRAM

of postgraduate medical training -
clinical residency
in the direction -530001- "General medicine"

qualification: "pediatrician"

Bichkek-2017
GENERAL PROVISIONS
about clinical residency
in the specialty "pediatrics"

Term of study is 3 years.

1. The purpose of clinical residency in the specialty "pediatrics"

Postgraduate education in the specialty "pediatrics" provides for the professional training of a specialist, a pediatrician of general practice, who has deep theoretical and practical knowledge in the diagnosis, prevention and treatment of common childhood diseases and who has the legal right to provide primary medical, social and medical care children of all age groups in the amount corresponding to the qualification characteristics of the doctor of this specialty.

The tasks of clinical residency in the specialty "pediatrics" include:
- to teach and give in-depth theoretical knowledge on the socio-economic and medical-biological foundations of the organization of practical public health and pediatric services, on medical and biological and social aspects of medical activity, on the epidemiology of common childhood diseases, on the main clinical sections of pediatrics, on issues family planning, healthy lifestyle, preventive medicine;
- to develop independent clinical thinking aimed at the effective use of the knowledge gained while providing timely, qualified medical and medico-social care to children of all age groups;
- to develop practical skills of hospital and community diagnosis of common diseases and provision of qualified medical care to children, including medical manipulations for prehospital and hospital medical care, as well as training in primary resuscitation and emergency and emergency aid;
- to provide a basic level of humanitarian knowledge and to teach the basics of the practical application of medical informatics, medical psychology and psychotherapy, to provide an opportunity to learn a foreign language;

Regulations on clinical residency in the specialty "pediatrics" is a normative document that establishes:
- professional appointments, basic terms and conditions of activity of a specialist in pediatrics;
- qualification characteristic of a pediatrician;
- requirements for the certification of a pediatrician.

Qualification characteristics of a general pediatrician

1. The level of professional knowledge in the specialty "pediatrics":

Pediatrician should know:
- socioeconomic and medico-biological foundations of family medicine, including the legal basis for health care, the main provisions of legislative acts on the reform of health care management and financing, medical insurance, the organization of primary medical care, the principles of the organization of work of medical institutions of various levels, organization and medical diagnostic process in stationary conditions, carrying out anti-epidemic, sanitary-hygienic, preventive measures in outpatient settings; questions of medical ethics and medical deontology;
- a causal connection between the complex of factors determining the occurrence, course and outcome of the disease, have modern ideas about physiology, a profound knowledge of the leading etiological and pathophysiological mechanisms of development of common diseases in childhood, clinical manifestations of the disease and its distinctive features in different periods of childhood;
- methods of implementation differential diagnosis of pathological conditions leading to clinical symptoms, methods of laboratory and instrumental diagnostics of diseases, the basic therapeutic, prophylactic and rehabilitative measures aimed at the prevention of disease and recovery of the patient;
- know the basics of general and private clinical pharmacology, non-pharmacological and alternative treatments, diet therapy, psychotherapy, physiotherapy, age characteristics, indications and counter-indications of the use of different types of therapy;
- the organizational structure of the public health system and the organizational mechanisms for the gradual, successive treatment of sick children with complex pathology, indications for outpatient, inpatient treatment and home treatment, the issues of medical examination, rehabilitation and examination of labor capacity;
- issues of human reproductive health, family planning, healthy lifestyle, medical and social psychology;

2. Level (list) of professional skills:

Pediatrician should be able to:
- organize a treatment and diagnostic process in outpatient and inpatient settings, conduct preventive measures in outpatient settings and at home; form a healthy family life; strictly observe the rules of medical ethics and medical deontology;
- in the outpatient setting, carry out early diagnosis of the disease, perform differential diagnosis, prescribe adequate individualized therapy, determine indications for inpatient treatment and home treatment, the need
for special methods of examination and treatment, carry out prevention, medical examination, rehabilitation and examination of work capacity;

