MINISTRY OF HEALTH OF UKRAINE
NATIONAL PIROGOV MEMORIAL MEDICAL UNIVERSITY, VINNYTSYA

«APPROVED» at a meeting of the specialized methodological council for therapeutic disciplines protocol No. 4 from 19 Mar 2026 Chairman Mykola STANISLAVCHUK	«AGREED» Head of Examination Commission No. 3 « 11 » 03 2026 Vadym ZHEBEL

EXAM MATERIALS

STATION No. 1 «STANDARDIZED PATIENT IN THE INTERNAL MEDICINE CLINIC» OSP(C)E

SPECIALTY	**222 Medicine**
EDUCATIONAL PROGRAM	**«Medicine»**
FACULTY	**Faculty of Foreign Citizens Training**

Vinnytsia - 2026

EXAM MATERIALS APPENDICES

1. Instructions for students at the station (Appendix 1)
2. List of practical skills (Appendix 2)
3. Algorithms for practical skills performing (Appendix 3)
4. Sample task (Appendix 4)
5. Regulatory documents (Appendix 5)

Appendix 1

INSTRUCTIONS FOR STUDENTS AT STATION No. 1 "STANDARDIZED PATIENT IN THE INTERNAL MEDICINE CLINIC"

The higher education (HE) candidate must greet and present the examiner with the identification number that was assigned during OSP(C)E registration. At the station, a video recording of the applicant's response is made. The HE candidate receives a clinical task that involves communication with the patient, asking about complaints and anamnestic data, and conducting a certain objective examination.

THE FOLLOWING COMPETENCES ARE ASSESSED: communication; complaints, anamnesis; objective examination; ethical aspects.

When working with a standardized patient: there is an ADMISSION IN THE OFFICE OF THE PRIMARY CARE DOCTOR.

1. The HE applicant must greet and introduce himself: "I am your doctor," without talking his name.
2. Ask the patient how to contact him.
3. After receiving information about the patient's name, inform that he/she should interview the patient and examine him/her.
4. Ask permission to conduct the survey.
5. Ask the patient's age
6. Ask about complaints (patient reports leading complaint that requires detailing according to algorithm).
7. Conduct a detailed analysis of complaints according to the given algorithm
8. Before conducting an objective examination, HE applicant must explain to the patient the purpose of the procedure. For example, to measure the difference between pulse and heart rate.
9. Explain the procedure to the patient: first count the pulse waves on the radial artery for 60 seconds, count the heart rate at the apex of the heart for 60 seconds , and calculate the difference between the contractions.
10. Obtain the patient's consent to conduct an objective examination.
11. Treat your hands with an antiseptic solution.
12. Conduct an objective examination.

When working with a clinical task - perform tasks related to interviewing the patient, collecting anamnestic data, and conducting the specified objective examination.

After completing the task or expiring of the time at the station, return the task to the instructor, wait for a signal of the time spent ending at the station, and leave the station. After the time spent at the station has expired, the examiner does not accept a response. The examiner is an observer of your actions and does not provide instructions, comments, or questions.

After passing the first station, the student must move to another station according to the route sheet.

The duration of the station is 8 minutes.

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IT IS PROHIBITED to communicate with the examiner, use educational and support materials, use gadgets, transmit, copy, and distribute any information related to the exam that is not publicly available. If a HE candidate violates the above norms, his/her exam will be terminated, and the exam grade will be "failed" (violation of the rules of academic integrity).

BRING gloves and a stethoscope.

Appendix 2

LIST OF PRACTICAL SKILLS AT THE STATION

No.	Diagnosis	Leading complaint	Practical skill
1	Gouty arthritis	Joint pain	Joint examination
2	Rheumatoid arthritis	Joint pain	Joint examination
3	Flu, pneumonia	Temperature increase	Nasopharyngeal swab
4	Pneumonia	Temperature increase	Lung auscultation
5	COPD	Cough	Lung auscultation
6	Cirrhosis	Abdominal bloating	Fluctuation (percussion method for determining free fluid in the abdominal cavity)
7	Peptic ulcer	Abdominal pain	Superficial palpation of the abdomen
8	Pyelonephritis	Temperature increase	Pasternaksky's sign
9	Atrial fibrillation	Palpitation	Pulse deficit
10	Aortic stenosis	Dyspnea	Heart auscultation
11	Mitral stenosis	Dyspnea	Heart auscultation
12	Essential arterial hypertension	Blood pressure increase	Blood pressure measurement
13	Chronic lymphocytic leukemia	Temperature increase	Palpation of lymph nodes
14	Thyrotoxicosis	Palpitation	Palpation of the thyroid gland
15	Pulmonary tuberculosis	Cough	Mantoux test and skin changes
16	Myocarditis	Palpitation	ECG recording
17	Chronic heart failure	Dyspnea	Assessment of lower limb edema
18	Hypothyroidism	Edema	Assessment of lower limb edema

Appendix 3

ALGORITHMS FOR PRACTICAL SKILLS PERFORMING

1. **Collection of complaints and medical history**

For palpitation:

1. Did the palpitation come on suddenly or gradually?
2. How long does it last?

3. What symptoms accompany palpitation?
4. What triggers of the palpitation?
5. Were there similar attacks before?
6. What were you sick with before?

