Primary accreditation of health care professionals







Azerbaijan Medical Simulation Education Association



THE GUIDE TO THE OSCE

Emergency Medical Care

Specialty: General medicine



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General provisions Passports of stations (hereinafter - the stations) of the Objective structured clinical examination (OSCE) for the second stage of initial accreditation and initial specialized accreditation of specialists are documents that include the necessary information on the equipment of the station, a briefing (a short assignment before entering the station), scenarios, evaluation sheets (hereinafter checklist), sources of information, reference material, etc., and are intended as methodological and reference material for the assessment of the accredited person's proficiency in a specific practical skill (knowledge), and can be used to assess the level of readiness of healthcare professionals for professional activities.

Assessing the characteristics of practical skills in a specific discipline can be implemented through the selection of specific scenarios. The accreditation subcommittee for the specialty (hereinafter referred to as the ASC) takes this decision on the day of the second stage of the accreditation of specialists.

In order to ensure standardization of the procedure for assessing practical skills, the terms of the assignment and checklist are the same for everyone.

It is advisable to announce in advance to the accredited the rules for visiting the simulation center and the regulations of the accreditation exam.



1 Professional standard (job description)

- 1.1 Unified tariff-specialization summary of job responsibilities of employee and labor professions related to the healthcare sector (approved by Resolution No. 8 of the Ministry of Labor and Social Protection of the Republic of Azerbaijan dated June 19, 2017)
- 1.2 Sample job descriptions for the employees in medical, pharmaceutical and other specialties working in medical institutions (approved by Order No. 70 of the Minister of Health of the Republic of Azerbaijan dated September 19, 2012)

2 Information about the passport's developers

Organization-developer:

- 2.1 Baku branch of the I.M. Sechenov First Moscow State Medical University.
- 2.2 AMSEA- Azerbaijan Medical Simulation Education Association.

3 Operating time of the Station

The total time to perform the task is 10 minutes.

The time the accredited person spends at the station is at least 8.5 minutes (in case of early completion of a practical skill, the accredited person remains at the station until the voice command "Go to the next station").

			Table 1
Command announcement time	Voice command	Action of the accredited person	Time of the skill completion (min)
0'	Read the station assignment	Familiarization with the task (briefing)	0,5'
0,5'	Enter the station and say your ID number	Getting started at the station	
8,0'	You have one minute left	Continuing to work at the station	8,5'
9,0'	Go to the next station	Leaves the station and goes to the next station according to the individual route	1'

4 Task of the station

Demonstration by the accredited person of the skills of examining a patient with a sharp health deterioration in conditions of the outpatient medical organization, the ability to use emergency medical care equipment.



5 Information on ensuring operation of the station

The following must be provided for the organization of the station operation: 5.1 Workplace of ASC member

		Table 2
N⁰	List of equipment	Quantity
1	Work table (worktop)	1 pc
2	Chair	2 pcs.
3	PC for the access to local network of the Simulation Center ¹	1 pc.
4	A device for broadcasting video and audio recordings ² from the workplace of the accredited person with the ability to give input envisaged in the station's passport	1 pc.
5	Microphone with the ability to provide input, envisaged in the station's passport	1 pc.
6	Headphones	2 pcs.
7	Check lists in paper format (in case of technical problems, they are not used during normal operation)	According to a number of persons being accredited
8	Ball-point pen	2 pcs.

¹In the future - a computer with Internet access for access to the automated accreditation system for healthcare specialists of the Azerbaijan Ministry of Health

²By agreement with the chairman of the ASC, the equipment for broadcasting the video recording of the accredited person's performance may be located in another place, to which members of the ASC must have unhindered access, to be able to review the video record.

