

## **CATALOG OF COMPETENCE**

### **on the specialty "Gastroenterologist"**

#### **POSTGRADUATE LEVEL**

Catalog of competencies (postgraduate level) on the specialty "Gastroenterologist" developed by a working group consisting of: Moldobaeva M. S. (Chairman, Prof., Head of the Department of Propaedeutics of Internal Diseases with the course of Endocrinology), Tolombaeva N. T., Attokurova R. M. (Deputy Chairman), Petrova A. S., Vinogradova A.V., Dzhusupbekova Sh. B.

The materials of the state educational standard of postgraduate medical education on the specialty "Gastroenterologist" were used in the development of the competence catalog"

The list of competencies was discussed by the staff of the I. K. Akhunbaev KSMA, HISM, members of the PA of Gastroenterologists of the Kyrgyz Republic, practicing gastroenterologists.

Reviewers:

Mamatov S. M.- Doctor of Medical Sciences, Professor, Head of the Department of Hospital Therapy, Occupational Pathology with the course of Hematology of the I. K. Akhunbaev KSMA.

Sulaimanova Ch. T. - Candidate of Medical Sciences, Associate Professor, Head of the Department of Public Health and Healthcare of the HISM.

## **CONTENT**

### **EXPLANATORY NOTE**

#### **CHAPTER 1. GENERAL PROVISIONS**

- 1.1. Definition of the specialist "Gastroenterologist»
- 1.2. Basic principles of the specialist "Gastroenterologist»
- 1.3. Purpose of the document
- 1.4. Users of the document

#### **CHAPTER 2. GENERAL TASKS**

- 2.1. "Gastroenterologist" as a medical specialist/expert
- 2.2. Communication skills

- 2.3. Skills of working in cooperation (in a team)
- 2.4. Management skills (manager)
- 2.5. Health promotion and healthy lifestyle promotion skills
- 2.6. Research Scientist
- 2.7. Knowledge in the field of professional ethics

### **CHAPTER 3. SPECIAL TASKS (PROFESSIONAL COMPETENCIES)**

- 3.1 Common symptoms and syndromes (List 1)
- 3.2 Common diseases and conditions (List 2)
- 3.3 General patient problems (List 3)
- 3.4 Medical manipulations (List 4)
- 3.5 Emergency conditions (List 5)

### **CHAPTER 4. RECOGNITION CRITERIA AND CLASSIFICATION OF POSTGRADUATE EDUCATION INSTITUTIONS**

### **CHAPTER 5. REGULATIONS ON THE EXAMINATION/ ATTESTATION**

#### **EXPLANATORY NOTE**

Currently, the Kyrgyz Republic is actively implementing health sector reforms. The system of medical education is undergoing significant changes, as one of the fundamental systems that provide practical healthcare with highly professional personnel.

Despite the efforts of doctors, scientists, and health authorities, diseases of the internal organs, including the pathology of the digestive and hepatobiliary systems, remain one of the most significant medical and social problems in the Kyrgyz Republic. Diseases of the digestive system are among the most common diseases in therapeutic practice. Gastroenterologists are the first link of medical care that meets with such patients, and the right decisions in this situation are a guarantee of success in treatment.

In recent years, the number of functional disorders of the digestive system, which occupy a leading place in the structure of the pathology of the digestive system, has increased. Their diagnosis often causes significant difficulties for practitioners, leading to unnecessary examinations, and most importantly to irrational therapy. To obtain positive results of treatment of diseases of the digestive system, a systematic integrated approach is necessary, which consists in a consistent prescribing drugs of various pharmacological groups that affect both the etiological factor and various links in the pathogenesis of the disease. There are new views on the etiology and pathogenesis of some gastroenterological diseases. Therefore, the task of healthcare educational organizations within the framework of the reforms carried out in the medical education system in the Kyrgyz Republic is not only to increase the number of medical personnel, but also to improve the quality and compliance of medical personnel training with the changing needs of the population.

In this regard, as well as in the light of the reform of medical education, in the Kyrgyz Republic, the training of highly professional gastroenterologists for work in health care institutions continues to be extremely relevant, so a new catalog of competencies of a gastroenterologist has been revised and developed.

When developing the document, international standards for the training of a gastroenterologist were also taken into account, but special consideration was given to the fact that the duration of postgraduate training is 2 years after completing the residency "General Practitioner" in accordance with the Law of the Kyrgyz Republic "On Education" and other regulatory legal acts of the Kyrgyz Republic in the field of postgraduate medical education and approved in accordance with the procedure established by the Government of the Kyrgyz Republic.

## **CHAPTER 1. GENERAL PROVISIONS**

### **1.1. Definition of the specialist "Gastroenterologist".**

**"Gastroenterologist"** - this is a specialist who has completed training under the residency program or professional retraining on the cycle of specialization in the discipline "Gastroenterology", who is required to master the medical manipulations of the gastroenterological profile, that is, to be able to provide qualified gastroenterological assistance to adults with common diseases of the digestive organs and the hepatobiliary system and to carry out basic medical and diagnostic measures, and also to master the methods of forming a healthy lifestyle and strictly comply with the requirements of medical ethics and medical deontology when conducting health-improving, preventive, therapeutic, diagnostic and rehabilitation measures among the population in outpatient and polyclinic conditions, in the hospital and at home.

### **1.2. Basic principles of the work of a specialist "Gastroenterologist"**

"Doctor of Gastroenterology" uses the following principles in his work:

- Open and unrestricted access to medical care;
- Simultaneous treatment of both acute and chronic diseases of the digestive system and the hepatobiliary system;
- Preventive orientation of care to prevent the impact of risk factors for the development of gastroenterological pathology by informing the population and risk groups;
- Duration and continuity of care based on the needs of each patient;
- Coordination of medical care for the patient;
- The principle of cost-effectiveness and feasibility of assistance;
- Respect for the patient's right to self-determination and take into account the views of their family members.