For elevated pressure:

1. To what numbers does blood pressure increase?
2. What symptoms accompany this condition?
3. What was the blood pressure before?
4. What medications do you take regularly?
5. What were you sick with before?

For shortness of breath:

1. Did it occur suddenly or gradually?
2. What triggers of the shortness of breath?
3. What symptoms accompany this condition?
4. What factors leads to decreasing of shortness of breath?
5. Does it occur the same way throughout the day?
6. Are there any attacks of severe shortness of breath (suffocation, asphyxia)?
7. What were you sick with before?

For coughing:

1. Is the cough dry or wet?
2. If wet, what is the sputum color, and how much of it?

If the cough is dry, is it paroxysmal?

3. What symptoms accompany it?
4. What triggers of the cough?
5. How long does it last?
6. What were you sick with before?

For elevated temperature:

1. What numbers does the temperature rise to?
2. What symptoms accompany it?
3. How long does it last?
4. What causes the temperature decreasing and to what numbers?
5. Have you been in a contact with patients who have had similar symptoms? After what did they occur?
6. What vaccinations do you have?
7. What were you sick with before?

For joint pain:

1. Which joints are painful?
2. What symptoms accompany it?
3. What triggers of the pain?

4. What was the treatment? What was the effect of the treatment?
5. How long have you been sick?
6. What were you sick with before?

For abdominal pain:

1. What is the nature of the pain: aching, spastic, cutting, dull?
2. Localization of the pain?
3. What symptoms accompany it?
4. What triggers of the pain?
5. Is there a connection with food?, the act of defecation?
6. What brings relief?
7. How long does it last?
8. What were you sick with before?

For bloating:

1. What symptoms accompany it?
2. What causes bloating?
3. Is there a connection with food?, the act of defecation?
4. What brings relief?
5. How long does it last?
6. What were you sick with before?

1. DETERMINATION OF PULSE AND PULSE DEFICIT IN A PATIENT WITH ATRIAL FIBRILLATION ACCORDING TO ETHICAL PRINCIPLES

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – to measure the pulse and assess the difference between the pulse and heart rate
2. Explain the examination process to the patient: first you need to calculate pulse waves on the radial artery in 60 sec
3. Calculate heart rate at the apex in 60 seconds
4. Calculate difference between measurements
5. Obtain patient's consent for the procedure

2. **Objective examination**
    1. Treat your hands with an antiseptic before conducting an objective examination.
    2. Determine that the pulse is the same on both arms (find the pulse on both arms) and say that you determine the height and fullness of the pulse (the tutor will report the result)
    3. Determine its rhythmicity/arhythmicity (say that you are determining, and the tutor will report the result)
    4. Count the pulse per minute (say that you need to calculate in a minute, and the tutor will report the result)
    5. Count the heart rate at the apex per minute using a stethoscope (say that you are counting the heart rate per minute, the tutor will report the result)
    6. Calculate pulse deficit

2. PERFORMING AUSCULTATION OF THE HEART

1. **Ethical aspects:**

1. Explain the purpose of the examination to the patient – to assess the properties of heart sounds and determine the presence of additional murmurs
2. Explain the examination process to the patient: first, the apical impulse in the heart area is determined by hand, the first tone is assessed at this location using a phonendoscope, the second tone is assessed at two more points in the heart area and the presence of murmurs is determined.
3. Obtain patient consent for examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Palpate the apical impulse in the IVth left intercostal space with the palm of the hand.
3. Use your index and middle fingers to localize the impulse.
4. Using a phonendoscope, assess the first tone above the apex: if there is a mannequin, say what you heard, and if there is no mannequin, the tutor will say the properties of the first tone after the student's phrase "I need to assess the first tone above the apex"
5. Place the phonendoscope in the second intercostal space right side from the sternum: if there is a mannequin, say what you heard, and if there is no mannequin, the tutor will say the properties of the second sound after the student's phrase I need to assess the second sound above the aorta"
6. Place the stethoscope in the second intercostal space left side from the sternum: if there is a mannequin, say what you heard, and if there is no mannequin, the tutor will say the properties of the second tone after the student's phrase "I need to assess the second tone over the pulmonary artery"
7. Say that you heard a heart murmur and place the stethoscope at the point of its epicenter if working with a mannequin. If there is no mannequin, the tutor will say after this phrase which murmur is heard at which point of auscultation in accordance with the clinical task.