The pediatrician must perform:
- examination and examination of patients: collection of anamnesis, examination, palpation, percussion, auscultation, determination of arterial pressure, otorhino-, laryngoscopy,
- independently to clinically evaluate the results of laboratory, biochemical, immunological, electrophysiological, functional, radiologic and other instrumental methods of research,
- prescribe, control, adjust and evaluate individualized therapy of the patient, a set of preventive, dispensary and rehabilitation measures,
- medical manipulations: carry out primary cardiopulmonary resuscitation, including airway patency recovery, indirect heart massage, artificial respiration, direct laryngoscopy and intubation of the trachea, medical and electrical pulse defibrillation of the heart, carry out various methods of oxygen therapy, independently perform infusion- transfusion therapy; all types of injections, determine the blood group and RH-compatibility, conduct fetal, secretion and natural secretions for research, rinsing of the stomach and intestines, eliminate coprostasis, conduct duodenal sounding, catheterization of the bladder, removal of uncomplicated foreign bodies from auditory and nasal passages, to take physiological births and provide emergency medical care in case of pathological births of both the parturient woman and the newborn, to evaluate physical and sexual development of children and adolescents, conduct local anesthesia, conduction anesthesia, anti-shock activity, to perform immobilization, reduce uncomplicated sprains, to stop external bleeding, hold the front and rear nose tamponade, puncture and drainage of superficial hematomas, to carry out a primary treatment for burns, frostbite, to provide surgical benefits abscesses, panaracer, produce suture and surgical treatment of penetrating wounds, perform diagnostic and therapeutic puncture of articular cavity, cerebrospinal, pleural puncture, conduct and interpret tuberculin skin tests, perform General massage, postural drainage, and vibromassage, to provide primary psychological help.

3. **Level of general theoretical and humanitarian knowledge**
- know and be able to convey information on the results of the assessment of environmental, epidemiological, sanitary-hygienic, social, economic risk factors to the health of the widest groups of the population;
- understand the role of ethnic, national-cultural and behavioral factors that affect morbidity, disease prevention, a healthy lifestyle, organization and provision of medical services;
- to have an idea about the status of development of medical science and technology, about the newest medical technologies; to know the basics of medical informatics with the methods of statistical processing of medical information;
- to apply in practice the achievements of theoretical health sciences, including knowledge of human behavior, social sciences, demography, biological and medical statistics, epidemiology, environmental protection in order to prevent chronic and infectious diseases and accidents.

4. **Level of organizational and methodological skills**
- To know the forms of organization of medical-diagnostic process (out-patient admission, day hospital, home care, hospital at home, planned and emergency hospitalization, stationary care), types of accounting and reporting documentation, orders for outpatient and inpatient activities, sanitary-epidemiological regime, the procedure of establishing and determining temporary disability, design of
disability organizations in the dispensary, organizing the work process in the staff and the issues of labor discipline.
- Be able to analyze the results of individual activities and the functioning of a medical institution.

PROGRAM OF STUDY IN THE CLINICAL RESIDENCY ON SPECIALTY "PEDIATRIC"

I. The general part

Preparation of the clinical resident is carried out in accordance with this educational program and according to the individual plan, which is approved by the supervisor of the resident and the department of residency. Training of clinical residents is conducted through self-training, their participation in the therapeutic, diagnostic, organizational and educational work of the department and medical institution.

For personal management of the daily work of the clinical resident is appointed a responsible teacher with the necessary experience of practical work and professional training. Management and control over the preparation of clinical residents is carried out by the supervisor.