5.2. Workplace of the accredited person

The station must imitate a work premise and include equipment (accessories) and consumables (based on the attempts of accredited persons):

5.2.1. List of furniture and other equipment

		Table 3
N⁰	List of furniture and other equipment	Quantity
1	A couch (or functional bed) with a raised headboard, positioned in such a way as to allow the accredited person to approach the patient from all sides	1 pc.
2	Mannequin ³ , allowing simulation of various vital functions, lying on a couch and wearing a shirt that opens easily at the chest and shorts (or trousers that easily open at the sides) to provide easy access for the accredited person to examine the back, shoulders, legs and feet of a patient	1 pc.
3	Telephone set (in a visible place, imitation)	1 pc.
4	A wheeled cart (or kit in a suitcase) that holds equipment, supplies, and medications (with labels)	1 pc.
5	Patient's monitor	1 pc.
6	Wall clock with second hand	1 pc.



³If the simulator is powered by an electrical network, it is necessary to consider the option of connecting it so that the wires (including the wire connecting to the computer) do not mislead the accredited person and are not perceived by him as an additional danger.

N⁰	List of medical equipment	Quantity
• •=		
1	Face mask for breathing bag	1 pc.
2	Oxygen source (imitation)	1 pc.
3	Oxygen face mask with reservoir bag	1 pc.
4	Breathing bag with reservoir	1 pc.
5	Pulse oximeter	1 pc.
6	Suction apparatus	1 pc.
7	Set of catheters for sanation	4 pcs.
8	Oropharyngeal airway (№ 3 and №4)	1 pc.
9	Phonendoscope	1 pc.
10	Tonometer	1 pc.
11	Electrocardiograph	1 pc.
12	Anti-HIV kit	1 pc.
13	Eye shield	1 pc.
14	Penlight	1 pc.
15	Tourniquet	1 pc.
16	Still water bottle (imitation)	1 pc.
17	Disposable plastic cup	1 pc.
18	Infrared thermometer (imitation)	1 pc.
19	Express blood glucose analyzer	1 pc.
20	Long-term infusion stand	1 pc.
21	Portable compressor aerosol inhaler (nebulizer)	1 pc.
22	Container for disposal of needles and sharps for class B waste	1 pc.
23	Class A waste container	1 pc.
		Table 4

5.2.2. List of medical equipment

Table 4



5.2.3. Consumables

N₂	List of consumables	Quantity (per 1 attempt)
1	Disposable spatula in a package	1 pc.
2	Examination gloves (size S, M, L)	1 package each
3	Disposable face mask	1 pc.
4	Alcohol wipes	4 pcs.
5	2 ml syringe with 0.1-0.25 mm needle	2 pcs.
6	10 ml syringe with 0.25-0.6 mm needle	2 pcs.
7	20 ml syringe with 0.4-0.8 mm needle	2 pcs.
8	Peripheral intravenous catheter (PIVC) 14, 16, 18, 20, 22 G	2 pcs each
9	Intravenous infusion system	2 pcs.
10	Medical patch for PIVC	2 pcs.
11	Non-sterile dressing	1 pc.
12	Saline solution 0.9% 500 ml	1 vial
13	Dextrose solution 5% 200 ml	1 vial
14	Dextrose solution 10% 400 ml	1 vial
15	0.1% solution of epinephrine (adrenaline) 1 mg/ml	5 ampules
16	Dextrose solution 40%	1 ampules
17	Clopidogrel tablets 75 mg	1 package
18	Ticagrelor tablets 90 mg	1 package
19	Prasugrel tablets 10 mg	1 package
20	Isosorbide dinitrate spray	1 vial
21	Salbutamol, solution for inhalation 2.5 mg - 10 nebulas	10 vials
22	Ipratropium bromide, solution for inhalation 500 µg 1 vial	1 vial
23	Dextrose solution 40%	10 ampules
24	Magnesium sulphate solution 250 mg/ml	1 ampules
25	Norepinephrine 2 mg/ml	10 ampules
26	Dexamethasone solution 4 mg/ml, or prednisolone solution 30 mg/ml, or methylprednisolone solution 30 mg/ml	5 ampules
27	Hydrocortisone (lyophilisate) 100 mg	2 vials
28	Furosemide solution 20 mg/2 ml	5 ampules
29	Solution of non-fractionated heparin 5000 IU/ml	5 vials
30	Morphine sulfate solution 10 mg/ml	10 ampules
31	Fondaparinux 2.5 mg	1 ampule
32	Nitroglycerin 500 µg	1 package
33	Metoprolol 50 mg	1 package
34	Erythromycin 250 mg	1 vial
35	Omeprazole 40 mg	2 vials
36	Concentrated red cells 100 ml	5 packages
37	Recombinant tissue plasminogen activator (rt-PA) 50 mg	1 package
38	Urokinase 10000 units	2 vials
39	Decompression needle	1 pc.
40	Glucose or dextrose tablets	1 package
41	Alteplase 50 mg	1 package
42	Labetalol 100 mg/20 ml	1 package
43	Nicardipine 10 mg	10 vials
44	Clevidipine 50 ml	10 vials
45	0.05% aqueous solution of chlorhexidine bigluconate	5 vials
46	70% alcoholic spirit solution	2 vials
47	Phentanyl 25-50 µg	1 package
48	Lidocaine 20 mg/ml	10 vials