3. PERFORMING BLOOD PRESSURE MEASUREMENT

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – blood pressure needs to be measured
2. Explain the examination process to the patient: a cuff is placed on the shoulder, air is pumped in, firstly a pulsation is heard on the radial artery, and then with a phonendoscope – in the cubital fossa.
3. Obtain patient consent for examination

2. **Objective examination**

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Check the patient's position: the patient should sit comfortably, with their back and feet supported, without crossing his/her legs.
3. Place the cuff on the patient's bare shoulder 2-3 cm above the elbow bend (clothing should not compress the shoulder above the cuff)
4. Secure the cuff so that only one finger can pass between it and the shoulder (i.e., check).
5. While monitoring your pulse, quickly inflate the cuff until the pulse disappears.
6. Pump another 30 mm Hg, place the stethoscope in the cubital fossa, and slowly release air at a rate of approximately 2-3 mm Hg per second.
7. The tutor will announce the pressure reading when the air is released from the cuff (if a mannequin is available, say the BP that was heard)
8. It is necessary to indicate whether this indicator is normal or elevated.

9. In case of elevated pressure, indicate the degree to which the pressure corresponds.

4. EVALUATION OF MANTOUCH TEST AND SKIN CHANGES

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – the diameter of the papule after the Mantoux test should be measured
2. Explain the examination process to the patient: a transparent ruler is applied to the papule and its diameter in mm is determined.
3. Obtain patient consent for examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Use your index finger to determine the presence of a papule
3. Use a transparent ruler to measure the diameter of the papule perpendicular to the axis of the forearm.
4. The tutor should report the diameter of the papule
5. Make a conclusion about the type of Mantoux test :

   0-1 mm – negative reaction
   2-4 mm – reaction is questionable
   5-16 mm – positive reaction
   17 mm and more – hyperergic reaction
6. Indicate what the detected Mantoux test indicates.
7. Changes on the skin of the back and chest in the form of a network of dilated capillaries are called Frank's symptom, which is a pathognomonic sign of pulmonary tuberculosis.

5. COLLECTION OF SAMPLES FROM THE NASOPHARYNX

1. Ethical aspects:

1. Explain the purpose of the examination to the patient - obtaining a sample of secretion from the nasopharynx for laboratory diagnosis of influenza types A and B
2. Explain the examination process to the patient: using a sterile disposable swab, biomaterial is taken from the posterior wall of the nasopharynx through the nostril by means of a careful rotational movement
3. Inform the patient about possible subjective sensations during the procedure (lacrimation, irritation of the mucous membrane, urge to sneeze or cough), which are normal and short-lived.
4. Emphasize the importance of proper specimen collection techniques to ensure the reliability of laboratory analysis results.
5. Obtain informed consent from the patient for the nasopharyngeal swab procedure.

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Ask patient to remove the mask (slide it off his/her nose) and clear nasal passages with a disposable tissue.
3. Place the patient in an upright position, ask them to tilt the head back slightly and relax.
4. Take a sterile swab for nasopharyngeal sampling, holding it between the thumb, index, and middle fingers (similar to holding a pencil), which provides control of movement and reduces the risk of injury.
5. Carefully insert the swab into one of the nostrils along the floor of the nasal passage, parallel to the palate, to a depth of approximately 6–8 cm (until the posterior wall of the nasopharynx is reached or resistance is encountered). While holding the swab in the

nasopharynx for 2-3 seconds, perform rotational movements to saturate the mucosa with the sample. Slowly withdraw the swab without touching the walls of the nasal passage.

6. Remove the cap from the dropper bottle and place the sample swab in the bottle. Mix the liquid with the swab by rotating it vigorously in the bottle at least 10 times. Squeeze the swab against the walls of the bottle and place the swab in a waste container as a potentially infectious material. Close the sample solution bottle with the dropper cap.
7. Remove the test cassette from the packaging immediately before use and place it on a clean, dry, flat surface, away from direct sunlight.
8. Add 3 drops of sample solution to the sample well of the test cassette (S). Time and observe for the appearance of the colored line(s) within 15 minutes.
9. Give an interpretation of the result (the tutor will provide information after the applicant says that 15 minutes have passed and I can interpret the test result)

Interpretation of results:

Test negative: one colored line appears in the control region (C); no colored line appears in the test region (A, B). No influenza A or B virus antigens were detected in the sample.

Test positive for influenza A: One colored line appears in the control region (C); One colored line appears in the test region (A); No colored line appears in the test region (B). Influenza A virus antigen was detected in the sample.

Test positive for influenza B: one colored line appears in the control region (C); one colored line appears in the test region (B), no colored line appears in the test region (A). Influenza B virus antigen is detected in the specimen.

The test is positive for influenza A and influenza B: one colored line appears in the control region (C); two colored lines appear in the test region (A, B). Influenza A and B virus antigens are detected in the sample.

Invalid test: No control line appears. This indicates that there is not enough sample for testing or that the testing procedure has not been followed. The test should be repeated using a new test.

10. Dispose of used test system components as Category B waste in a labeled container. Remove PPE (personal protective equipment) according to protocol.

