

## **Algorithm of a Student Action for scenario №1**

Communicative skills. Inquiry of patient complaints with right side  
**pleuropneumonia.** Medical history.

1. Say hello and introduce yourself.
2. Explain to the patient the purpose and course of the examination.
3. Obtain agreement of the patient for the examination.
4. Collect passport data (age, place of employment, position)
5. Collect the main complaints and carry out their details:
  - ask about pain in the chest (localization and nature of the pain, its relationship with breathing),
  - ask about the presence of cough (more in the morning, at night, in the evening or throughout the day, whether the cough is accompanied by sputum discharge);
  - ask about the amount of sputum, color, smell and consistency;
  - ask about body temperature (level of temperature, whether it changed during the day);
  - ask about dyspnoea (at rest or under loading, what is more difficult : to inhale or exhale).
6. Collect concomitant symptoms (weakness, palpitations).
7. Carry out an inquiry on organs systems:
  - the nervous system (the presence in the past of loss of consciousness, dizziness, visual impairment, hearing, speech),
  - cardiovascular system (whether in the past were there an increase of blood pressure, palpitations or interruptions in the work of the heart, pain in the heart region),
  - the gastrointestinal tract (whether in the past noted nausea, vomiting, impaired stool or pain in the abdomen),
  - the urinary system (whether in the past have been there any violations of urination, or pain during urination).
8. Anamnesis of the disease:
  - when the first symptoms of the disease appeared,
  - dynamics of symptoms,
  - what treatment was used.
9. Anamnesis of life:
  - living conditions,
  - professional history,
  - epidemiological history (contact with other patients),

- bad habits (smoking or drinking alcohol),
  - allergic history
  - the presence of concomitant diseases (diabetes, kidney disease, liver).
10. Finish the inquiry of the patient (report).
  11. Recommendations for the patient to carry out further examination (physical examination, additional research methods).

### **Algorithm of a Student Action for scenario №2**

Communication skills. Interview with a patient with **dry pleurisy**. Medical history

1. Say hello and introduce yourself.
2. Explain to the patient the purpose and course of the examination
3. Obtain consent from the patient for the examination.
4. Collect passport data (age, where and by whom)
5. Collect the main complaints and carry out their detailing:
  - ask about pain in the chest (localization of pain, connection with breathing),
  - ask about the presence of cough (more in the morning, at night, in the evening or throughout the day, accompanied by coughing sputum production)
  - ask about the amount of sputum, color, smell, and consistency
  - ask about body temperature (what indicator of temperature, or did it change during the day),
  - ask about shortness of breath (at rest, during exertion, it is more difficult to inhale or exhale)
6. Collect concomitant symptoms (weakness, palpitations).
7. Conduct a survey on organ systems:
  - nervous system (the presence in the past of dizziness, loss of consciousness, impaired vision, hearing, speech)
  - cardiovascular system (in the past there were no increases in blood pressure, palpitations and interruptions in the work of the heart, pain in the heart)
  - Gastrointestinal tract (or noted nausea, vomiting, stool, or abdominal pain in the past)
  - urinary system (did not note in the past urinary disorders, or pain).
8. The history of the disease:
  - when the first symptoms
  - dynamics of symptoms
  - what was treated
9. Anamnesis of life:
  - accommodations,
  - professional history
  - epidanamnesis (contact with other patients)

bad habits (smoking and drinking)

Allergic history

- the presence of concomitant diseases (diabetes, kidney disease, liver)

10. Complete the survey of the patient (notify), thank the patient

11. Recommend the patient to undergo further examination (physical examination and auxiliary examination methods)

### **Algorithm of a Student Action for scenario №3**

Communication skills. Interview with a patient with **bronchial asthma**. Medical history.