Table 6

5.2.4. Simulation equipment of the station and its characteristics

N⁰	Characteristic of simulation equipment
1.	 Full-height of a man simulator older than 8 years, with the possibility of imitating the following parameters: imitation of breathing sounds and murmur; visualization of chest excursion; imitation of central and peripheral arterial pulsation; displaying of a specified electrocardiogram on medical equipment; eye blinking and change in pupil lumen; preferred; voice guide; simulation of the auscultatory picture of heart performance, heart sound/ murmur; imitation of perspiration; imitation of change in capillary filling and temperature of skin cover; imitation of asturation parameters, heart rate via real pulse oximeter imitation patient's monitor.
2.	Patient monitor reproducing parameters specified in scenario (when measured)

6 Actions of ASC members, supporting personnel at the preparatory stage (prior to the start of the station operation)

- 1. Checking an access to local network of the simulation center*
- 2. Checking the compliance of the design and completion of the OSCE station with the standard passport, taking into account the number of persons being accredited.
- 3. Checking the presence of necessary consumables at the station.
- 4. Checking the availability of written task (briefing) before entering the station.
- 5. Checking the readiness of simulator for operation.
- 6. Installation of necessary scenario by programmed control of simulator.
- 7. Checking the readiness of broadcasting video records to the video surveillance room.
- 8. Selection of the situation according to the decision of the ASC.
- 9. Carrying out other activities necessary for normal operation of the station.

* In future - Obtaining a login and password to enter the automated accreditation system for healthcare specialists of the Azerbaijan Ministry of Health and logging in. Reconciliation of own personal data.



7 Actions of ASC members, supporting personnel during the station operation

- 1 Turning on video camera with the command "Read the station task" (if necessary).
- 2 Quality control of audio-video recording of the actions of accredited person (if necessary).
- 3 Launching the simulator and managing the simulator software.
- 4 In the future* Entering the individual number of the accredited person into the checklist in the automated accreditation system for healthcare specialists of the Ministry of Health of Azerbaijan.
- 5 Registration of the sequence and correctness of actions/discrepancies in the actions of the accredited person in accordance with the parameters in the checklist
- 6 Conducting minimum necessary dialogue with the accredited person on behalf of the patient, and providing additional input for completing the situation (scenario) Table 7.
- 7 Compliance with the rule do not say anything on your own; do not enter into negotiations, even if you disagree with the opinion of the accredited person. Do not ask clarifying questions, do not make demands.
- 8 Use permitted input only if the simulator does not allow you to reproduce it.
- 9 After the command to the accredited person "Go to the next station", bring the used simulation equipment and premises to their original condition.

For ASC members with little experience of working at a station, it is allowed to increase the period for preparing the station and filling out the checklist. The period in this case should be equal to the period of operation of the station (10 minutes).