6. PERFORMING OF LUNG AUSCULTATION ACCORDING TO ETHICAL PRINCIPLES

1. Ethical aspects:

1. Explain the purpose of lung auscultation performing to the patient – to assess the nature of breath sounds
2. Explain the examination process to the patient: first listen to the front of the chest, then to the back.
3. Obtain informed consent from the patient

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Methodically and correctly perform auscultation of lung along the intercostals intervals, on symmetrical areas and relevant topographic lines. In front, supraclavicular areas, subclavian areas and go down along the intercostal spaces; from the third intercostal space, compare the areas above the right lung with each other, that is, the upper point of auscultation with the lower one. From the back: suprascapular, interscapular and subscapular areas.
3. Take into account the phases of breathing (inhalation, exhalation) when listening to the patient (you can instruct the patient to “inhale”, “exhale”)

4. Listen to the main breath sound (if there is a mannequin, say what you heard, or the tutor will report the result after the phrase “I assess the main type of breathing”). Instruct the patient to breathe through the nose.
5. Listen to the additional breath sound (if there is a mannequin, say what you heard, or the tutor will report the result after the phrase “I assess additional breath sounds”), give the patient instructions – to cough

7. PALPATION AND ASSESSMENT OF JOINT FUNCTION ACCORDING TO ETHICAL PRINCIPLES

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – to examine the joints and assess their function
2. Explain the examination process to the patient: firstly you need to examine and assess the number of affected joints.
3. Assess the condition of the skin around the joints
4. Assess changes in the joint areas.
5. Determine the range of motion in the joints
6. Obtain patient consent for examination

2. **Objective examination**

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Determine the number of affected joints (the tutor will report the result after the phrase “estimating the number of affected joints”)
3. Determine the condition of the skin around the joints, is it changed/not changed (say what you are determining, and the tutor will report the result).
4. Assess the condition of the muscles around the joints, interosseous spaces, (say what you are determining, and the tutor will report the result)
5. Find out the nature of changes in the shape of the joints, not deformed/deformed due to edema, effusion (say what you are determining, and the tutor will report the result)
6. Determining joint pain (say what you are determining, and the tutor will report the result)
7. Assess the volume and amplitude of movements in the joints (say what you are determining, and the tutor will report the result)

8. DEFINITION OF PASTERNATSKY'S SIGN IN ACCORDANCE WITH ETHICAL PRINCIPLES

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – to determine the pain in the area of the affected kidney.
2. Explain the examination process to the patient – tapping is performed twice in the lumbar region in the projection of each kidney. The first time, tapping is performed very lightly, and the second time a little harder.
3. Obtain the patient's consent to conduct the examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Examine the patient in a standing position
3. Stand behind the patient
4. Place the palm of one hand on the right half of the lumbar region
5. With your other hand, clenched into a fist, tap lightly on the back of your palm.
6. Ask if there is pain (the tutor will report the presence or absence of pain)
7. If there is no pain, tap a second time a little harder.
8. Ask if there is pain (the tutor will report the presence or absence of pain)

9. Place the palm of one hand on the left half of the lumbar region
10. With your other hand, clenched into a fist, tap lightly on the back of your palm.
11. Ask if there is pain (the tutor will report the presence or absence of pain)
12. If there is no pain, tap a second time a little harder.
13. Ask if there is pain (the tutor will report the presence or absence of pain)
14. To conclude which kidney is affected

9. DETERMINATION OF FLUCTUATION IN THE ABDOMINAL CAVITY (PERCUTORIAL METHOD OF DETERMINING FREE FLUID IN THE ABDOMINAL CAVITY)

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – to determine the presence of free fluid in the abdominal cavity
2. Explain the examination process to the patient – the patient should lie on his back, the doctor, assessing the sound of light tapping of the abdomen, will determine the level of free fluid. Then the patient should turn over to the other side, and the doctor will continue tapping.
3. Obtain the patient's consent to conduct the examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Ask the patient to lie on his back, bend his legs slightly at the knees, and place his arms along his body.
3. The finger-plesimeter is placed parallel to the midline and percussion is performed from the navel area, where the tympanic sound is determined, towards the flank of the abdomen.
4. The HE candidate must say that percussion is made till a dull sound. After this phrase, the tutor will announce the place where the clear percussion sound changes to a dull sound.
5. The patient is turned to the opposite side.
6. Without removing the finger-plesimeter from the previously identified boundary of dull and tympanic percussion sounds, quiet percussion blows are again applied immediately.
7. The candidate should ask if a tympanic sound has appeared. After this phrase, the tutor will report whether there is a tympanic sound or a dull sound.
8. Make a conclusion about the presence of free fluid in the abdominal cavity (if a tympanic sound appears in place of a dull percussion sound in the flank of the abdomen, this indicates the presence of ascites in the abdominal cavity).

