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

«APPROVED»
at Methodical Council of surgical disciplines
Protocol №5 from 18/03/2026
Head of Methodical Council
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«AGREED»
Head of the Examination Commission №1
« 11 » 03. 2026 p.
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EXAM MATERIALS

STATION No 6 "PROVIDING OF EMERGENCY CARE TO A SURGICAL PATIENT" OSP(C)E

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

Vinnytsya - 2026

APPENDICES TO EXAM MATERIALS

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

Appendix 1

INSTRUCTIONS FOR STUDENTS' WORK AT THE STATION №6 «PROVIDING OF EMERGENCY CARE TO A SURGICAL PATIENT»

THE FOLLOWING COMPETENCES ARE ASSESSING: communication; complaints, anamnesis; objective examination; diagnostics; providing emergency care in emergency situations, patient`s management and treatment tactics; ethical aspects. The station also provides for the control of technical skills from the list of medical manipulations according to List 5 of the Higher Education Standard for specialty 222 "Medicine".

The higher education applicant is required to greet and present the examiner with the identification number that was assigned during registration with the OSP(C)E. The students' work at the station is video recording.

Every student receives an assignment based on a specific clinical scenario. Work at the station involves interaction with a tutor who plays the role of a standardized patient (mostly) or doctor`s assistant according to scenario.

Before starting communication with the tutor, the student familiarizes himself with the "Student assignment". Then he clearly completes it according to the following scheme.

Stages of work	Instructions
Beginning of interaction with the patient	Greet and introduce yourself (without giving your last name). Briefly explain the essence of the communication to the patient. Consider ethical and legal aspects: obtain consent for further actions, warn about possible unpleasant sensations.
Collection of complaints and medical history	Detail the chef complaint according to your task, using the scheme provided below this table. Avoid excessive immersion in information that does not relate to the main complaints.
Objective examination	Before and after contact with the patient, treat your hands with an antiseptic. Use the information provided in the condition. Indicate any deviations in vital signs. Conduct the examination according to the scenario. A list of symptoms is given after the table.
Diagnostics	Each task is accompanied by the result of diagnostic procedures. Name and interpret the deviations in laboratory indicators. Interpret the X-ray, sonographic or endoscopic image. The list of examinations is given after the table. Formulate the diagnosis. Suggest additional diagnostic methods, if provided for by the scenario.
Management and treatment tactics	Offer emergency care. When determining surgical tactics, name the necessary interventions. Offer medication, indicate the doses and method of administration of drugs. The list of medicines is given after the table.
Technical skill	It is performed according to the algorithm presented in a separate appendix. For different tasks, it may apply to different stages of work (objective examination, diagnostics, emergency care)
Exam completion	Say goodbye to the patient.

	Confirm task completion

Scheme of detailing the chef complaint
when solving tasks at Station 5

Pain assessment: according the mnemonic acronym SOCRATES: Site, Onset, Character, Radiation, Associations, Time course, Exacerbating/relieving factors, and Severity.
Bloody stool: color and character of blood (bright red, dark, clots, on toilet paper, on top of stool or mixed with it); nature of stool (formed, liquid, ground, mucus); defecation disorders (diarrhea, constipation, tenesmus); sensations during defecation and around the anus (pain, itching, burning, foreign body sensation); abdominal pain; general symptoms (weight loss, weakness, fever, joint syndrome).
Vomiting: character of the masses (undigested food, bile, blood with clots, "coffee grounds", stagnant contents without bile); frequency and duration; what it is associated with; accompanying symptoms (presence of abdominal pain, bloating, gas retention, fever, constipation or diarrhea, headache, dizziness).
Hemoptysis: presence of cough, volume of blood when coughing up blood, character and color of blood, character of sputum (purulent, mucous, clots), how it appeared and whether there were provoking factors, duration and dynamics; accompanying symptoms (fever, weight loss, shortness of breath, pain), factors of anamnesis (smoking, frequent bronchitis, pneumonia, tuberculosis, occupational exposure, injuries, surgeries).

