

Profile of a graduate of the study program *General Medicine* at Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava

PREAMBLE

Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava (JFM CU), is an institution whose one of its tasks is to educate doctors capable of providing health care to citizens at the level of up-to-date knowledge. Based on this task, our goal is to prepare graduates who have the following qualification characteristics:

1. The graduate of JFM CU masters the basic principles of medicine and is able to apply these in their profession. He is generally educated and well-trained so that he is able to understand the existence and importance of the relationship between medicine, nature sciences and society and is able to use this knowledge in his/her work.
2. The graduate has theoretical knowledge of the morphology and function of individual organs and systems of a healthy person, the origin and course of morphological and functional changes that will enable their correct interpretation and application for rational health promotion, prevention, diagnosis and treatment of diseases.
3. The graduate masters basic methods of medical examination using simple instrumentation and basic laboratory and examination methods, including diagnostics, differential diagnosis and treatment of more common diseases. He/she also masters the basics of providing qualified assistance in life-threatening situations.
4. The graduate has good theoretical and practical clinical skills which, under the professional guidance of an experienced doctor, will enable him/her to provide healthcare at the appropriate level of the organizational structure.
5. By studying at JFM CU, the graduate acquires the ability and willingness to continue their education.
6. The graduate understands human health and disease as a result of the interaction of genetic, biological, physical, chemical, psychological, emotional, spiritual, social and other environmental influences on the human body.
7. The graduate should be a convinced supporter of modern trends in the development of medicine, represented mainly by the concepts of primary disease prevention and health promotion with an emphasis on the preference for a healthy lifestyle.
8. The graduate should be a bearer of basic human principles and should cultivate and maintain a sense of a hierarchy of values in which altruism, empathy, respect for life, respect for human dignity and the rights of the patient are at the forefront.
9. The graduate masters the principles of medical psychology and ethics, which will be guided in his/her professional activities in relation to the sick person, his/her relatives and his/her surroundings.
10. The graduate will also be prepared to work in primary health care. He/she masters the basic principles and organization of health care, basic medical legal standards necessary for the exercise of the profession.
11. The graduate will be able to obtain a specialization in individual medical disciplines or be able to be actively involved in medical research after completing the prescribed internships, postgraduate studies and examinations.
12. The graduate masters basics of scientific work in theoretical and clinical disciplines and modern methods of obtaining scientific and professional information.

A. The graduate of JFM CU has following specific knowledge and skills:

1. In the field of healthcare organization, he/she has basic knowledge of:

(a) the organization of healthcare in general and within it:

- tasks and organization of primary health care in our country and basic directions abroad
- tasks and organization of hospital care
- organization of the emergency medical service and the emergency medical service
- organization of the fight against cancer
- organization of care for risk groups of the population (dispensary, screening)
- principles for organizing the care of the pediatric population, including the vaccination system
- principles governing the organization of care for the elderly and patients with chronic diseases and people with reduced working capacity
- organization of spa treatment
- organ and tissue donation
- principles of the organized fight against drug addiction
- organization of the hygiene service, including anti-epidemic measures and immunization
- principles governing the organization of sexually transmitted diseases
- an organization and implementation of entry, periodic, exit and subsequent preventive examinations of workers performing work in which there is an increased risk of occupational diseases and industrial poisoning
- organization of health education of the population
- organization of primary and secondary disease prevention

(b) the legal status and duties of the doctor in general, but in particular:

- rights and obligations of the primary care physician
- rights and obligations of the doctor in relation to the death of persons
- rights and obligations related to the collection of biological material in medical, genetic and legal indications
- rights and obligations related to the implementation of health promotion and disease prevention programs
- legal status of the doctor
- about his/her legal responsibility and about his/her rights, especially at the level of primary health care

(c) the organization of sickness, sickness and pension insurance, but in particular on:

- principles of assessment activity
- principles for compensating for accidents and occupational diseases, industrial poisonings and other occupational injuries
- principles of rational pharmacotherapy,
- principles for the provision of medical devices and needs
- indications for spa treatment
- on the administrative duties of a doctor in dealings with the above mentioned institutions

2. In the field of emergency medical assistance in life-threatening situations:

a) the graduate masters the etiopathogenesis, diagnosis and treatment of such diseases and conditions that endanger human life:

- theoretically and practically resuscitation of a patient at risk of death or clinical death
- treatment methods used in resuscitation and treatment of the patient at the level of primary care

(b) has good knowledge of life-threatening conditions, in particular:

- injuries to the head, neck, chest, abdomen, spine, limbs, pelvis and polytrauma
- acute limb ischemic syndrome, acute thrombophlebitis and phlebothrombosis, thromboembolic disease and haemostasis disorders
- severe dysrhythmias and cardiac arrest
- acute left and right ventricular failure
- allergic conditions, including anaphylactic shock
- severe respiratory disorders and respiratory arrest
- pulmonary embolism
- status asthmaticus
- shocks
- heavy bleeding (external, internal)
- epilepsy and seizures
- bites by poisonous animals
- burns, damage to the body due to heat and cold, electric shocks
- conditions causing asphyxia (drowning, aspiration, poisoning, insect bites)
- acute abdominal events
- comas - hepatic, diabetic, uremic, adrenal failure, exogenous intoxication, respiratory failure
- acute intoxications - especially intoxication with drugs, CO, CO₂, acids, alkalis, fatty solvents, alcohols, organophosphates, fungi, addictive substances, heavy metals, combat poisons
- organization and provision of first aid in the event of accidents in industry, the environment and natural disasters
- acute radiation sickness
- post-transfusion reactions

c) has good knowledge of life-threatening conditions in children and knows the basic solutions to emergencies, especially in:

- conditions causing asphyxia in children
- acute abdominal events, including acute intestinal obstruction
- malignant dehydration
- acute states of unconsciousness, convulsions
- urgent assistance with injuries, bleeding, securing vital functions and transporting the patient

d) from psychiatric diseases threatening the life of the patient or people around him, the graduate has knowledge, diagnostic and therapeutic skills, especially in the field of:

- principles of coping with a psychomotor restless and aggressive patient and measures for patient transport
- procedure in patients with acute psychogenic disorder and in patients in a suicidal crisis
- acute and delirious states
- main principles of long-term medication of psychotropic drugs in endogenous psychoses

(e) the graduate is familiar with diagnosis and first aid in the event of serious damage to the eye, but in particular:

- damage to the eye by a foreign body
- severe conjunctivitis
- traumatic eye damage (burns, bleeding, anterior segment injury).

(f) the graduate is able to diagnose and treat life-threatening infectious diseases.

(g) the graduate is able to give first medical care for acute massive genital bleeding and should be able to manage an uncomplicated birth.

3. In the field of diagnosis and therapy of other acute and chronic diseases and conditions.

a) The graduate has knowledge of the theoretical foundations and can perform a basic examination of the patient (history, somatic examination, inspection, palpation, percussion, auscultation, measurement of basic parameters of body function - pulse, blood pressure, body temperature, weight, height, BMI, basic musculoskeletal examination).

b) The graduate has knowledge and practical experience with:

- the use of ancillary examinations in the diagnostic process, such as: basic functional examination of the lungs and cardiovascular system, including ECG, basic methods of X-ray and ultrasound diagnostics, urinalysis and basic examinations using dry chemistry
- digital examination of the rectum and prostate
- examination of visual acuity and colour vision

c) The graduate has knowledge in special examinations about:

- proctoscopy
- otoscopy, laryngoscopy and rhinoscopy examination
- examination of the anterior segment of the eye

d) The graduate has theoretical knowledge and practical experience in the field of laboratory diagnostics with:

- clinical-chemical methods of examination of biological material
- haematological methods
- paper diagnostic methods
- biopsy (cytological and histological) methods

Knowledge of the basics of these methods allows the graduate to rationally indicate them and correctly interpret their results.

e) The graduate has good knowledge and good practical experience in diagnosing, interpreting the meaning and therapy of such symptoms, signs and syndromes as:

- disorders of consciousness, vertigo, cyanosis, jaundice, oedema, changes in body temperature, arterial hypotension, tinnitus, meningism, headache, otalgia, hypacusis, epistaxis, cough, dyspnoea, haemoptysis,

haematopoiesis, cardiac arrhythmias, dysphagia, dyspepsia, nausea vomiting, diarrhoea, splenomegaly, hepatomegaly, constipation, gastrointestinal bleeding, dysuria, glycosuria, proteinuria, pyuria, haematuria, leanness, obesity, haemorrhagic diathesis, lymphadenopathy, chest and abdominal pain, limb pain, back pain, back pain, areas, lumbago, locomotor disorders, sleep disorders, seizures and collapse.

f) The graduate masters the peculiarities of physiology, prevention, examination, diagnosis and treatment of diseases of children and adolescents.

4. The graduate has a comprehensive, modern knowledge of the most common and most serious diseases in the population, but especially about:

a) arterial hypertension, arteriosclerosis and its complications, heart failure, ischemic heart disease, myo-, endo- and pericardial diseases, congestive heart failure, valves heart disease, aortic diseases, peripheral arteries and veins, congenital and vascular developmental defects