Treatment and preventive work:
1. Curation of 5-8 patients in clinical departments under the guidance of an assistant, docent of the department with the development of methods of clinical and functional laboratory and instrumental examination of patients of various profiles. The clinical resident is trained in clinical, laboratory and functional departments. The clinical resident takes a direct part in the clinical examination of each patient, as well as in instrumental and laboratory researches.
2. Participation in the clinical rounds of the head of the medical institution, the head of the department, the staff of the department and scientific worker. When conducting rounds, in the supervised ward, the clinical resident presents his patients.
3. Representation of patients at medical conferences, meetings of professional and scientific societies with the preparation of demonstration material on a given topic.
4. The clinical resident monthly independently carries out two night duties, and at passage of a cycle of reanimation and anesthesiology in addition works under the schedule of branch.
5. Obligatory presence of the clinical resident at autopsy of the deceased patients, supervised by the ordinator, with the subsequent participation in clinic-anatomical conferences.
6. The clinical resident performs self-medical manipulations (intravenous infusions, puncture of the subclavian vein, electropulse therapy, puncture of the pleural, pericardial and abdominal cavities, blood transfusion, intubation of the trachea, / joint injection of the drugs, bronchoscopy, etc.).
7. Independently draws up and maintains a medical history, forms a stage, fills the messenger list at the WTC, sanitation card and other documentation.
8. Participates in compiling reports on the activities of the clinical department, analyzes mortality, discrepancies in diagnoses, number of beds, availability of laboratory, instrumental survey methods, etc.
9. Participates in the reception of patients in the clinic and dispensary observation of them.
10. Development of functional methods of the research of cardiovascular, broncho-pulmonary, gastroenterological, urinary and other systems (ECG, PCG, echocardiography, radiography, respiratory function, bronchoscopy, gastroscopy, gastric secretion, duodenal sounding, organs, etc.)
11. Sanatorium and educational work.

Academic work:
1. Visiting lectures on pediatric cardiology, neurology, pulmonology, gastroenterology, hematology and other sections of pediatrics, functional and laboratory methods of research, medical genetics, prevention and organizational and methodical work in medicine.
3. Participation in the preparation of lectures and demonstrations of patients.
4. Independent study and referencing of the recommended special medical literature with the subsequent delivery of tests on the sections of internal diseases.
5. Participation in scientific conferences, congresses, symposiums, etc.
6. Visit to the meetings of the pediatric society with active participation in the preparation of abstract reports, the demonstration of patients.
7. Visiting clinico-anatomical conferences.
8. Mastering the basics of clinical biochemistry, laboratory diagnostics, practical genetics, principles of clinical pharmacology. Ability to carry out pharmacodynamic control over the prescription of drugs of various groups, prevent and stop possible complications and side effects of medication therapy.
9. Mastering the issues of medical and labor expertise by temporary disability for various pediatric diseases.
10. Acquaintance with the basics of deontology, medical ethics, medical history, including national.
11. Mastering the principles of scientific research, familiarization with the methods of working with scientific literature, the creation of literary reviews, teaching the basics of working with a computer.
12. For 3 years of study, the clinical resident must pass examinations in all sections of pediatrics: cardiology, pulmonology, gastroenterology, nephrology, hematology, endocrinology, infectious diseases, phthisiatrics, as well as propedeutics, laboratory and functional diagnostics, polyclinics, clinical pharmacology, X-ray diagnostics.
13. Credits are accepted by the supervisor with the participation of heads of departments, docents, senior scientific collaborators.
14. The annual certification of clinical residents is carried out by a commission headed by the head of the department and with the participation of the administration of the institution.

II. Training program

General issues of the organization of the pediatric service
1. Fundamentals of health legislation, policy documents, legal basis for public health in the Republic.
2. General issues of the organization of the pediatric service, the work of hospitals, specialized hospitals, polyclinics, the basis of family medicine, the organization of emergency medical care for children in the Republic.
3. Issues of public health care, sanitary and epidemiological service environment, ecology.
5. Fundamentals of the organization of treatment and preventive care for adults and children, outpatient and inpatient care for urban and rural populations.
6. Organization of work of obstetric institutions.
7. The organization of inpatient medical care, specialized anti-tuberculosis, skin-venereal, neuro-psychiatric and infectious hospitals
8. Basics of the organization of emergency medical aid
9. Organization of anesthesia and resuscitation service for children
10. Organization of specialized treatment and preventive care for children
12. Organization of work of the family doctor and family doctors groups (FDG).
13. Organization of work of narrow specialists in the conditions of a polyclinic
14. Organization and operation of insurance medicine
15. Organization of work of rehabilitation departments
16. Organization of work of children's sanatorium institutions.

Neonatology
The organization of medical care for newborns in the maternity hospital.
1. Feeding newborns after birth.
2. Adaptation of children to the conditions of extrauterine life.
3. Antenatal pathology.
5. Asphyxia (hypoxia) of newborns, birth trauma.
6. Diseases of the respiratory system of the newborn period.
7. Diseases of the skin, subcutaneous fat, navel in newborns, sepsis, intrauterine infection.
9. Syndrome of vomiting and regurgitation, hemorrhagic disorders.
10. Anemia, endocrinopathy in newborns.