### **1.3. Purpose of the document**

This List of competencies should become part of the regulations for postgraduate training of a "Gastroenterologist". Based on this catalog:

**Defined by:**

- the purpose and content of postgraduate training of a gastroenterologist
- the level of professional competence, knowledge and practical skills of a gastroenterologist.

**Developed by:**

- gastroenterologist training programs;
- criteria for assessing the quality of training of a gastroenterologist;
- standard requirements for the certification of a gastroenterologist;
- standards of examination, treatment, rehabilitation and follow-up of patients;

**Organized by:**

- educational process;
- professional orientation of medical graduates;

**Conducted by:**

- attestation of the "Gastroenterologist".

**1.4. Users of the document**

According to the purpose of the document, the users are:

- Ministry of Public Health of the Kyrgyz Republic
- Educational organizations Health organizations
- Professional associations
- Medical practitioners
- Residents
- Other stakeholders

**CHAPTER 2. GENERAL TASKS**

This chapter lists the general competencies that a gastroenterologist should have. The general competencies presented in the Catalog are consistent with international recommendations and approaches that have been summarized by the Royal Society of Physicians of Canada (CanMEDS). According to this approach, a gastroenterologist should be not only a professional in his field, but also a manager, a specialist in communication skills, a promoter of a healthy lifestyle, a research scientist.

## **2.1. Gastroenterologist as a medical specialist/expert**

A "gastroenterologist" is a doctor who has received special training to provide medical care to the adult population. As a specialist, he provides care to patients within the limits of his professional competence, observing the principles of evidence-based medicine.

### **As a specialist, a gastroenterologist is able to:**

- take care of the health of patients and society (assess the risks to the health of patients, give advice on maintaining and promoting health, maintain a healthy lifestyle, both physically and mentally, recommend screening tests and vaccination in accordance with national protocols);
- advise, accompany and care for patients in cooperation with representatives of other specialties, while respecting their right to self-determination;
- conduct anamnesis collection;
- conduct an examination (clinical examination) of the patient;
- interpret the information obtained during the collection of anamnesis and clinical examination, establish a preliminary diagnosis and differential diagnosis, and develop a patient management plan using the results of an objective examination;
- perform the usual tests and additional procedures adopted in this specialty;
- prescribe appropriate diagnostic and therapeutic measures, explain their essence to the patient and interpret the results;
- take appropriate and long-term care of patients with chronic gastroenterological and hepatobiliary diseases, incurable, progressive diseases;
- advise patients and their families on the formation of a healthy lifestyle and the prevention of gastroenterological diseases;
- perform all diagnostic and therapeutic measures, taking into account the cost/reasonable utility ratio and guarantee the safety of patients, applying the principles of efficiency, expediency and cost-effectiveness;
- store and protect health information appropriately;
- maintain and expand their professional competence.
- comply with infection control requirements aimed at reducing the risk of infections associated with the provision of medical care, such as both patients and medical staff;
- be able to conduct pre-test and post-test counseling on planned treatments, including informed consent of the patient.

## **2.2. Communication skills**

The "Gastroenterologist" manages the relationships with patients, families, contact persons and other specialists involved in the treatment effectively and in accordance with the situation. He bases his decisions and communication of information on mutual understanding and trust.

### **Competencies**

"Doctor of Gastroenterology" is able to:

- build trusting relationships with patients, their families, and other close relatives;

- competently and correctly conduct interviews with the patient;
- receive important information from patients and their environment, discuss it, and share elements of the knowledge gained, taking into account the patient's situation;
- communicate the risks and benefits of diagnostic and therapeutic measures in a form that is understandable to the patient and obtain informed consent;
- make a decision about diagnostic and therapeutic procedures for disabled and underage patients, discussing these procedures with the appropriate representatives of these patient groups;
- document the information received during consultations / home visits and transmit it as soon as necessary;
- empathize by reporting bad news and responsibly report complications and mistakes.

### **2.3. Skills of working in cooperation (in a team)**

"Gastroenterologist" cooperates with patients, contact persons and other participants of treatment from a wide variety of professional groups, taking into account their experience and opinions.

#### **Competencies**

The "gastroenterologist" is able to:

- collaborate with other specialists and experts from other professional groups, with nurses, especially in providing long-term care to patients with chronic non-communicable diseases;
- recognize differences of interest, accept other opinions, and avoid conflicts and resolve them through cooperation.

### **2.4. Management skills (manager)**

The "Gastroenterologist" becomes a member of the healthcare system and contributes in optimizing the work of the health organization in which he works. It carries out its management tasks within the framework of its inherent functions. It sets priorities and consciously decides how to use limited resources in the field of healthcare.

#### **Competencies**

As a manager, a gastroenterologist is able to:

- successfully manage their professional activities and take on management tasks that correspond to their professional position;
- find a balance between your professional and private activities;
- effectively use limited health resources in the best interests of the patient, taking into account efficiency, adequacy and cost-effectiveness;
- evaluate and use relevant information for patient care;
- ensure and improve the quality of medical care and patient safety.

### **2.5. Skills in the field of health promotion and promotion of a healthy lifestyle.**

The "gastroenterologist" can promote a healthy lifestyle among patients and the population. He can help patients navigate the healthcare system and get appropriate care in a timely manner.

### **Competencies**

"Doctor of Gastroenterology" is able to:

- describe the factors that affect human and social health and promote the preservation and promotion of health;
- recognize problems that affect the patient's health and take the necessary measures.