10. PERFORMING OF SUPERFICIAL PALPATION OF THE ABDOMEN

1. Ethical aspects:

1. Explain the purpose of the examination to the patient - to identify areas of pain for determination of the affected organ.
2. Explain the examination process to the patient: firstly superficial palpation is performed to assess the degree of abdominal distension and the presence of areas of tenderness, and then pain is sequentially assessed in the areas corresponding to the stomach, duodenum, pancreas, liver, and gallbladder.
3. Obtain patient consent for examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Ask the patient to lie on his back, bend his legs slightly at the knees, and place his arms along his body.
3. Ask the patient to breathe deeply with his/her mouth open, the abdominal muscles should participate in breathing
4. The student should be located to the right of the patient.

5. HE applicant places the palm of his/her right hand on the patient's abdomen, slightly bending his fingers, and gradually, carefully, without penetrating too deeply, palpates all parts of the abdomen.
6. Palpation begins with the left iliac region in the following sequence: left iliac region - right iliac region - left lateral - right lateral - left subcostal - right subcostal - umbilical - suprapubic - epigastric . The painful area should be palpated last.
7. The patient should be asked to report any pain (after this phrase, the tutor will report in which area the pain occurs when the student begins to palpate it)

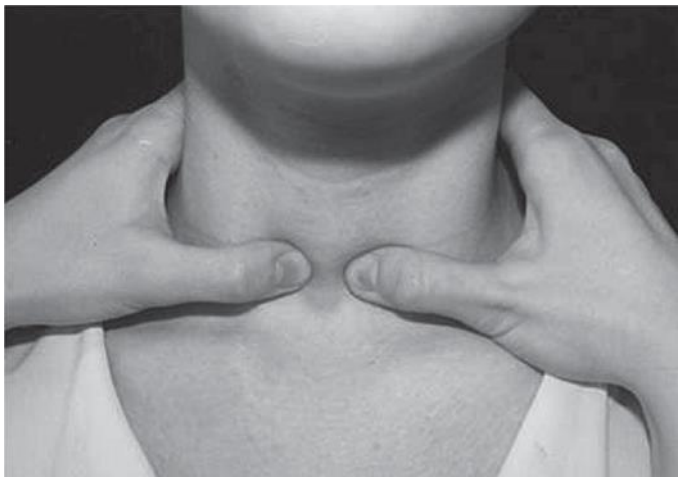
11. PERFORMING OF THYROID GLAND PALPATION

1. Ethical aspects:

1. Explain the purpose of the examination to the patient - to identify areas of the altered thyroid gland.
2. Explain the examination process to the patient: firstly the thyroid gland is examined, including during swallowing, and then lightly palpated, determining its structure and size.
3. Obtain patient consent for examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Ask the patient to stand up. Palpation of the thyroid gland is performed with both hands in the doctor's position in front of the patient.
3. First, examine the thyroid area. The patient is asked: "Please swallow some saliva."
4. Then place the thumbs of both hands on the throat below the Adam's apple, medially from the nodding muscle, which converge at this point, forming an acute angle. Place the remaining four fingers of both hands on the outer edge of the nodding muscle on the corresponding side.



5. First, the isthmus of the gland is palpated, then the right lobe is circled with circular movements of the right finger, and the left lobe with the left. The movements should be soft, smooth, and careful.
6. The patient should then be asked to take a sip (swallow saliva) to palpate the lower poles of the lobes or to determine the lower borders of the nodes if the gland is located low. Continuing to move your fingers along the nodding muscle upwards, you can examine the cervical lymph nodes.
7. The following characteristics are determined (HE applicant needs to say what characteristics are determined and the tutor will report the result for each of them):
    - Size
    - Consistency (soft or firm)
    - Texture (uniform or nodules)

- Tenderness
- Are lymph nodes palpable around the thyroid gland?

8. Make a conclusion about the condition of the thyroid gland: changes correspond to hyperthyroidism

12. PERFORMING OF LYMPH NODES PALPATION

1. Ethical aspects:

1. Explain the purpose of the examination to the patient – to detect altered lymph nodes
2. Explain the examination process to the patient: palpate symmetrical areas, following a certain sequence: chin, submandibular, angular maxillary, parotid, occipital, posterior cervical, anterior cervical, supraclavicular, infraclavicular, axillary.
3. Obtain patient consent for examination

2. Objective examination

1. Treat your hands with an antiseptic before conducting an objective examination.
2. Ask the patient to stand up and stand in front of the patient.
3. The doctor places his fingers (or the entire hand) with the palmar surface on the skin of the examined area and, without lifting it, slides his fingers along with the skin over the underlying dense tissues (muscles or bones), pressing lightly on them.
4. Lymph node examination is performed in symmetrical areas of the same name, following a certain sequence: submental (you need to ask to tilt your head forward and fix it with your left hand), submandibular, angular, parotid, occipital, posterior cervical, anterior cervical, supraclavicular, infraclavicular, axillary.
5. Before starting palpation of the axillary lymph nodes, the doctor asks the patient to move his arms in different directions to a horizontal level and examines the armpits,
6. After that, the researcher places his palms lengthwise on the lateral surfaces of the patient's chest on both sides so that the tips of the fingers rest against the bottom of the armpits. Asking the patient to slowly lower his arms down, the doctor at this time moves his fingers slightly upwards, grasps the contents of the armpits with them and slides.
7. The doctor determines their number, size and density (consistency), mobility (movability), the presence of soreness and adhesion of the nodes to each other, to the skin and surrounding tissues. It is necessary to talk about what the student determines and the tutor will report the result for each characteristic.