(b) red blood cell diseases (anaemias, polyglobulia, polycythemia), white blood cell diseases (leukaemia, disorders of altered function and/or white blood cell counts), haemostasis and coagulation disorders and immune-deficit conditions

c) rhinitis, tonsillitis and pharyngitis, laryngitis, bronchitis, bronchial asthma, pneumonia and pleurisy, pneumothorax, respiratory insufficiency, tuberculosis

d) gastroenteritis, gastritis and its complications, functional gastric dyspepsia, gastric and duodenal ulcers, functional intestinal dyspepsia, haemorrhoids and inflammation of the rectum, bile stones, gallbladder, pancreatitis, viral hepatitis, chronic hepatitis, cirrhosis of the liver, cirrhosis

e) diabetes mellitus and its complications, gout and underlying disorders of lipid metabolism

f) disorders of acid-base, electrolyte balance and water metabolism

g) infectious diseases of the urinary tract, urolithiasis, disease processes affecting the contents of the scrotum in children and adults, glomerulonephritis, pyelonephritis, renal insufficiency, uraemia, prostate diseases

h) serious diseases of muscles, joints and tendons, rheumatic and infectious diseases of the musculoskeletal system, vertebrogenic pain syndromes and their complications, osteoporosis

i) underlying systemic diseases and immune disorders

j) the most common diseases of the central and peripheral nervous system and vascular diseases of the brain (atherosclerosis, ischemia, bleeding)

k) epilepsy, migraine, neuroses, psychoses

l) blepharitis, conjunctivitis, hordeolum, glaucoma, vascular diseases, refractive errors and strabismus

m) the most common periodontal diseases, caries prevention, glossitis

n) panic disease, dermatomycoses, bacterial skin infections, skin ulcer, venereal diseases, the most common diseases affecting the hair, allergic diseases and their skin manifestations, eczema

o) hyper- and hypothyroidism, hyper- and hypocortisolism, hyper- and hypofunction of the adeno- and neurohypophysis, hyper- and hypoparathyroidism, basic endocrine disorders of the female and male genital organs

p) congenital and acquired metabolic disorders, disorders of metabolism of trace elements and vitamins, eating disorders

q) underlying immune system disorders, including HIV infection / AIDS

r) underlying genetic syndromes

s) basic gynaecological and obstetric diseases and conditions

(t) underlying childhood infectious diseases

- (u) major disorders of child growth and development, puberty and adolescence.
- v) basic postoperative complications
- w) damage to health due to physical factors, especially ionizing radiation disease and vibration disease, pneumoconiosis
- x) origin, course, diagnosis and treatment and consequences of cancer
- y) injuries and fractures
- z) terminal states

5. The graduate has knowledge of:

- (a) disease risk factors in relation to heredity, age, race, sex, socio-economic status, lifestyle factors, occupational exposure, environmental exposure, dietary style, prenatal exposure, abnormal metabolic status, smoking, drug addiction
- b) organ and tissue transplantation, dialysis program
- c) family planning and effective contraception
- d) the importance of rational diet, physical activity and regeneration

6. The graduate masters the basics of complex pharmacotherapy, including:

- a) pharmacotherapy of childhood diseases
- b) pharmacotherapy in pregnancy and in breast-feeding women
- c) pharmacotherapy of diseases in the elderly
- d) knowledge of adverse drug reactions and drug interactions
- e) transfusion and infusion therapy, injection therapy
- f) principles of parenteral and enteral nutrition

7. The graduate masters the basics of care for chronically ill, physically and mentally handicapped people at the level of primary health care and the principles of physiotherapy and rehabilitation treatment.

8. The graduate masters the principles of care for the elderly at the level of primary health care and also has a good knowledge of the aging process, the peculiarities of the origin, manifestations and course of diseases in the elderly, prevention of premature aging and principles of health promotion in old age.

B. The graduate of JFM CU masters the following practical performances (in addition to those already mentioned in the previous text):

1. venepuncture
2. catheterisation of men and women
3. introduction of the probe into the stomach, gastric lavage
4. independent recording of the ECG curve and the ability to practically evaluate this curve
5. independent evaluation of urinary sediment

6. examination of workers at high-risk workplaces according to valid regulations
7. basic methods of drug administration
8. treatment of wounds of soft anatomical structures of the locomotor system
9. principles and practical procedures for the correct treatment of dislocations of large joints and broken bones, including knowledge of the principles of immobilization and plastering techniques
10. principles and practical implementation of asepsis, antisepsis and wound dressing, bandaging technique
11. work with basic surgical instruments
12. conducting spontaneous childbirth at home and in exceptional circumstances
13. basic examination of the child
14. basic neurological examination
15. basic psychiatric examination

C. The graduate of JFM CU:

1. is fluent in at least one world language and passively in another world language
2. is able to work in a team of health professionals as a partner and basic skills to organize the work of the team
3. masters the basic use of computers in his/her profession.

D. The graduate of JFM CU is able to think creatively and follow the principles of evidence-based medicine, in the field of basic theoretical, preclinical and clinical disciplines. He/she is able to:

1. critically evaluate the level of evidence in preclinical and clinical studies,
2. to assess the ethical aspects of scientific work on animals and patients
3. prepare a basic scheme of the pre-clinical and clinical phase of drug and medical device testing
4. analyse and synthesize knowledge from the available literature in the form of a critical review article
5. prepare materials for the original scientific, resp. clinical study (defining the hypothesis, objectives, methods, structure of the results and their comparison with other authors, summarizing the conclusions).