### **2.6. Research - Scientist**

During his professional activity, the gastroenterologist strives to acquire significant knowledge in his specialty, monitors their development and promotes them.

### **Competencies**

As a research scientist, a gastroenterologist is able to:

- constantly improve the skills aimed at their professional activities;
- critically understand specialized medical information and its sources and take it into account when making decisions;
- inform patients, medical students, other doctors, government officials, and others who actively care about their health, and support them in their actions to learn;
- promote the development, dissemination and implementation of new knowledge and methods.

### **2.7. Knowledge in the field of professional ethics**

"Doctor of Gastroenterology" improves his practical activities in accordance with ethical norms and principles, quality standards of medical care and regulatory legal acts in the field of healthcare.

### **Competencies**

As a professional, a gastroenterologist is able to:

- to carry out his professional activities in accordance with high quality standards, demonstrating a responsible and caring attitude to patients;
- practice ethically and responsibly, respecting the legal aspects of the activities of medical professionals.

## **CHAPTER 3. SPECIAL TASKS (PROFESSIONAL COMPETENCIES)**

### **Types of activities of the "gastroenterologist"**

"Gastroenterologist" is obliged to master the following types of activities and their corresponding personal tasks to provide gastroenterological care to the population, in accordance with the regulatory documents of the Kyrgyz Republic:

- diagnosis, treatment, prevention and rehabilitation of the most common diseases of the digestive system;
- provision of emergency medical care;
- performing medical manipulations;
- palliative care activities;
- compliance with infection safety measures when providing medical care and performing medical manipulations;
- organizational and managerial activities.

**A graduate who has completed a residency program in the specialty "gastroenterologist" must have the following competencies: versatile and professional.**

#### **Universal competencies (UC)**

- Readiness for abstract thinking, analysis, synthesis (UC-1).
- Willingness to manage the team, to tolerate social, ethnic, religious and cultural differences (UC-2)
- Readiness to participate in teaching activities in programs of secondary and higher medical education or secondary and higher pharmaceutical education, as well as in additional professional programs for persons with secondary vocational or higher education in accordance with the procedure established by the federal executive body responsible for developing state policy and regulatory legal regulation in the field of healthcare (UC-3).

**The professional competencies (PC) of a "gastroenterologist" are characterized by:**

#### **In preventive activities (PC-1, 2, 3, 4):**

- Readiness to implement a set of measures aimed at preserving and strengthening health and including the formation of a healthy lifestyle, prevention of the occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating the harmful effects on human health of environmental factors(PC-1).
- Willingness to undertake preventive medical examinations, clinical examinations and implementation of dispensary observation of healthy and chronic digestive system (PC-2).
- Readiness to carry out anti-epidemic measures, the organization of protection of the population in the foci of especially dangerous infections, the deterioration of the radiation situation, natural disasters and other emergencies (PC-3).
- Readiness to use social and hygienic methods of collecting and medical and statistical analysis of information on health indicators of adults and adolescents (PC-4).

#### **In diagnostic activities (PC-5):**

- Readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in patients in accordance with the International Statistical Classification of Diseases and Health-related Problems.

- Readiness to make a diagnosis based on a diagnostic study in the field of gastroenterology.
- Readiness for differential diagnosis of diseases based on diagnostic studies in the field of gastroenterology.
- Readiness to analyze the regularities of the functioning of individual organs and systems, to use knowledge of anatomical and physiological bases, basic methods of clinical and immunological examination and assessment of functional state the state of the body of patients for the timely diagnosis of a group of diseases of the digestive system.

**In medical activity (PC-6, PC-7):**

- Readiness to perform the main therapeutic measures in patients with gastroenterological diseases of a particular group of nosological forms that can cause severe complications and (or) death (PC-6);
- Timely identify life-threatening violations of internal organs, use methods of their immediate elimination, and implement anti-shock measures;
- Readiness to prescribe adequate treatment to gastroenterological patients in accordance with the diagnosis, to implement an algorithm for choosing drug and non-drug therapy for specialized patients;
- Readiness to provide medical assistance in emergency situations, including participation in medical evacuation (PC-7).

**In rehabilitation activities (PC-8):**

- Readiness to use natural therapeutic factors, medicinal, non-drug therapy and other methods in patients who need medical rehabilitation and spa treatment (PC-8)
- Readiness to use various rehabilitation measures (medical, social, psychological) for the most common pathological conditions and injuries of the body;
- Readiness to give recommendations on the choice of the optimal regime in the period of rehabilitation of gastroenterological patients (motor activity) dependencies on morphofunctionalstatus), determine the indications and contraindications to the appointment of physical therapy, physiotherapy, reflexology.

**In psychological and pedagogical activity (PC-9):**

- Readiness to form the motivation of the population, patients and their families to preserve and strengthen their own health and the health of others (PC-9).

**In organizational and managerial activities (PC-10,11,12):**

- Willingness to use the regulatory documentation adopted in the health care (laws of the Kyrgyz Republic, technical regulations, international and national standards, orders, recommendations, the international system of units (SU), current international classifications), as well as documentation for assessing the quality and effectiveness of the work of medical organizations of the gastroenterological profile (PC-10).
- Willingness to use knowledge of the organizational structure of the gastroenterological profile, management and economic activities of medical organizations of various types to

provide medical care, analyze the performance of their structural divisions, evaluate the effectiveness of modern medical-organizational and socio - economic technologies in the provision of medical services to patients with diseases of the digestive system (PC-11).

- Readiness to organize medical assistance in emergency situations, including medical evacuation (PC-12).