Diseases of young children
1. Rickets, spasmophilia, hypervitaminosis D.
3. Allergic diseases, primary immunodeficiency diseases.
4. Hereditary metabolic disorders, syndrome of impaired intestinal absorption.
5. Chronic eating disorders (hypotrophy).

Diseases of the respiratory system
1. Modern classification childrens bronchopulmonary diseases.
3. Acute bronchitis, bronchiolitis and obstructive bronchitis.
5. Acute purulent-destructive pneumonia, the principles of diagnosis and treatment.
6. Chronic pneumonia, diagnostic and treatment criteria.
8. Congenital and hereditary diseases of the respiratory system.
9. Acute and chronic respiratory failure, emergency and resuscitation in acute respiratory failure.

Cardiorheumatology
2. Types of heart failure, clinic and treatment of heart failure.
4. Morphological and clinical common features of collagen diseases and their difference from each other.
5. Peculiarities of the course and criteria for the diagnosis of rheumatoid arthritis in children.

Nephrology
1. Acute and chronic pyelonephritis
5. Acute and chronic renal failure.

Hematology
2. Leukemia in children (acute and chronic).
3. Hemorrhagic diathesis.

Gastroenterology
1. Diseases of the esophagus: congenital anomalies, esophagitis.
2. Diseases of the stomach and duodenum: functional disorders of the stomach; gastritis and gastroduodenitis, peptic ulcer of stomach and duodenum; tumors of the stomach.
3. Diseases of the intestine: congenital and hereditary intestinal diseases, bowel anomalies; chronic non-specific enteritis and colitis; cystic fibrosis, celiac disease, intolerance of disaccharides in children.
5. Acute and chronic pancreatitis in children.

Pediatric Neurology
1. The basic principles of assessing the neuropsychological development of children, features of neurological status in children of early age.
2. Epilepsy and epileptic syndrome.
4. Meningoencephalitis, neurotic reactions, neuritis and polynuritis.

Endocrinology
1. Physiology and pathology of the pituitary gland, thyroid gland, pancreas and adrenal glands.

Pediatric Anaesthesiology-Reanimatology
1. Organizational issues of children's anesthesia and resuscitation service
2. Anatomico-physiological features of the child's organism from the positions of anesthesiologist-resuscitator
3. General questions of anesthesiology. Particular questions of anesthesiology. Anesthesia for certain conditions and diseases
4. Questions of general resuscitation. General questions of emergency, emergency and intensive care
5. Methods of resuscitation and intensive care for certain pathological conditions.

2. The main work of the district pediatrician, the visiting nurse is the work with documents. Basic orders and directions of the Ministry of Health of the Kyrgyz Republic for out-patient and polyclinic care for children. The main accounting and reporting forms of documentation.
3. Scientific organization in the work of a pediatrician in a polyclinic: the use of selector communication, telephonization, cliché stamps, forms, computerization of the workplace, screening programs.
4. Education of a healthy child in the family. The role of parents in the education of a healthy child. Allocation of the family to a risk group. Features of the work of the social patronage service with the family of the "risk group". Service of social patronage. The state. Goals. Tasks.
7. Features of observing children who have recovered from bronchopulmonary pathology under the conditions of the family. Making plans for observation and recovery. Use of local sanatoria for health improvement of children.
8. Features of observation of children with background diseases: rickets, structural abnormalities, anemia, exudative-catarrhal diathesis in family settings, drawing up plans for observation and rehabilitation of these children. Hygienic training of parents on the prevention of these diseases.
12. Popularization of the principles of a healthy lifestyle in the family.
13. Features of the doctor's work in preschool and school.