13. ECG Electrode Placement

1. Ethical Considerations:

1. Explain to the patient the purpose of the examination — assessment of cardiac function by recording its electrical activity. This allows detection of arrhythmias, conduction disorders, and signs of ischemia or myocardial infarction.
2. Explain the procedure: electrodes will be placed on the upper and lower limbs and on the exposed chest.
3. Obtain the patient’s informed consent for the examination.

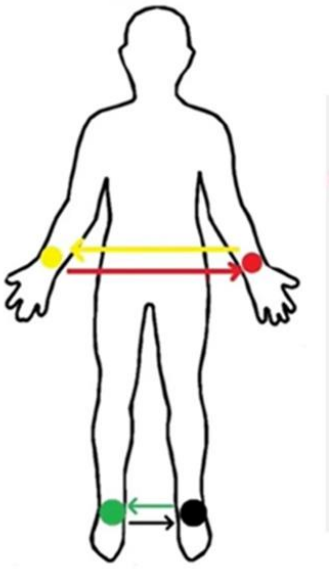
2. Objective Examination

1. Perform hand antisepsis before the examination.
2. The patient should lie in the supine position, expose the areas for electrode placement (upper limbs, lower limbs, and chest), and remain relaxed.
3. Prepare the skin before each electrode placement by applying gel (or water).
4. Place 4 limb electrodes:
   - Right arm – red electrode
   - Left arm – yellow electrode
   - Left leg – green electrode

- Right leg – black electrode

Mnemonic:

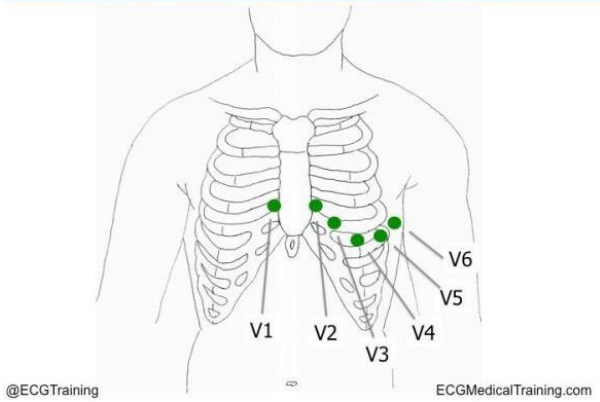
- **Red** (R – Right): right arm
- **Yellow** (L – Left): left arm
- **Green** (F – Foot): left leg
- **Black** (N – Neutral/Ground): right leg



https://cardiomc.com.ua/kincevyj-ekg-elektrod-doroslyj.html
https://aemc.org.ua/info/article/618/

1. Place 6 precordial (chest) electrodes; clean the placement sites with alcohol at the corresponding intercostal spaces:

   - **V1 (red):** 4th intercostal space, right sternal border
   - **V2 (yellow):** 4th intercostal space, left sternal border
   - **V3 (green):** midway between V2 and V4
   - **V4 (brown):** 5th intercostal space, midclavicular line
   - **V5 (black):** same horizontal level as V4, anterior axillary line
   - **V6 (purple/blue):** same level as V4 and V5, midaxillary line.



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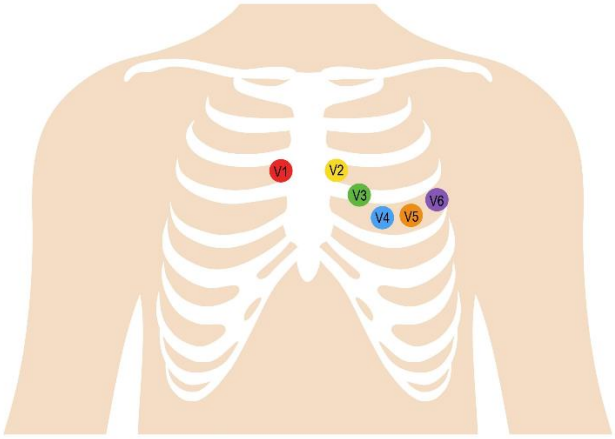

14. ASSESSMENT OF LOWER LIMB EDEMA.

1. Ethical Considerations:

1. Explain to the patient the purpose of the examination — to determine the presence of edema in the lower limbs.
2. Explain the procedure: inspection of the feet followed by palpation of the dorsum, then examination of the lower legs with repeated pressure on specific areas.
3. Obtain the patient's informed consent.