### 3.1 Common symptoms and syndromes

(List 1)

To indicate the level of competence that must be achieved by the end of training in this discipline, the following gradations are used:

**Level 1** - indicates that the resident can independently diagnose and treat the majority of patients with this disease or condition accordingly; if necessary, determine the indications for hospitalization.

**Level 2** - indicates that the resident is guided in this clinical situation, makes a preliminary diagnosis and redirects the patient to a secondary one or the tertiary level for the final verification of the diagnosis and selection of therapy; subsequently, it monitors the prescribed therapy (medical examination).

The **letter "H"** - means that the condition or disease is urgent and indicates the need for emergency diagnosis and / or treatment. The resident is able to assess the patient's condition and begin to provide emergency care and organize urgent hospitalization.

### 3.1. Common symptoms and syndromes in the practice of a gastroenterologist (List 1)

| Symptom/ Syndrome   |
|---|
| Abdominal pain (of any nature and in any part of it)        |
| Pain when food passes through the esophagus(odynophagia)    |
| Heaviness, feeling of fullness in the stomach               |
| Dysphagia   |
| Dyspepsia   |
| Diarrhea  |
| Bitterness and dry mouth                                    |
| Heartburn   |
| Nausea, vomiting  |
| Burp  |
| Bad breath  |
| Decrease, lack of appetite                                  |
| Plaque on the tongue  |
| Flatulence  |
| Constipation  |
| Weight loss, exhaustion                                     |
| Allocation of hard ("sheep"), with a bumpy surface of feces |
| Feeling of incomplete bowel movement                        |
| Admixture of blood in the feces                             |

|   |
|---|
| Anemia.   |
| Esophageal bleeding   |
| Gastric bleeding  |
| Intestinal bleeding   |
| Jaundice  |
| Itchy skin  |
| Changes in the skin (erythema palmarum, telangiectasis, hemorrhagic rashes) |
| Fever   |
| Nosebleeds  |
| Menstrual cycle disorder  |
| Edematous syndrome, ascites   |
| Oliguria  |
| Loss of consciousness   |
| Impaired consciousness, hallucinations, delusions                           |
| Weakness  |
| Hepatomegaly  |
| Splenomegaly, hypersplenism   |
| Cholestasis   |
| Hemorrhagic syndrome  |
| Portal hypertension   |
| Hepatic-cellular insufficiency  |
| Hepatic encephalopathy  |
| Hepatorenal syndrome  |

### 3.2 Common diseases and conditions (List 2)

| Digestive system diseases  | Level | H |
|--|-------|---|
| Diseases of the esophagus  |       |   |
| Functional diseases of the esophagus   | 2     |   |
| Dysphagia (achalasia, diffuse esophageal spasm, etc.)  | 2     |   |
| Gastroesophageal reflux disease (GERD)   | 2     |   |
| Barrett's esophagus  | 2     |   |
| Esophageal strictures  | 2     |   |
| Esophageal diverticula   | 2     |   |
| Hernia of the esophageal orifice of the diaphragm.   | 2     |   |
| Acute conditions associated with esophageal damage: esophageal foreign bodies, esophageal perforation, esophageal burns, Mallory-Weiss syndrome. | 2     | H |
| Esophageal bleeding  | 2     | H |
| Esophageal tumors  | 2     |   |
| <b>Diseases of the stomach and duodenum 12</b>   |       |   |
| Chronic gastritis  | 2     |   |
| Chronic duodenitis   | 2     |   |
| Peptic ulcer of the stomach and duodenum 12  | 2     |   |
| Symptomatic gastroduodenal ulcers  | 2     |   |
| Gastropathies caused by NSAIDs   | 2     |   |
| Functional diseases of the stomach   | 2     |   |

|  |     |   |
|--|-----|---|
| Gastrointestinal bleeding                            | 2   | H |
| Zollinger-Ellison syndrome.                          | 2   | H |
| Diseases of the operated stomach.                    | 2   |   |
| Stomach tumors                                       | 2   |   |
| <b>Bowel diseases</b>                                |     |   |
| Crohn's disease                                      | 1/2 |   |
| Non-specific ulcerative colitis                      | 1/2 |   |
| Ischemic colitis.                                    | 1/2 |   |
| Pseudomembranous colitis                             | 1/2 |   |
| Diverticular bowel disease                           | 1/2 |   |
| Malabsorption syndrome                               | 1   |   |
| Enzyme-deficient enteropathies                       | 1/2 |   |
| Whipple's disease                                    | 2   |   |
| Irritable bowel syndrome                             | 1   |   |
| Intestinal bacterial overgrowth syndrome             | 1   |   |
| Helminthiasis of the digestive system                | 2   |   |
| Intestinal tumors                                    | 2   |   |
| <b>Diseases of the gallbladder and biliary tract</b> |     |   |

|  |   |  |
|--|---|--|
| Functional disorders of the gallbladder, biliary tract and sphincter of Oddi | 2 |  |
| Dyskinesia of the gallbladder and biliary tract                              | 2 |  |
| Chronic non-calculous cholecystitis  | 2 |  |
| Chronic calculous cholecystitis  | 2 |  |
| Postcholecystectomy syndrome   | 2 |  |
| Cholangitis  | 2 |  |
| Tumors and polyps of the gallbladder   | 2 |  |
| Liver diseases   |   |  |
| Chronic infectious hepatitis   | 2 |  |
| Other chronic hepatitis  | 2 |  |
| Cirrhosis of the liver   | 2 |  |
| Primary biliary cholangitis  | 2 |  |
| Primary sclerosing cholangitis   | 2 |  |
| Non-alcoholic fatty liver disease (NAFLD)                                    | 2 |  |
| Hemochromatosis  | 2 |  |
| Hepatolenticular degeneration<br>(Wilson - Kononov disease)                  | 2 |  |
| Alpha-1 antitrypsin deficiency   | 2 |  |
| Alcoholic liver disease  | 2 |  |
| Toxic liver damage   | 2 |  |
| Medicinal liver damage   | 2 |  |
| Familial non-hemolytic hyperbilirubinemia                                    | 2 |  |
| Helminthiasis of the liver   | 2 |  |
| Echinococcosis of the liver  | 2 |  |
| Liver tumors   | 2 |  |
| Liver amyloidosis  | 2 |  |
| Diseases of the liver vessels  | 2 |  |
| Diseases of the pancreas   |   |  |
| Chronic pancreatitis   | 2 |  |
| External secretory pancreatic insufficiency syndrome                         | 2 |  |