The student greeted, introduced himself, explaining what he would do, asked the patient for permission to conduct an examination

2. Collected passport data (name, age, gender, address, place of work, profession, position)

Collecting major complaints

3. Asked about shortness of breath / suffocation, the nature of shortness of breath / suffocation (expiratory, inspiratory, mixed)

4. Asked about the factors that provoke shortness of breath (physical activity, inhalation factors, food, chemicals, medications); the duration and frequency of asthma attacks; connection with the time of day (daytime, nighttime); degree of restriction of physical activity

5. Asked about the factors that provoke shortness of breath reduce or stop shortness of breath (elimination of a provoking factor, cessation of stress, change of position)

6. Asked about coughing (dry, with phlegm, persistent, paroxysmal)

7. Asked about the conditions for the appearance of a cough (asthma attack, physical exertion, inhalation factors, chemicals, drugs)

8. Asked about the nature of sputum (quantity, color, consistency, time of appearance, hemoptysis)

9. Asked about chest pain: localization, connection with breathing, coughing, body position; fever and its nature (level (subfebrile, moderately elevated, high, excessively high), type of temperature (correct, incorrect; constant, remitting, intermittent, hectic, wavy, recurrent, perverted); weakness

10. Conducted a survey on organ systems:

-Nervous system (dizziness, loss of consciousness, impaired vision, hearing and speech);

-cardiovascular system (palpitations and interruptions in the work of the heart, increased blood pressure, pain in the heart);

digestive system (nausea, vomiting, heartburn, abdominal pain, diarrhea, constipation, changes in stool);

urinary system (pain during urination, lower back pain, impaired diuresis and dysuria)

Medical history.

11. Asked about the onset of the disease (time of onset, what factors are associated with); symptoms at the onset of the disease (shortness of breath / walking away, cough, sputum, chest heaviness, wheezing, audible at a distance; their relationship with provoking factors)

12. I asked about the development of symptoms, their dynamics, the appearance of new symptoms, the dynamics of the severity of symptoms, the relationship with the time of day (daytime, nighttime), the degree of restriction of physical activity, well-being in the interictal period

13. I asked about the previous treatment, its effectiveness (what drugs, the duration of their use, the effect on symptoms, the frequency and duration of exacerbations and remissions), the seasonality of exacerbations

14. Asked about inpatient treatment for this disease (quantity per year, duration)

Anamnesis of life.

15. Identified risk factors for the disease (hereditary, environmental, domestic and occupational)

16. Asked about bad habits (smoking, alcohol abuse, drug addiction)

17. Gathered epidemiological history (contact with patients with infectious diseases, patients with fever, being abroad for the past 3 months, using the services of public catering facilities)

18. Gathered an allergic history: allergic diseases (conjunctivitis, allergic rhinitis, allergic skin manifestations)

19. Determined the presence of concomitant diseases (in particular, chronic respiratory diseases) that can affect the underlying disease

Assessment of survey results

20. Formulated a probable diagnosis (nosological or syndromic), justified by the data obtained (Attacks of expiratory suffocation with unproductive cough and viscous sputum, distant dry rales, forced position of the body while sitting or standing with fixation of the shoulder girdle, participation of additional respiratory muscles. No symptoms and satisfactory state of health out of an attack. Presence of premorbid state - allergic rhinitis.)

Communicative skills. Inquiry of patient complaints with **arterial hypertension**.  
Medical history.

1. Say hello and introduce yourself.
2. Explain to the patient the goals and course of the examination.
3. Obtain patient's agreement for examination.
4. Clarify passport data (name, surname, age, profession, place of work, social status).
5. Find out the basic complaints and carry out their detailization:
  - clarify the levels of blood pressure, at what time of day it increases more often, what can provoke blood pressure increasing, patient's actions for decreasing of blood pressure;
  - clarify the symptoms which accompany the increasing of blood pressure (headaches, pain in the heart region, dizziness)
  - clarify the presence of pain in the heart region, its nature;
  - clarify the characteristics of headaches;
  - clarify the presence of peripheral edema and its nature.
6. Find out additional complaints (disorders of vision, urination, weakness, nausea, vomiting, decreased working ability).
7. Conduct an inspection of other organ systems:
  - nervous system (the presence of dizziness, loss of consciousness, disorders of vision, hearing, speaking in the past).
  - respiratory system (cough, shortness of breath, chest pain, associated with breathing).
  - gastrointestinal tract (nausea, vomiting, dejection or abdominal pain).
  - urinary system (whether in the past there have been any disorders of urination or pain).
8. History of disease (anamnesis morbi):
  - when were the first symptoms appeared?
  - what does the patient associate the onset of the disease with?
  - dynamics of symptoms?
  - the presence of hypertensive crises, their frequency and nature?
  - has the patient ever been consulted by a doctor before about this disease?
  - what was treatment, the effectiveness of treatment?
  - what was the reason for going to the doctor at the moment?
9. History of life (anamnesis vitae):
  - childhood diseases, developmental features in childhood
  - the presence of risk factors for hypertension (smoking, obesity, excessive consumption of fatty and salty foods, dyslipidemia)
  - professional history (harmfulness and aggravating factors),
  - bad habits (smoking, drinking alcohol, drugs, energetic drugs)