**LIST OF PRACTICAL SKILLS OF THE CLINICAL RESIDENT, TRAINING ON SPECIALTY "DOCTOR-PEDIATRIC"

The clinical resident should learn how to perform the following independently:

- independently clinically evaluate the results of laboratory, biochemical, immunological, electrophysiological, functional, radiological and other instrumental research methods;
- appoint, control, adjust and evaluate individualized therapy of the patient and a set of rehabilitation measures;
- medical manipulations: carry out primary cardiopulmonary resuscitation, including airway patency, indirect heart massage, artificial respiration, direct laryngoscopy and intubation of the trachea, medical and electropulse heart defibrillation, conduct various methods of oxygen therapy, self-administer infusion-transfusion therapy; all kinds of injections, determine the blood group and Rh-compatibility, carry out fetal secretion and natural secretions for research, rinsing of the stomach and intestines, eliminate coprostasis, catheterize the bladder, provide emergency medical care and carry out intensive therapy for newborns, carry out local anesthesia treatment, conductive anesthesia, anti-shock measures, perform immobilization, stop external bleeding, conduct anterior and posterior tamponade of the nose, puncture and drainage of superficial hematomas, perform primary treatment for burns, frostbites, provide surgical manual for abscesses, panaritiums, make suturing and surgical treatment of non-penetrating wounds, perform diagnostic and therapeutic puncture of articular cavities, spinal, pleural puncture, postural drainage and vibromassage, must know the principles of working with equipment used in anesthesiology, resuscitation and intensive care.
- Evaluate the data of the morphological state of peripheral blood and bone marrow, assess the pathology of the blood elements under the microscope, perform a sternal puncture, trepanobiopsy, puncture of the lymph node, smear count and microscopy of blood smears, stop bleeding from the nose, tooth socket and any external bleeding;
- Assessment of physical and neuropsychological and sexual development in children with endocrine pathology, conducting functional tests: the study of blood sugar, acetone and sugar in the urine by express methods, to provide emergency assistance to endocrine patients, to determine the bone age and size of the thymus, The use of special research methods (radiological, radiological, radioisotope, biochemical, ultrasound), to determine indications for the hospitalization of endocrine patients, to organize it in accordance and with the severity of the patients.
- to carry out methods of studying diseases of the digestive system: X-ray study, duodenal sounding, gastric juice research, endoscopy, ultrasound;
- evaluate ultrasound studies of the kidney and urinary tract, laboratory methods of blood and urine tests: determination of residual nitrogen, urea, creatinine, clearance of endogenous creatinine, general urine analysis, urine by Nechiporenko, Addis-Kakovsky, Zimnitsky test, excretory urography;
- know instrumental methods of hemodynamic research: measurement of blood pressure by N.S. Korobkov and on the temporal artery, measurement of blood pressure using the method of arterial oscillography and oscillometry, measurement of HP, determination of bcc, MO and UO, blood flow velocity, sphygmography, rheocardiology, examination of the condition of capillary walls and capillary circulation, functional tests used in the study of cardiovascular system, with physical load, wedge - orthostatic, orthostatic with physical load according to Shalkov, Gorinevskaya, functional tests with intensive physical exertion for children engaged in (with a delay of breath, Stange, Gentcha, Serpina), samples with the introduction of drugs (atropine, potassium and indium), instrumental methods of cardiovascular research: ultrasound of the heart, X-ray methods of heart examination (fluoroscopy, radiography, tomography, angiography, roentgenogramography, electrokymography, x-ray-nocinematography), methods for studying joints and periarticular tissues by examining surface and bimanual palpation, studying the function of the ortho-motor apparatus in statics and motion, the instrumental methods of studying the musculoskeletal system: x-ray methods of joint research, arthropneumography, arthroscopy, joint scintigraphy, thermal imaging of joints, goniometry of joints, dynamometry (muscle strength), myomanometry (muscular tone), joint puncture and the characterization of changes in the synovial fluid;
- practical skills in neurology: research of the function of the cranial nerves, investigation of the motor sphere, investigation of the sensitive sphere, research of the static field and coordination, research of the autonomic nervous system, evaluation of the child's psychomotor development, evaluation of additional methods of examining the nervous system. (EGG, ultrasound, CT, craniography, NMR), lumbar puncture, evaluation of the CSF.

Is attached curriculum of the educational program of postgraduate medical study in the specialty

"pediatric".

Educational program of postgraduate medical training - clinical residency - in the direction -530001-
"general medicine", qualification: «pediatrician” elaborated by the International High School of Medicine

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