|   |   |   |
|---|---|---|
| Pancreatic tumors   | 2 |   |
| Infectious diseases of the digestive system   |   |   |
| Acute intestinal infections   | 2 |   |
| Parasitic diseases and preventive measures.   | 2 |   |
| Giardiasis  | 2 |   |
| <b>Emergency conditions in diseases of the abdominal cavity</b>   |   |   |
| Acute abdominal pain  | 2 | H |
| Acute cholecystitis   | 2 | H |
| Acute pancreatitis  | 2 | H |
| Gastrointestinal bleeding   | 2 | H |
| Perforated ulcer of the stomach and duodenum  | 2 | H |
| Acute intestinal obstruction  | 2 | H |
| Hepatic coma  | 2 | H |
| Acute hepatic-cellular insufficiency  | 2 | H |
| <b>Selected issues of related pathology</b>   |   |   |
| Digestive diseases and pregnancy  | 2 |   |
| Diseases of the digestive system in various occupational pathologies  | 2 |   |
| Defeat of the digestive system in systemic diseases   | 2 |   |
| Defeat of the digestive system in endocrine pathology   | 2 |   |
| Defeat of the digestive system in infectious diseases   | 2 |   |
| Surgical treatment of diseases of the digestive system  |   |   |
| Modern possibilities of surgical treatment of diseases of the digestive system  | 2 |   |
| Indications and contraindications to surgical treatment   | 2 |   |
| Methods and results of surgical treatment of diseases of the digestive system   | 2 |   |
| <b>Pharmacology in gastroenterology</b>   |   |   |
| Clinical pharmacology and tactics of the use of medicines in diseases of the digestive system   | 1 |   |
| Herbal medicine. Characteristics and tactics of the use of medicinal plants in diseases of the digestive system   | 1 |   |
| Side effects of medications used in gastroenterology  | 1 |   |
| Combination of pharmacotherapy with other types of treatment  | 1 |   |
| <b>Variable part</b>  |   |   |
| <b>Endoscopic diagnosis of gastrointestinal diseases</b>  |   |   |
| GERD. Modern classifications of GERD. Barrett's esophagus. Esophagitis. Tumors of the esophagus. Varicose veins of the esophagus.   | 1 |   |
| Gastritis. Erosive and ulcerative lesions of the stomach and duodenum. Diagnosis of complications of peptic ulcer disease. Other causes of gastric bleeding (Mallory-Weiss syndrome). | 1 |   |
| Diseases of the small intestine. Capsule endoscopy in the   | 1 |   |

|  |   |   |
|--|---|---|
| diagnosis of diseases of the small intestine. Enteroscopy in the diagnosis of diseases of the small intestine.   |   |   |
| Inflammatory diseases of the colon and rectum. The importance of endoscopic methods in diagnosis and treatment.  | 1 |   |
| Malignant diseases of the colon and rectum. The importance of endoscopic methods in diagnosis and treatment.   | 1 |   |
| <b>X-ray diagnostics in gastroenterology</b>   |   |   |
| Classical methods in radiology. Additional methods (CT, MRI). Contrast agents. The device of the X-ray department.   | 1 |   |
| Radiation diagnostics of the upper digestive tract   | 1 |   |
| Radiation diagnostics of diseases of the hepatobiliary system and pancreas   | 1 |   |
| Radiation diagnosis of intestinal diseases   | 1 |   |
| <b>Ultrasound diagnostics in gastroenterology</b>  |   |   |
| Ultrasound diagnostics of liver diseases.  | 1 |   |
| Ultrasound diagnostics of diseases of the biliary system   | 1 |   |
| Ultrasound diagnostics of diseases of the pancreas, spleen.  | 1 |   |
| <b>Gastroenterological diseases in the elderly</b>   |   |   |
| Age-related anatomical and functional features of the digestive system.  | 1 |   |
| Methods of examination of elderly patients with diseases of the digestive system.  | 1 |   |
| Diseases of the esophagus in the elderly   | 1 |   |
| Peptic ulcer of the stomach and duodenum 12. Features of the course of the disease in the elderly and senile age. Complications of peptic ulcer disease. Diseases of the operated stomach. | 2 | H |
| Diseases of the hepatobiliary system in the elderly  | 1 |   |
| Diseases of the pancreas in the elderly  | 1 |   |
| Intestinal diseases in the elderly   | 1 |   |
| Malignant tumors of the gastrointestinal tract in the elderly  | 1 |   |
| <b>Questions of dietetics in diseases of the gastrointestinal tract</b>  |   |   |
| Basic information about the most important types of metabolism: proteins, carbohydrates, fats. Human protein and energy needs  | 1 |   |
| Nutritional and biological value of food products. Fundamentals of therapeutic cooking. Nutrition of the adult population.   | 1 |   |
| Therapeutic nutrition for diseases of the gastrointestinal tract: esophagus, stomach, 12-duodenum, intestines  | 1 |   |