2. Objective Examination

1. Perform hand antisepsis before the examination.
2. Inspect the feet (dorsal surface) on both sides. Assess skin color, verbally indicating that you are examining the skin. The tutor will inform you about any abnormalities.
3. Touch the feet with the dorsal surface of your hand, stating that you are assessing skin temperature. The tutor will indicate whether the skin is warm or cold.
4. Apply pressure with two fingers (index and middle) over a bony surface (medial malleolus and dorsum of the foot) for 5–10 seconds. Determine whether a pit remains after pressure. Assess how quickly it disappears. Evaluate symmetry. Ask whether swelling increases in the evening or resolves after overnight rest. While assessing, verbalize each step so the tutor can provide findings.
5. Repeat on the other foot, assessing symmetry and daily variation of edema.
6. Apply pressure with two fingers over the anterior-medial surface of the lower leg (tibia) for 5–10 seconds. Assess for pitting, its duration, symmetry, and daily variation
7. Repeat on the other lower leg, again commenting on symmetry and progression.
8. Make a conclusion regarding the presence of edema (unilateral or bilateral) in the feet and lower legs. Based on the findings, suggest which condition the edema may be associated with.

Appendix 4

SAMPLE TASKS

Station No. 1 "Standardized patient in the internal medicine clinic" (collection of complaints and anamnesis, objective examination, preliminary diagnosis)"

Clinical situation No. 1

Scenario for a patient with coronary artery disease, persistent atrial fibrillation, tachysystolic variant

Student questions	Tutor's response

What is your name?	Victor
How old are you?	52 years old
What are you complaining about?	Palpitation
Did the palpitations come on suddenly or gradually?	Palpitation came on suddenly
How long does it last?	It appeared about three days ago and is being felt at the moment.
What symptoms accompany palpitations?	General weakness and shortness of breath at minor physical exertion (walking 100 m at a normal pace).
What causes palpitations?	Associated with psycho-emotional stress (problems at work)
Have there been similar attacks before?	I have been noticing this for two years (2-3 episodes of attacks per year). Previously, these manifestations passed on their own within 2-3 hours. In the absence of a palpitation, I feel satisfactory, I do not experience any restrictions when performing ordinary physical exertion (the patient consciously limits heavy physical exertion).
What were you sick with before?	Three years ago, he suffered a non-Q myocardial infarction.

Instructions to the scenario:

1. The tutor reports that the pulse is arrhythmic after the candidate has indicated that he determines the rhythmicity of the pulse.
2. The tutor reports that the height and fullness of each wave is different, after the candidate indicates that he determines the height and fullness of the pulse.
3. The tutor reports the pulse rate (pulse - 120 beats/min), after the applicant indicates that he determines the pulse rate per minute.
4. The tutor reports the heart rate after the candidate indicates that he counts the heart rate per minute (HR - 152 beats/min).

Clinical situation for the student

Ask the patient about his complaints and anamnesis.

Objectively: condition of moderate severity. The patient is pale, sweating is noted, blood pressure is 110/80 mm Hg. Auscultation - heart sounds are arrhythmic, of varying strength. When auscultating the lungs - vesicular breathing. The liver is not palpable. Pastosity of the lower legs is noted.

Task:

1. Ask the patient's complaints and anamnesis.
2. Determine the patient's pulse and pulse deficit according to ethical principles.

OSP(C)E STATION EVALUATION CHECKLIST

No.	Components of the clinical case being evaluated	Number of points per position	Number of student points
1	**Student's communication skills**	**0.6**	

	Greeted	0.15	
	Introduced himself	0.15	
	Informed that he would interview and examine the patient	0.15	
	Asked the patient's name, his age	0.15	
2	**Patient complaints and anamnesis**	**1.5**	
	Asked what the patient was complaining about.	0.3	
	Asked if the palpitation came on suddenly	0.15	
	Asked how long a palpitation lasts	0.15	
	Asked what symptoms accompany palpitations	0.3	
	Asked what the patient attributed the palpitations to.	0.15	
	Asked if there had been similar attacks before.	0.15	
	Asked what were the patient sick with before?	0.3	
3	**Ethical aspects**	**0.9**	
	Explained to the patient the purpose of the procedure – to measure the pulse and assess the difference between the pulse and heart rate	0.15	
	Explained the procedure to the patient: first count the pulse waves on the radial artery for 60 seconds	0.15	
	Counted the heart rate at the heart apex in 60 seconds.	0.15	
	Calculated the difference between them	0, 3	
	Obtained patient consent for the procedure	0.15	
4	**Objective examination**	**3.0**	
	Infection control: treated hands with antiseptic	0.15	
	Determined that the pulse is the same in both arms	0.75	
	Determined the rhythmicity of the pulse (arrhythmic)	0.3	
	Determined that the height and fullness of each wave are different	0.6	
	Counted the pulse per minute (pulse - 120 beats/min)	0.3	
	Counted the heart rate at the heart apex per minute (heart rate - 152 beats/min)	0.3	
	Calculated pulse deficit (32)	0.6	
	Maximum number of points per station	**6.0**	###

Appendix 5

REGULATORY DOCUMENTS (only for the last 5 years)
on the basis of which clinical cases were created .