Important! It is strongly recommended not to ask questions not listed in this table. You must not say anything on your own or enter into negotiations, even if you do not agree with the opinion of the accredited person. Do not ask clarifying questions or make demands: "Continue!", "Carry out the auscultation of the lungs!" etc.; ask questions: "What are you going to do next?", "How long?" etc.



Sample texts of introductory information within the framework of the dialogue between a ASC member and the accredited person

	between a ASC member and	Table 7
№	Action of the accredited person	Text of introductory information
1	When assessing the situation, demonstrating a safety gesture	"No danger"
2	On the attempt to wash hands	"Let us assume that the hands have been sanitized"
3	When assessing vital functions that are not reproduced by the simulator independently	Give an input in accordance with the chosen situation (scenario)
4	When an accredited person tries to make a phone call	Imitate manager of emergency medical service (EMS): "Emergency medical service is listening, what has happened to you?"
5	If correct and complete information is provided	Brief answer: "Call is taken! Wait"
6	If the information is incomplete	It is acceptable to ask questions on behalf of the EMS manager: "Introduce yourself, please?", "Give your address?", "What is the age and gender of the victim?", "What is the scope of your intervention?"
7	If the accredited person does not comment on the treatment being carried out	If necessary, it is permissible to ask the accredited person the following questions: "What is the oxygen level?", "What medications did you administer?", "What dosage?"
8	In preparation for a paracentesis of the chest, after treating the puncture area with antiseptic and bringing the needle to this area	"Let us assume that the paracentesis is completed"



Table 8

8 List of situations (scenarios) of the station⁴

N⁰	Situation (scenario)
1	Acute coronary syndrome (ACS), STEMI (ST elevation myocardial infarction), cardiogenic shock
2	Acute coronary syndrome (ACS), NSTEMI (Non ST-segment elevation myocardial infarction), pulmonary edema
3	Anaphylactic shock (AS)
4	Gastrointestinal (GI) hemorrhage
5	Broncho-obstructive syndrome (BOS) against the background of bronchial asthma
6	Thrombembolia of the pulmonary artery (TEPA)
7	Cerebrovascular accident (CVA), ischemic stroke
8	Hypoglycemia
9	Tension pneumothorax (obstructive shock)
10	Cardiac tamponade

ASC determines the choice and sequence of situations (scenarios) of the station on the day of the second stage of initial accreditation of healthcare professionals.

9 Information (briefing) for the accredited person

You are medical specialist. Medical brother/sister called you for help. The patient in front of you is 45 years old (approximate weight 60 kg, height 165 cm). There is an emergency medical treatment kit on the floor.

Medical brother/sister cannot help you as he/she calms down the relative accompanying the patient. Voice your actions in detail, as if a colleague were next to you.



10 Reference information for the accredited person

As a rule, emergency medical measures are carried out at the site where the patient's condition has sharply deteriorated. Each medical organization must have a set of equipment and accessories for provision of emergency medical care in the form of portable kit of emergency medical aid and manual defibrillator. The kit includes everything necessary to provide emergency medical care in various situations to ensure qualified care by a medical doctor of any specialty authorized to work with patients.

The qualification characteristics of a specialist who has a diploma on medical education and a valid professional certificate (certificate of accreditation), or job descriptions of a medical specialist include the obligation to provide emergency medical care.

This station is based on the use of the generally accepted ABCDE approach, used in world and national practice to provide emergency medical care.

11 Algorithm of skill implementation

ABCDE algorithm is used for the systematic assessment of an ill person in a critical state. It includes working through the following steps:

Airway (patency of airways) Breathing (breathing) Circulation (circulation of blood) Disability (neurological status) Exposure (appearance)

Each step of the ABCDE approach includes clinical assessment, research, and intervention.