|   |   |  |
|---|---|--|
| Therapeutic nutrition for diseases of the hepatobiliary system and pancreas   | 1 |  |
| <b>Pathology</b>  |   |  |
| <b>Pathological anatomy</b>   |   |  |
| Tasks, organization of clinical and anatomical conferences, commissions for the study of fatal outcomes, medical control commissions. | 2 |  |
| Morphological conclusion on biopsy material from the mucous membranes of the esophagus, stomach and intestines.                       | 2 |  |
| Pathological anatomy of the digestive system  | 2 |  |
| <b>Pathological physiology</b>  |   |  |
| Physiology of digestive function  | 2 |  |
| Pathogenesis of the main syndromes of digestive disorders. Dysphagia. Dyspepsia. Malabsorption.                                       | 2 |  |
| Pain syndrome in cases of digestive disorders   | 2 |  |
| <b>Iatrogenic diseases</b>  |   |  |
| Medicinal disease   | 2 |  |
| Complications of invasive procedures  | 2 |  |

### PALLIATIVE CARE

| Condition / Disease   | Level | H |
|---|-------|---|
| Pain syndrome in diseases of the gastrointestinal tract                   | 1     | H |
| The process of dying and help in the last stage of life in a hepatic coma | 1     | H |

### 3.3 General Patient problems (List 3)

|   | Level |
|---|-------|
| Difficult patient / Aggressive patient in Gastroenterology                              | 2     |
| Disability/limitation of health opportunities in diseases of the gastrointestinal tract | 2     |
| Gender problems in diseases of the gastrointestinal tract                               | 2     |
| Post-transplant conditions in liver diseases  | 2     |

## 3.4

**Medical manipulations (List 4)**

**A gastroenterologist should be able to perform the following manipulations independently:**

| <b>№</b> | <b>Manipulation</b>  | <b>Quantity</b> |
|----------|--|-----------------|
| 1.       | Methods of standard examination of patients with chronic gastroenterological diseases  | 220             |
| 2.       | Assessment of the pH-metry of gastric contents with interpretation   | 10              |
| 3.       | Study of duodenal content with interpretation  | 35              |
| 4.       | Determination of H. pylori by rapid urease respiratory helic test  | 200             |
| 5.       | Interpretation of the program  | 200             |
| 6.       | Participation in the competition of materials for the Physico-chemical, microscopic, bacteriological examination (vomit, ascitic, pleural fluid, ical) and independent interpretation of macroscopic results | 35              |
| 7.       | Introduction and interpretation of the results of pharmacological tests in GERD  | 5               |
| 8.       | Participation in the collection of material and interpretation of the results of biopsies of the esophagus, stomach, intestines, and liver.  | 20              |
| 9.       | Participation in the technique of esophagogastroduodenoscopy (EGDscopy) with the interpretation of the results   | 70              |
| 10.      | Participation in the method of rectoromanoscopy (RRS)with interpretation of the results  | 30              |
| 11.      | Participation in the colonoscopyinterpretation of the results  | 20              |
| 12.      | Participation in the method of laparoscopy with interpretation of the results  | 5               |
| 13.      | Participation in the liver puncture biopsy technique and interpretation  | 2               |
| 14.      | Participation and mastery of the technique of abdominal puncture and independent macroscopic interpretation of the obtained material   | 25              |
| 15.      | Improvement of the technique of finger examination of the rectum with an independent decision of the tactics of further actions  | 15              |
| 16.      | Self-removal of ECG and identification of urgent changes with the organization of further actions (send to a specialist)   | 50              |
| 17.      | Participation in the methods of conducting ultrasound examinations of the abdominal organs, ultrasound Dopplerography (ultrasound, UZDG) and independent interpretation of the results.                      | 80              |
| 18.      | Participation in the method of fiber scanning of the liver and independent interpretation of the results   | 70              |
| 19.      | Participation in the method of radioscopy (- graphy)esophagus, stomach, small and large intestine and self-interpretation of the results   | 100             |
| 20.      | Participation in the method of review radiography of the abdominal cavity and independent interpretation of the results  | 30              |
| 21.      | Participation in the method of irrigoscopy and independent interpretation of the results.  | 50              |
| 22.      | To justify the indications for the appointment of computed tomography and nuclear magnetic resonance techniques and the  | 30              |

|     |  |     |
|-----|--|-----|
|     | independent interpretation of their results.   |     |
| 23. | Justify the indications for the appointment of serological studies (RA, RSC, RNGA, RTGA), hepatitis antigens, markers of viral hepatitis A,B,C, D, E., PCR of HCV RNA, HBV DNA (qualitative and quantitative), genotyping, and independent evaluation of their results.  | 100 |
| 24. | To justify the indications for the appointment of methods for assessing the conditions of the endocrine function of the gastrointestinal tract (diagnosis of celiac disease, markers of damage to the gastric mucosa: Pepsinogen 1, 2, gastrin, anti-H. pyloriIgG, genetics of lactose metabolism) and independent interpretation of their results | 10  |
| 25. | To justify the indications for the appointment of methods for the determination of serological markers of tumor growth(AFP, REA, CA-19-9, CA-125, CA-72-4) and independent interpretation of their results   | 80  |
| 26. | To justify the indications for the appointment of methods for the determination of markers of autoimmune diseases ( AMA, ANA, LIA-MAXX,LIA-liver)and independent interpretation of their results   | 80  |
| 27. | Substantiate the indications for the purpose of methods for assessing the functional state of the liver according to the biochemical parameters of blood independent interpretation of their results   | 100 |
| 28. | To justify the indications for the appointment of methods for the determination of markers of cytolysis and hepatic cell necrosis and independent interpretation of their results  | 80  |
| 29. | Justify the indications for the appointment of methods determination of markers of cholestasis and independent interpretation of their results   | 80  |
| 30. | Independent implementation of the methodology tests of counting numbers, handwriting and dri interpretation of their results   | 100 |
| 31. | Self-assessment of clinical blood, urine, and biochemical blood tests  | 100 |
| 32. | Evaluation of the patient's height and weight indicators, calculation BMI  | 100 |
| 33. | Ascitaphysical determination and evaluation  | 80  |
| 34. | Filling out and maintaining the medical record of an inpatient patient, making an extract from the medical record  | 100 |
| 35. | Filling out and maintaining medical documentation in the polyclinic: medical card of an outpatient patient, statistical card, disability certificate, referral for hospitalization, sanatorium-resort card, and others   | 100 |
| 36. | To justify the indications for the referral of a VTE patient and filling out a special card  | 15  |