List of symptoms that are expected to be demonstrated when solving tasks at Station 6

- Blumberg's sign
- Murphy sign, Ortner`s symptom
- Kehr's point
- Kehr's (phrenicus) symptom
- suprapubic thrust
- Pasternacki's symptom (Murphy's punch sign)
- Homans (dorsiflexion) sign
- Moses' (Bancroft's) sign

List of practical skills and abilities
that are expected to be demonstrated when solving tasks at Station 6

- Objective examination of the chest
- Objective examination of the abdomen
- Objective examination of the lower extremities
- Demonstration of above mentioned symptoms
- Determination of hepatic dullness
- Palpation of the pulse on the dorsal arteries of the feet, posterior tibial arteries
- Determining points for pericardiocentesis
- Needle decompression of tension pneumothorax (pyopneumothorax) on a manikin
- Diagnostic thoracentesis on a manikin
- Ruville-Grégoire test (interpretation)
- Insertion of gastric tube on a manikin
- Insertion of soft urinary catheter on a manikin
- Rectal examination on a manikin
- Interpretation of laboratory test results: complete blood count, biochemical blood test, urine test (general, for enzyme content), sputum test, pleural fluid test;

- Interpretation of images obtained as a result of: Chest radiography, Abdomen radiography, arteriography, CT, irrigography, mammography, esophagography, abdominal ultrasound, vascular ultrasound, FEGDS.

Approximate list of medications for use when solving tasks at Station 5 (other drugs from the specified groups or with similar effects are allowed)

- Antibiotics (amoxicillin 1000/clavulanate 200; cefepime 1.0; amikacin 0.5; if anaerobes are expected + metronidazole 0.5)
- Analgetics (Ketoprofen 5% 2ml; paracetamol 1% 100ml; morphine 1% 1ml)
- NSAIDs (Diclofenac sodium 2.5% 3ml)
- Spasmodics (Drotaverine 2% 2ml)
- Plasma substitutes (saline sodium chloride solution; Ringer's solution).
- Blood products (erythrocyte mass; fresh frozen plasma)
- Vasopressors (Noradrenaline Tartrate 2mg/ml 4 ml, titrate 1 mg/h)
- Anticoagulants (unfractionated heparin 5000–10,000 IU/ enoxaparin 0.4–0.8 ml/ rivaroxaban 20 mg).

Duration of work at the station 6 min.

After completing the work or the time spent at the station has expired, return the task to the teacher, wait for the signal to end and leave the station. After the time spent at the station has expired, the examiner does not accept an answer. The examiner is an observer of your actions and does not provide instructions, comment, or additional questions.

After passing the station, the student moves to another one according to the route sheet.

It is FORBIDDEN to communicate with the examiner (except in cases related to security issues, deterioration of well-being, unforeseen circumstances, etc.), use educational and auxiliary materials, use gadgets, transmit, copy, and distribute any information related to the exam and not publicly available. If a candidate for higher education violates the above norms, his/her exam is terminated, and the exam grade is given as “failed” (violation of the rules of academic integrity).

BRING gloves and a stethoscope.

Appendix 2

LIST OF PRACTICAL SKILLS AT THE STATION

№	Diagnosis	Syndromes	Objective examination	Diagnostics, manipulations
1	Penetrating chest wound. Hemothorax. Hypovolemic shock	Acute blood loss	objective manifestations of fluid accumulation in the pleural cavity, objective manifestations of shock	Interpretation of the chest radiograph Diagnostic thoracentesis on a manikin Interpretation of the Rouvilois-Grégoire test
2	Tension spontaneous pneumothorax. Obstructive shock	Chest pain	Chest Examination Focusing on Objective Signs of Obstructive Shock.	Interpretation of the chest radiograph Needle decompression on a manikin
3	Acute intestinal obstruction Distributive shock	Abdominal pain	Abdominal examination	Interpretation of CBC, biochemical blood test Interpretation of X-ray A gastric tube insurtion on a manikin

4	Perineal trauma Acute urinary retention	Abdominal pain	Interpretation of available data Suprapubic thrust simulation	Insertion of a soft urinary catheter on a manikin. Forecasting the stages of resolving the condition.
5	Postoperative peritonitis. Distributive shock	Abdominal pain	Abdominal examination Determination of Blumberg symptom, hepatic dullness	Interpretation of CBC, biochemical blood test Interpretation of X-ray
6	Gastrointestinal bleeding Hypovolemic shock	Upper GI bleeding	Abdominal examination Dermal examination on a manikin	Interpretation of CBC, Interpretation of endoscopic photo
7	Traumatic rupture of the spleen Hypovolemic shock	Abdominal pain	Abdominal examination Demonstration of phrenicus symptom Check for hepatic dullness	Interpretation of CBC Interpretation of CT image
8	Renal colic attack	Abdominal and lower back pain	Abdominal examination Kidney palpation Determination of Pasternatsky's symptom	Interpretation of CBC, urinary test, Interpretation of CT image
9	Penetrating chest wound, hemopericardium Obstructive shock	Chest pain	Chest examination Emphasis the manifestations of hemopericardium and obstructive shock	Interpretation of CBC, chest radiograph. Determining points for pericardiocentesis.
10	Thoracoabdominal trauma, diaphragmatic rupture, gastric displacement and entrapment. Shock	Chest pain	Chest examination	Interpretation of CBC, chest radiograph A gastric tube insurtion on a manikin
11	Femoral artery thromboembolism	Lower extremity pain	Examination of the lower extremities palpation of dorsal feet arteries and posterior tibial artery pulse	Biochemical blood test interpretation Angiogram interpretation

Appendix 3

ALGORITHMS FOR PRACTICAL SKILLS PERFORMING

Rectal examination on a manikin.