- the presence of cardiovascular diseases in the family;
  - the presence of other chronic diseases (diabetes mellitus, diseases of the thyroid gland, adrenal glands, chronic kidney disease and central nervous system)
10. Inform the patient of the ending of the inquiry. Thank. Speak about previous diagnosis.
11. Propose a plan for further examination (physical examination and additional methods of examination).

### **Student action algorithm for scenario № 5**

Communication skills. Questioning a patient with **angina pectoris**. Medical history

1. Say hello and introduce yourself.
2. Explain to the patient the purpose and course of the examination.
3. Obtain consent from the patient for the examination.
4. Collect passport data (age, where and by whom).
5. Collect the main complaints and carry out their detailing:
  - ask about the localization of pain;
  - ask the patient to indicate the location of the pain;
  - clarify the intensity of pain;
  - ask about the duration of pain;
  - ask about the nature of the pain;
  - clarify pain radiating
  - ask what provokes and eliminates pain
  - clarify the relationship of pain with physical exertion, detail intense physical exertion (walking on a flat surface in meters, climbing stairs).
6. Collect related symptoms.
7. Medical history:
  - determine the duration of the disease and its course;
  - clarify previous treatment;
  - identify a history of complications and cardiovascular events;
8. Anamnesis of life
  - evaluate bad habits and risk factors (smoking, alcohol, stress, etc.);
  - assessment of the presence of physical inactivity;
  - hereditary history (disease and death of relatives at a young age from cardiovascular disease)

- identification of concomitant diseases that can affect the development and course (chronic kidney disease, diabetes mellitus, etc.)

9. Inform patient of completion of survey.

10. Recommend that the patient undergo further examination (physical examination and auxiliary examination methods).

### **Algorithm of a Student Action for scenario №6**

Communicative skills. Inquiry of patient complaints with right side **myocardial infarction**. Medical history.

1. Say hello and introduce yourself.
2. Explain to the patient the purpose and course of the examination.
3. Obtain agreement of the patient for the examination.
4. Collect passport data (age, place of employment, position)
5. Collect the main complaints and carry out their details:
  - ask about pain in the chest (localization, nature, duration, irradiation of pain, time of its occurrence, dynamics, relationship with external factors, the use of drugs and their effectiveness)
6. Collect concomitant symptoms (weakness, cold sweat, dyspnoe).
7. Carry out an inquiry on organs systems:
  - the nervous system (the presence in the past of loss of consciousness, dizziness, visual impairment, hearing, speech),
  - respiratory system (whether in the past were there dry or phlegm cough, dyspnoe, pain in the chest),
  - the gastrointestinal tract (whether in the past noted nausea, vomiting, impaired stool or pain in the abdomen),
  - the urinary system (whether in the past have been there any violations of urination, or pain during urination).
8. Anamnesis of the disease:
  - when the first symptoms of the disease appeared,
  - dynamics of symptoms,
  - what treatment was used, their effectiveness.
9. Anamnesis of life:
  - living conditions,

- professional history,
- epidemiological history (contact with other patients),
- bad habits (smoking or drinking alcohol, addiction),
- allergic history
- the presence of cardiovascular disaster, diabetes, kidney disease, liver disease in patient and his relatives.

10. Finish the inquiry of the patient (report).

11. Recommendations for the patient to carry out further examination (physical examination, additional research methods).