### 3.5. Urgent Conditions (List 5)

The "gastroenterologist" should be able to independently diagnose and provide emergency care at the pre-hospital stage, as well as determine the tactics of providing further medical care in the following emergency conditions:

1. Anaphylactic shock in diseases of the gastrointestinal tract
2. Urticaria and Quincke's edema in diseases of the gastrointestinal tract
3. Hepatic coma according to the severity of the conditions

4. Hepatic colic
5. Acute abdominal pain/ Acute abdomen
6. Acute cholecystitis
7. Acute pancreatitis
8. Gastrointestinal bleeding
9. Perforated ulcer of the stomach and duodenum
10. Acute intestinal obstruction
11. Acute liver failure
12. Hypovolemic shock in malabsorption syndrome
13. Acute respiratory insufficiency in diseases of the gastrointestinal tract
14. Pulmonary edema, cardiac asthma in diseases of the gastrointestinal tract
15. Clinical death in diseases of the gastrointestinal tract

## CHAPTER 4. Recognition criteria and classification of postgraduate education institutions

### Categories of postgraduate training institutions

**Category A (2 years):** Departments of gastroenterology of national centers, research institutes and other republican institutions.

**Category B (2 years):** Departments of gastroenterology of city, regional clinics and regional hospitals.

**Category C (1 year):** Therapeutic and other departments specializing in the care of patients with gastroenterological diseases.

**Category D (6 months):** Medical offices specializing in gastroenterology.

### Characteristics of institutions for providing postgraduate education

| Category   | Category |   |   |
|--|----------|---|---|
|  | A        | B | C |
| <b>Characteristics of the clinic</b>   |          |   |   |
| Departments of gastroenterology of national centers, research institutes and others republic institutions.                     | +        | - | - |
| Departments of gastroenterology of city, regional clinics and regional hospitals.  | -        | + | + |
| Medical institutions with outpatient / outpatient department   | +        | + | + |
| <b>Medical team</b>  |          |   |   |
| Head physician - specialist in the field of gastroenterology   | +        | + | + |
| - university lecturer  | +        | - | - |
| - full-time (at least 80%)   | +        | + | + |
| - participating in the training of residents   | +        | + | - |
| Assistant Manager - a specialist in the field of gastroenterology, who is an employee of the faculty of postgraduate education | +        | + | + |

|  |   |     |     |
|--|---|-----|-----|
| At least 1 full-time doctor (including the head) or the head of the department   | + | +   | +   |
| <b>Postgraduate education</b>  |   |     |     |
| Structured postgraduate training Program   | + | +   | +   |
| Interdisciplinary training (hours / week)  | + | +   | +   |
| Participation in scientific research with publication in peer-reviewed journals  | + | -   | -   |
| Analysis of clinical cases in a multidisciplinary team (gastroenterologist, abdominal surgeon, morphologist, functional diagnostics doctor, radiologist, oncologist, etc.) | + | -   | -   |
| <b>Basic medical services in the field of gastroenterology</b>   |   |     |     |
| Esophagogastroduodenoscopy   | + | +   | -   |
| Ultrasound of the abdominal cavity, ultrasound dopplerography (ULTRASOUND,UZDG)  | + | +   | +   |
| Puncture of the abdominal cavity   | + | +   | -   |
| Tests of counting numbers, handwriting, etc.   | + | -   | -   |
| Study of duodenal content  | + | +/- | -   |
| Urease respiratory helic test  | + | +/- | -   |
| Coprogram  | + | +   | +   |
| Biopsy of esophageal, gastric, and intestinal mucosa   | + | +/- | -   |
| Rectoromanoscopy (RRS)   | + | +/- | -   |
| Colonoscopy  | + | +/- | -   |
| Laparoscopy  | + | -   | -   |
| Finger examination of the rectum   | + | +   | +   |
| Liver fibroscanning  | + | -   | -   |
| Radioscopy (- graphy)esophagus, stomach, small and large intestine   | + | +   | -   |
| Overview radiography of the abdominal cavity   | + | +   | +/- |
| Irrigoscopy  | + | +   | -   |
| CT and MR of abdominal organs  | + | +/- | -   |
| Serological studies (RA, RSC, RNGA, RTGA), hepatitis antigens, markers of viral hepatitis A, B,C, D, E   | + | +   | -   |
| Immunological studies: autoimmune and cancer markers in diseases of the gastrointestinal tract and liver   | + | +   | -   |

Recognized medical institutions are clinical bases for postgraduate training of a "gastroenterologist" and must meet the requirements according to state educational standards.

## CHAPTER 5.Regulations on the examination/attestation

**The purpose** of the exam / attestation is to determine the level of knowledge and practical skills of clinical residents trained in the specialty "gastroenterologist" in accordance with the catalog of competencies.