1. Серцево-судинні захворювання. Класифікація, стандарти діагностики та лікування / [за ред.: В. М. Коваленка (голов. ред.) та ін.]. – 2024.

2. Збірник клінічних рекомендацій. кардіологія та ревматологія Київ (2024) https://health-ua.com/multimedia/userfiles/files/2024/ZKR_%D0%A1ardio_2024/ZKR_2024.pdf

3. Skybchyk, V., & Solomenchuk, T. (2024). Рекомендації Європейського товариства кардіологів із фібриляції передсердь 2024 року: основні положення щодо лікування — принцип AF-CARE. Частина 1. Практикуючий лікар, (3), 5-10. вилучено із https://plr.com.ua/index.php/journal/article/view/822

4. Настанова Європейського товариства кардіологів щодо ведення фібриляції передсердь (2024): нові аспекти й основні положення документа https://medreview.com.ua/issues/91/article2/

5. 2024 ESC Guidelines for the management of atrial fibrillation ESC Clinical Practice Guidelines. https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines/Atrial-Fibrillation.

6. Наказ МОЗ України № 102 від 19 січня 2023 року. Стандарти медичної допомоги «Туберкульоз»

7. Коваленко В.М., Шуба Н.М., Борткевич О.П.. Ревматичні хвороби. Класифікація, стандарти діагностики та лікування. -Київ, Моріон. 2021.-400 с.

8. Журавльова Л.В., Олійник М.О., Сікало Ю.К.. Основи діагностики та лікування ревматичних захворювань. – Київ, Медкнига. 2023. – 360 с.

9. Інфекційні хвороби: Підручник для мед. ун-тів, інст., акад. – 4-те вид., перероб. та допов. Затверджено МОН і МОЗ / За ред. О.А.Голубовської. – К., 2022. – 464 с. стор. 153-164.

10. EmPendium. Інфекційні хвороби. Забір мазка з носоглотки [Електронний ресурс] // EmPendium: медичний портал. – Режим доступу: https://empendium.com/ua/chapter/B27.1374.44

11. Відбір, зберігання та транспортування зразків матеріалів для тестування на SARS-CoV-2 : дод. 3 до Стандартів медичної допомоги "Коронавірусна хвороба (COVID-19)" [Текст] / Затв. Наказом Міністерства охорони здоров’я України від 28 берез. 2020 р. № 722.

12. Centers for Disease Control and Prevention. Influenza antiviral medications: Summary for clinicians. https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm (Accessed on October 22, 2020).

13. Clinical practice guidelines for influenza [Internet]. Geneva: World Health Organization; 2024. PMID: 39374347.

14. Оприлюднено наказ МОЗ України від 25.08.2023 № 1514 "Про затвердження Уніфікованого клінічного протоколу первинної та спеціалізованої медичної допомоги «Пептична виразка шлунка та дванадцятипалої кишки у дорослих і дітей»"

15. Уніфікований клінічний протокол первинної, спеціалізованої та екстреної медичної допомоги «Хронічне обструктивне захворювання легень», згідно з наказом МОЗ №1610 від 20.09.2024

16. Уніфікований клінічний протокол первинної та спеціалізованої медичної допомоги «Гіпертонічна хвороба (артеріальна гіпертензія)» МОЗ України 12.09.2024.

17. Артеріальна гіпертензія. Клінічна настанова, заснована на доказах. 2024

18. Клінічні практичні рекомендації ESH з лікування артеріальної гіпертензії 2024 року. Частина 1 https://cardioprostir.com.ua/news/klinichni-praktichni-rekomendaciyi-esh-z-likuvannya-arterialnoyi-gipertenziyi-2024-roku-chastina-1

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20. Уніфікований клінічний протокол первинної та спеціалізованої медичної допомоги «Ускладнення цирозу печінки: Гепаторенальний синдром», 2024. – 21 с.

21. Гематологічні захворювання в клінічній практиці : посібник. В. І. Бульда, І. О. Родіонова, Н. А. Дземан. Київ : Медкнига, 2023. 195 с.

22. Клінічна кардіологія. Сучасний погляд на захворювання серцево-судинної системи, ускладнення і конкурентні діагнози : навч. посіб. [для студентів вищих мед. закл. III–IV акредитації, слухачів курсів системи безперерв. післядиплом. освіти, практ. лікарів] / Буковин. держ. мед. ун-т ; Тащук В. [та ін.]; під ред. В. Тащука. – Чернівці : Технодрук, 2024. – 398 с. : іл, табл.

23. Ведення хворих на пієлонефрит: огляд вітчизняних та європейських настанов (2021) https://health-ua.com/urologiya-i-andrologiya/infekciyi-secovividnix-sliaxiv/68814-vedennya-hvorih-naplonefrit-oglyad-vtchiznyanih-tavropejskih-nastanov

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26. Наказ МОЗ України від 09.09.2022 № 1635. Уніфікований клінічний протокол первинної та спеціалізованої медичної допомоги «Хронічний лімфоїдний лейкоз»