### **Student action algorithm for scenario No. 7**

Communication skills. Questioning of the patient with **peptic ulcer**. History taking.

1. Welcome the patient and introduce yourself.
2. Explain the goals and course of the examination.
3. Obtain consent of the patient for examination.
4. Collect passport data (name, age, occupation, where he or she works).
5. Collect the main complaints and detail them:
  - ask about abdominal pain (intensity, nature, localization of pain, connection with food intake),
  - ask about pain radiation,
  - clarify the presence of episodes of black stool,
  - ask about a possible weight loss during the illness period,
  - ask about nausea, vomiting;
6. Collect related symptoms.
7. Medical history:
  - when the first symptoms appeared,
  - what could cause the disease onset on the patient's opinion,
  - dynamics of symptoms,
  - possible presence of seasonal exacerbations of the disease,
  - if the patient have consulted with a doctor about this disease before,
  - if patient used any medication for symptom relief,
  - what directly led the patient to the doctor now, how have the symptoms changed.
8. Anamnesis vitae:
  - nutrition (regularity, frequency, eating spicy foods, spices, dry food),
  - professional history (harmfulness and aggravating circumstances),
  - bad habits (smoking and drinking),



- family history presence of gastrointestinal tract diseases.
- 9. Inform patient about completion of examination.
- 10. Recommend the patient to undergo further examination (physical examination and auxiliary examination methods).

### **Algorithm of student actions according to scenario № 8**

Communication skills. Survey of a patient with **anemia**. Medical history

1. Establish contact with the patient: say hello, allow you to take a comfortable position on a chair or couch, indicate your role.
2. Ask the patient to introduce himself, collect passport data.
3. Explain the course and purpose of the procedure.
4. Ensure that the patient has voluntary informed consent for examination.
5. Interview the main complaints and their details:
  - ask about general weakness and fatigue
  - ask about dizziness (what provokes, connection with the position of the body, time with pre-arterial pressure, food intake)
  - ask about shortness of breath (at rest, during exertion, it is more difficult to inhale or exhale)
  - ask about the heartbeat (connection with breathing, physical activity, blood pressure, food intake)
6. Ask about concomitant symptoms (dry skin, brittle nails, koilonychia, hair loss, asthenia, angular stomatitis, glossitis, dysphagia, a feeling of rapid satiety, heaviness in the epigastrium after eating, melena).
7. Survey on organ systems:
  - nervous system (whether in the past, loss of consciousness, headache, tinnitus, taste disturbance were noted)
  - respiratory system (has a cough with blood been noted in the past)
  - gastrointestinal tract (whether vomiting with blood, abdominal pain, discoloration of feces — black stools, unchanged blood in feces, distorted taste (tendency to consume inedible objects), distorted desire to consume ice);

- the genitourinary system (whether in the past there have been violations of urination, or pain when urinating, red color of urine), in women - about uterine bleeding, heavy and prolonged menstruation.

#### 8. Medical history:

- specify the onset of the disease;
- when the first symptoms appeared;
- dynamics of symptoms;
- what was treated

#### 9. Anamnesis of life:

- risk factors for the disease (donation - more than 2 annual blood donations for women and more than 3 annual blood donations for men; women are informed about the nature of menstruation (cycle, duration, course) and pregnancy history (pregnant women and mothers under the age of 18, women giving birth 3 or more times or with an interval between births <1 year));
- family history (presence of coagulation disorders and colon cancer);
- living conditions (low socio-economic status), lifestyle, sports, nutrition (vegetarianism);
- the presence of past operations on the stomach and intestines, hemodialysis procedures;
- medical history: information is obtained on the medications the patient receives (antacids, H<sub>2</sub> receptor blockers, proton pump inhibitors, long-term use of non-steroidal anti-inflammatory drugs, long-term use of acetylsalicylic acid preparations, zinc or magnesium preparations);
- bad habits (smoking, drinking, etc.)
- professional history
- the presence in the past and present of inflammatory bowel diseases (erosive gastritis, ulcer, Helicobacter pylori infection, Whipple's disease, celiac disease, helminthic infestations), oncological diseases (colon cancer, colorectal adenoma), chronic kidney diseases (renal failure).