**Composition of the examination committee:**

- 2 representatives of group "A" clinics
- 1 representative of group "B" or "C" clinics»
- 2 representatives of the FPME
- 2 representatives of the PMA.

**Tasks of the examination/attestation commission committee:**

1. organization and conduct of the exam / certification;
2. conducting the exam and reporting the result;
3. review and correct exam questions as needed;
4. conducting examination questions no later than 1 month before the exam.

**Filing an appeal.** The candidate may challenge the composition of the expert group. An appeal must be filed before the exam begins. If approved, the exam is postponed for a minimum of 3 months and a maximum of 6 months, a new expert group must be appointed in advance.

**Exam Structure:**

Part 1: a structured oral exam based on a discussion of clinical cases with minimal criteria for results determined in advance (the examiner uses case descriptions, examination results, X-rays, functional examinations, and other illustrations (60 to 90 minutes).

Part 2: written exam with multiple choice answers (100 questions in 3 hours).

**Admission to the exam.**

Graduate of the postgraduate educational program in gastroenterology.

**Exam/Attestation evaluation criteria:**

The assessment of each part of the exam, as well as the final grade, is given with the mark "passed" or "failed". The exam was successful if both parts of the exam were passed.

**List of literature:**

1. Layout of the State educational standard of higher professional education of the Kyrgyz Republic in the specialty.
2. Federal State Educational Standard of Higher Education in Specialties in Residency, Russian Federation.
3. Gastroenterology: National hands (D. Yu. Bogdanov et al.); ed.: V. T. Ivashkin, T. L. Lapina; Russian gastroenterol.assoc., Assoc. of medical societies for quality. - M.: GEOTAR- Media, 2008. – 700p.
4. Gastroenterology/ Russian gastroenterol.assoc.; ed. by V. T. Ivashkin, M.: GEOTAR-Media, 2008 – - 182p.

5. Gastroenterology and hepatology: diagnosis and treatment: ruk. for doctors/ (A. Kalinin et al.) under.ed. by A.V. Kalinin, A. F. Loginov, A. I. Khazanov-2nd ed. and add. M.: MED press-inform, 2011-860p.
6. Diseases of the gallbladder and bile ducts / A. A. Ilyenko -- M. Anarchis, 2006 – 448 p.
7. Non-specific inflammatory diseases of the intestine / G. I. Vorobyov, I. L. Khalif – - M., Miklos 2008 -- 400 p.
8. Fundamentals of clinical hepatology. Diseases of the liver and biliary system: a textbook for the system of postgraduate education of doctors / V. G. Radchenko, A.V. Shabrov, E. N. Zinoviev. - St. Petersburg: Dialect, 2005-862 p.
9. Handbook of gastroenterology and hepatology: reference edition / S. Bloom, D. Webster; trans. from English. ed. V. T. Ivashkin, I. V. Maev, A. S. Trukhmanov. M.: GEOTAR-Media, 2010-581p.
10. Treatment regimens. Gastroenterology: a reference publication/ edited by V. T. Ivashkin, T. L. Lapina. M.: Littera, 2006-160 p.
11. Functional dyspepsia: a brief practice. /V. T. Ivashkin, A. A. Sheptulin, V. A. Kiprianis. M.: MEDpress-inform, 2011. - 105, 5 p.
12. Chronic duodenitis: a textbook/ I. V. Mayev, A. A. Samsonov. - M., 2005-160 p.
13. Ulcer disease: monograph/ I. V. Mayev, A. A. Samsonov. - M.: Miklosh, 2009 – 431 p.
14. V. A. Maksimov, K. K. Dalidovich, A. G. Kulikov, A. L. Chernyshov, V. A. Neronov Diagnostics and treatment of diseases of the digestive system. Moscow: Adamant Publishing House», 2016.-848p.
15. Maksimov V. A., Dalidovich K. K., Tarasov K. M., Chernyshev A. L. Functional disorders and acute non-communicable diseases of the digestive system: Moscow: Adamant Publishing House, 2009-384p.
16. Kalinin A.V. Gastroenterology. Handbook of a practical doctor/ A.V. Kalinin, I. V. Mayev, S. I. Rapoport; under the general editorship of Prof. S. I. Rapoport. - M.: MEDpress-inform, 2009.-320p.
17. Gastroenterology and hepatology: diagnostics and treatment/ (Kalinina Andrey Viktorovich et al.); ed. In Kalinin and A. I. Khazanov.- Moscow: Miklos, 2009. - 602s.
18. Gastroenterology: national guidelines / ed. by V. T. Ivashkin, T. L. Lapina. - M.: GEOTAR-Media, 2008. – 704p. - (Series "National guidelines").
19. Roitberg G. E. Internal diseases. The digestive system: studies. manual/ G. E. Roitberg, A.V. Strutynsky.- 2nd ed. - Moscow: MEDpress-inform, 2011. – 560p.: ill.
20. International standards of the World Organization of Family Doctors for postgraduate medical education in the specialty "Family Medicine» (WONCA, 2013).
21. International Standards of the World Federation of Medical Education (WFME) for Improving the Quality of Postgraduate Medical Education (WFME, 2015).
22. Competence Catalog (postgraduate level) specialty " Family doctor/General practitioner "
23. Clinical guidelines for the diagnosis and treatment of uncomplicated peptic ulcer disease in the active phase at the primary health care level of the Kyrgyz Republic.- Bishkek, 2010.-64 p.
24. Clinical protocols for the diagnosis, treatment, and prevention of viral hepatitis B, C, and D adopted by the Expert Council for Quality Assessment of Clinical Guidelines/Protocols and approved by Order of the Ministry of Health of the Kyrgyz Republic No. 42 of January 18, 2017.
25. Recommendations of the European Association for Liver Research, EASL, 2017