- Emphasize that you are explaining the essence of the manipulation to the subject, warning about possible unpleasant sensations and obtaining consent for further actions.
- Put on gloves.
- Emphasize that you have examined the anal area
- Emphasize that you have used lubricant. Carefully insert your index finger into the anus. Advise the patient to strain as if defecating and to relax as much as possible during the examination.

- Consistently examining the walls of the anal canal, assess the elasticity, tone and elasticity of the anal sphincter, the condition of the mucous membrane, the presence and degree of pain of the examination.
- Pass a finger into the rectal ampoule, determining the state of its lumen (gaping, narrowing), sequentially examine the intestinal wall over the entire surface and throughout the entire accessible length, pay attention to the state of the prostate gland (in men), recto-vaginal septum, cervix (in women), pararectal tissue of the inner surface of the sacrum and coccyx.
- After removing the finger from the rectum, assess the nature of the discharge (feces, bloody, purulent).
- Remove gloves, put them in a waterproof bag, treat hands.

Catheterization of a man's bladder with an elastic catheter on a manikin

- The initial condition is that you use sterile materials.
- Emphasize that you explain the essence of the manipulation to the subject, warn about possible unpleasant sensations and obtain consent for further actions.
- Put on gloves. Carry out hygienic treatment of the perineum, the external opening of the urethra. Remove the gloves and throw them into a waterproof bag.
- Emphasize that you put on sterile gloves. Emphasize that you open the package with the catheter.
- Wrap the penis with a napkin.
- Pull back the foreskin of the penis (if present), grab the penis from the side with your left hand (if you are right-handed) and pull it perpendicular to the surface of the body
- Use your right hand to treat the glans penis with a napkin moistened in an antiseptic solution
- Remove the catheter from the package. Take it 2 cm from the side opening with sterile forceps, hold the outer end of the catheter with the IV and V fingers. Lubricate the catheter or dip it in the available sterile lubricant.
- Advance the catheter into the urethra, applying a small, even force until the catheter reaches the bladder.
- Emphasize that you are filling the Foley catheter balloon with 10 ml of isotonic solution.
- Connect the catheter to the urine collection container (or lower the catheter into the urinal). Announce that you have attached the catheter with a plaster to the patient's thigh.
- Collect the wipes and place them in a waterproof bag.
- Remove the gloves and place them in a waterproof bag, treat your hands

Determination of blood group according to the AB0 system by the tsoliclonic method.

- Venous blood, Anti-A, Anti-B tsoliclones, and 0.9% sodium chloride solution are taken for the study. A special plate and sterile sticks are also required. The group and Rh are determined depending on the detection of the reaction of adhesion and sedimentation (agglutination) of erythrocytes. The blood is combined with a reagent containing antibodies: anti-A, anti-B tsoliclones are added to each drop of blood separately (ratio 1:10).
- While working at the station, in order to save time, the student interprets the data obtained:
- Agglutination did not occur with either antigen A or antigen B - the patient has the first group (0)
- Agglutination occurred with antigen A - the blood taken has the second group (A)
- Agglutination occurred with antigen B - the third (B)
- A reaction occurred with antigens A and B - blood of the fourth group (AB)

Insertion of a gastric tube on a manikin

- Emphasize that you are explaining the essence of the manipulation to the subject, warning about possible unpleasant sensations and obtaining consent for further actions.
- Put on gloves.

- Measure the required distance on the probe. To do this, set the last hole at the level of the xiphoid process, determine the distance to the nose and then to the earlobe, apply a mark (with a marker, adhesive plaster).
- Emphasize that you are applying lidocaine gel to the end of the probe. You can moisten the probe with water.
- Insert the probe carefully through the lower nasal passage perpendicular to the facial plane; in case of failure, try through the second nostril. If you cannot insert the probe through the nose or this is contraindicated, insert it into the pharynx through the mouth.
- Emphasize that you will recommend that the patient, while conscious, bend his head and swallow.
- Insert the probe to the specified depth. Introduce ≈20 ml of air from a syringe through the tube with simultaneous auscultation of the epigastric region - gurgling indicates correct placement of the tube (the appearance of cough, respiratory disorders, hypoxia and air flow through the tube may indicate that the tube is in the trachea or bronchus).
- Emphasize that you will fix the tube with adhesive tape to the nose (naso-gastric) or to the corner of the mouth (oro-gastric).
- Remove gloves, put them in a waterproof bag, treat your hands