10. Finish the patient survey (notify him about this).

11. Express a presumptive diagnosis.

12. Recommend the patient to undergo further examination (physical and additional studies).

13. Say goodbye to the patient.

### **Algorithm of student actions according to scenario № 9**

Communication skills. Survey of a patient with **glomerulonephritis**. Medical history

1. Say hello and introduce yourself.
2. Explain to the patient the purpose and course of the examination
3. Obtain consent from the patient for the examination.
4. Collect passport data (age, where and by whom)
5. Collect the main complaints and carry out the details:
  - urination (frequency, especially at night, pain in this case, nature, indications of blood and turbidity in the urine)
  - the presence of edema, especially on the face
  - headache
  - pain in the lumbar region
6. Collect related complaints (weakness, lack of appetite, fever).
7. Conduct a survey on organ systems:
  - nervous system - (the presence of dizziness, visual impairment, hearing, speech, taste, sleep disturbances, stress, injuries)
  - respiratory system - (the presence of shortness of breath, suffocation, chest pain, cough)
  - cardiovascular system - (the presence of increased blood pressure, palpitations and interruptions in the work of the heart, pain in the heart, shortness of breath, edema, asthma attacks)
  - gastrointestinal tract - (the presence of changes in appetite, nausea, vomiting, pain in the abdomen, constipation, diarrhea)
  - organs of movement - (pain in the limbs, joints, spine, change in the shape of the joints)
8. The history of the disease:
  - when the first symptoms appeared
  - dynamics of symptoms
  - what, where and when was treated, what are the results
9. Anamnesis of life:
  - accommodations
  - heredity
  - diseases transferred in childhood
  - professional history
  - epidanamnesis (contact with other patients, stay abroad)
  - bad habits (smoking, drinking, overeating)

menstrual function, menopause, pregnancy, childbirth

Allergic history

- the presence of concomitant diseases (obesity, diseases of the kidneys, liver, pancreas)

10. Finish conducting a patient survey (voicing a diagnostic hypothesis)

11. Recommend the patient to undergo further examination (examination, palpation, percussion, auscultation, instrumental and laboratory examination methods).

### **Algorithm of student actions according to scenario №10**

Communication skills. Survey of a patient with **diabetes**. History taking

1. Say hello and introduce yourself.

2. Explain to the patient the purpose and course of the examination

3. Obtain consent from the patient for the examination.

4. Collect passport data (age, address, occupations)

5. Collect the main complaints and carry out the details:

- ask about the feeling of thirst (when it arises, how it manifests)

- ask about the amount of drinking water (approximately) during the day

- ask about the amount of urine released per day (approximately)

- ask about food preferences (whether he loves sweet, flour)

- ask about the dynamics of changes in appetite and body weight for the year

- ask about dry skin, the presence and localization of itching

6. Collect related complaints (weakness, pain, shortness of breath, palpitations, increased pressure).

7. Conduct a survey on organ systems:

- nervous system - (the presence of dizziness, visual impairment, hearing, speech, taste, sleep disturbances, stress, injuries)

- respiratory system - (the presence of shortness of breath, suffocation, chest pain, cough)

- cardiovascular system - (the presence of increased blood pressure, palpitations and interruptions in the work of the heart, pain in the heart, shortness of breath, edema)

- gastrointestinal tract - (the presence of changes in appetite, nausea, vomiting, pain in the abdomen, constipation, diarrhea)

- urinary system - (whether in the past noted urination disorders, pain).

8. The history of the disease:

-when the first symptoms appeared

-dynamics of symptoms

-what, where and when was treated, what are the results

9. Anamnesis of life:

-accommodations

-heredity

diseases transferred in childhood

-professional history

-epidemiology (contact with other patients, stay abroad)

bad habits (smoking, drinking, overeating)

menstrual function, menopause, pregnancy, childbirth

Allergic history

- the presence of concomitant diseases (obesity, diseases of the kidneys, liver, pancreas)

10. Finish conducting a patient survey (voicing a diagnostic hypothesis)

11. Recommend the patient to undergo further examination (examination, palpation, percussion, auscultation, instrumental and laboratory examination methods).