Needle decompression of tension pneumothorax on a manikin

- The initial condition is assumed to be that you are using sterile materials.
- Emphasize that you are explaining the essence of the manipulation to the subject, warning them about the appearance of short-term pain, since the urgency of the situation does not require anesthesia, and obtaining consent for further actions.
- Put on gloves.
- Take a needle suitable for effective decompression.
- Select a place for manipulation on the mannequin (II intercostal space along the mid-clavicular line). With a decisive, measured movement, pierce the chest wall. Emphasize that you are convinced of the success of the procedure by the appearance of the characteristic sound of air escaping.
- If you have a mannequin without a special puncture site, describe the procedure.
- Remove gloves, put them in a waterproof bag, treat your hands

Diagnostic pleural puncture on a manikin

- The initial condition is that you use sterile materials.
- Emphasize that you explain the essence of the manipulation to the subject, warn about possible unpleasant sensations and obtain consent for further actions.
- Put on gloves.
- Determine the puncture site. In the patient's prone position, this is the V intercostal space along the midclavicular line, in the sitting position - the VI or VII intercostal space along the posterior axillary line.
- Emphasize that you treat the puncture site with an antiseptic.
- Take a 20 ml syringe. Emphasize that you are drawing local anesthetic (2% lidocaine) and performing infiltrative anesthesia. Anesthesia is not performed on an unconscious patient.
- Puncture the chest wall. Pull the piston towards you. Emphasize that you have obtained pathological contents in accordance with the scenario. Remove the needle with the syringe and place it in a tray or in a marked place. State what you are going to do with the contents.
- If you have a mannequin without a special puncture site, describe the procedure.
- Remove gloves and place them in a waterproof bag, treat your hands

Demonstration of the Blumberg symptom.

- Briefly explain the essence of the manipulation to the patient.

- Warn about possible unpleasant sensations. Obtain consent for further actions.
- Ask the patient to lie down on his stomach, slightly bend his knees and relax the muscles of the anterior abdominal wall. Sit to his right.
- Specify the location of the painful area.
- Conduct an external examination of the abdomen for symmetry, absence/presence of protrusions, participation of the anterior abdominal wall in respiratory movements.
- Place your right hand without pressure on the anterior abdominal wall and slowly immerse the tips of the half-bent II-IV fingers, fix the hand of your hand in this position for 2-3 seconds. Assess the severity of the patient's pain.
- Important! Avoid sharp and excessive pressure on the abdominal wall. Adjust the depth of immersion of your fingers according to the intensity of the patient's pain so as not to cause him additional suffering. Be careful not to damage the skin with your nails.
- Quickly remove your hand from the anterior abdominal wall and similarly assess the severity of the patient's pain; watch the patient's face: consider involuntary pain reactions (cry, grimace, shudder).

Check the symptom first in the patient's non-painful area of the abdomen, then in the painful areas.

Ortner's symptom - with your right hand rib, apply measured blows to the costal arches. With a positive symptom, pain occurs on the right.

Murphy's symptom - place the left palm under the right costal arch so that the thumb presses deeply into the abdominal wall in the projection of the gallbladder; ask the patient to take a deep breath - it is interrupted due to the occurrence of pain.

Kehr's **(Phrenicus) symptom -** pain when pressing between the legs of the sternocleidomastoid muscle in the supraclavicular area, in the projection of the phrenic nerve on the neck on the side of the pathology

Kehr's point is the name of a point at the intersection of the outer edge of the right rectus abdominis muscle with the right costal arch

Pasternacki's symptom (Murphy's punch sign) – in the patient's vertical position, place your palm on the lower back in the projection of the kidney and apply light blows with the fist of the other hand on your palm; in the patient's prone position - bring the hands of your hands under the patient's lumbar regions and apply jerky blows from the bottom up.

Homans sign is the pain and tenderness elicited on compression of the calf muscles by dorsiflexion of the foot

Moses' (Bancroft's) sign – pain is elicited when the calf muscle is compressed forwards against the tibia, but not when the calf muscle is compressed from side to side.

Ruville-Grégoire test – pour the blood obtained during diagnostic puncture of the serous cavity into a tray; its clotting indicates continuing bleeding**.**

Appendix 4

SAMPLE ASSIGNMENTS

Station №6. Providing emergency care to surgical patients.

Student assignment.

You are an emergency room doctor.

A patient with a sharp pain in the left lower extremity has admitted.

Patient appears moderately severe. BP: 118/76 mm Hg. PR: 118 per 1 minute. RR: 18 per 1 minute, SpO_2 98%. The skin and mucous look normal. Lung auscultation finds vesicular breath sounds. Cardiac sounds are rhythmic and clear. The abdominal wall is soft and painless on palpation. Intestinal sounds are as usual.

The foot and lower third of the left leg are cold to the touch; the skin is pale. The pulsation on the left femoral artery in inguinal area is clear, while absent on other arteries of the extremity. Mobility and sensitivity of the toes and lower leg are not impaired.

1. **Introduction.** Start an interaction with the patient. Consider legal and ethical aspects.

2. **Anamnesis.** Detail the pain. Identify risk factors for the disease.
3. **Physical examination**. Demonstrate the palpation of dorsal pedal pulse and posterior tibial pulse on both lower extremities.
4. **Diagnostic**. Interpret the blood test results. What additional diagnostic methods are needed? Formulate the diagnosis.
5. **Tactics and treatment**. Make emergency medication. Suggest a surgical tactics.
6. **Complete the work at the station**.

D-dimer	3,2 mgFEU/L
Prothrombin index	100%
The international normalized ratio	1,2
Fibrinogen	6.2 g/l
Fibrinogen B	+++

Assessment checklist

№	Components of the clinical case being evaluated	Number of points per position	Number of points of the student
1	**Communication skills**	**0,75**	
	The student introduced himself and greeted	0,3	
	Briefly explained the essence of the communication	0,15	
	Notified the end of the interaction and said goodbye	0,3	
2	**Collection of complaints and medical history**	**1,5**	
	Determined the location of the pain	0,15	
	Determined the onset of the pain	0,15	
	Determined the character of the pain	0,15	
	Determined the radiation of the pain	0,15	
	Determined the what the pain is associated with	0,15	
	Determined the dynamics of the pain	0,15	
	Determined the exacerbating/relieving factors for the pain	0,15	
	Determined the intensity of the pain	0,15	
	Clarified past illnesses, identified embologenic diseases	0,3	
3	**Objective examination**	**1,2**	
	Treated hands with antiseptic before and after contact with the patient	0,15	
	Conducted an examination of the lower extremities	0,15	
	Determined skin temperature by touch	0,15	
	Palpate the leg muscles on both legs	0,15	
	Conducted tactile sensitivity testing on both legs	0,15	
	Palpated the dorsal pedal pulse	0,15	
	Palpate the posterior tibial pulse	0,15	

	Compare the pulsation on both legs	0,15	
4	**Diagnostics**	**1,05**	
	Hyperfibrinogenemia was detected.	0,15	
	Found an increase in D-dimer levels	0,15	
	Named ultrasound Dopplerography	0,15	
	Named CT angiography	0,15	
	Formulated the diagnosis: Thromboembolism of the left femoral artery	0,3	
	Indicated the degree of ischemia (I)	0.15	
5	**Determining management and treatment tactics** Note: for prescribing a drug without dosage, the student receives half of the prescribed grade	**1,2**	
	Heparin was prescribed immediately	0,3	
	Intra-arterial thrombolysis	0,3	
	Urgent endovascular interventions: percutaneous aspiration thrombectomy; percutaneous mechanical thrombectomy	0.3	
	Urgent surgical intervention: thromboembolectomy	0,3	
6	**Legal and ethical aspects:**	**0,3**	
	Received consent for examination	0,15	
	Warned about possible unpleasant sensations	0,15	

Appendix 5

REGULATORY DOCUMENTS

1. Збірник клінічних рекомендацій. Хірургія.Ортопедія травматологія. Інтенсивна терапія. Київ 2024. https://health-ua.com/multimedia/userfiles/files/2024/ZKR_Hirurg_2024/ZKR_Hirurg_2024.pdf
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9. Хірургія : у 2-х томах. Т. 1, 2 : підручник / [С.О. Бойко, О. О. Болдіжар, П.О. Болдіжар та ін.] ; за ред.: П. Г. Кондратенка, В. І. Русина. – Вінниця: Нова Книга, 2019. ISBN 978-966-382-732-2
10. Essentials of general surgery and surgical specialties / senioreditor, Peter F. Lawrence; editors, Matt Smeds, Jessica Beth O'Connell. Sixth edition. Philadelphia: Wolters Kluwer Health, [2019] Identifiers: LCCN 2018039787 | eISBN: 9781496351050