General tips for applying the ABCDE approach in emergency situations:

- Address problems as they are discovered.
- Reassess after each intervention to monitor the patient's response to treatment.
- Engage the team that is with you, delegating tasks where appropriate.
- Continuous monitoring is required for all critically ill patients
- View results as they become available (e.g. laboratory tests)



algorithm Actions Initial response 1 Assess the situation • Check head rotation, show safety gesture 2 Assess consciousness, presence of breathing (without touching the victim) • Ask him/her loudly: "Do you need help?" 3 Call for help 4 Provide emergency kit (check if everything you need is available) 5 Put on gloves and make an assistant put on gloves 6 Comment on all your subsequent actions 7 Assess the condition of the upper respiratory tract/oral mucosa (with a spatula) Provide pulse oximetry Provide oxygen therapy if necessary (select the correct flow (minimum/average/maximum)) 9 Perform comparative chest percussion 10 Perform comparative auscultation of the lungs 11 Assess the condition of the trachea 12 Assess the condition of the trachea 13 Assess cervical filling 14 Check pulse simultaneously on the carotid and radial arteries for at least 10 seconds	
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12Assess the condition of the trachea13Assess cervical filling	
13 Assess cervical filling	
14 Check nulse simultaneously on the carotid and radial arterias for at least 10 seconds	
15 Measure arterial blood pressure (BP)	
16 Perform cardiac auscultation at 4 points	
17 ECG: apply electrodes, interpret ECG	
18 Press finger pulp for the assessment of capillary filling (blanch test)	
19 Provide venous access and blood sampling for analysis, comment on laboratory results necessary)	(if
20 Assess condition of the skin by palpating the patient's hands and/or forehead and/or ch and/or ankles	eeks
21 Check pupils' reaction to light	
22 Arrange blood glucose check	
23 Assess muscle tone (by flexion/extension of each arm and each leg)	
24 Palpate the pulse in the femoral arteries on both sides	
25 Perform superficial palpation of the abdomen at four sides from the navel	
26 Examine the legs and popliteal areas for the presence of varicose veins	
E 20 Entailine the logs and populate areas for the presence of various verification of the foot and legs to determine the presence of edema 27 Palpate the dorsum of the foot and legs to determine the presence of edema	
28 Examine the patient's back with a turn on his/her side and taking off clothes (imitation)
29 If necessary, perform a rectal examination to determine the presence of internal bleeding	
	Ig
30 Take the temperature	
31 If necessary, carry out additional examinations	noncet.
Conclusion	•
Carry out therapeutic measures (puncture/ pericardiocentesis /use the correct and comp of medications, use optimal method of medications administration, their correct dosag	
34 Conduct re-examination - ABCDE	



12. Scenarios

1 Acute coronary syndrome (ACS), STEMI (ST elevation myocardial infarction), cardiogenic shock

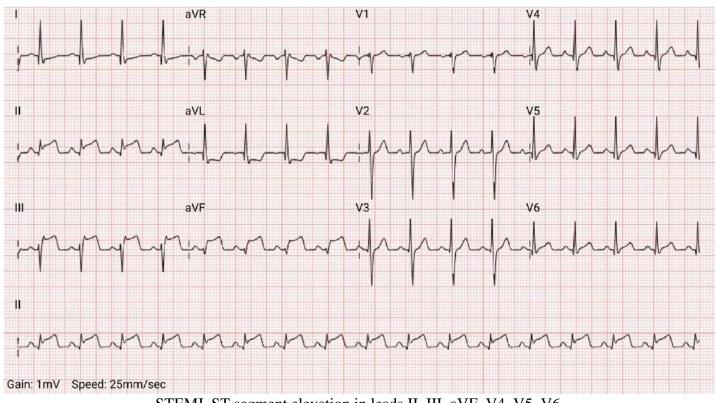
When attempting to assess consciousness:					
	Patient opens eyes, chest rises, responses				
	Patency of airways	The airway is visually patent			
Α	Saturation	88			
	When carrying out insufflation with O_2	90			
	Respiratory rate	24			
B	Percussion of the lungs	Clear pulmonary sound on the left and right*			
	Auscultation of the lungs	Weakened vesicular breathing on both sides			
	Trachea	Trachea is in normal position*			
	Cervical veins	Swollen*			
	Pulse, heart rate	Pulse is the same on both sides, weakened, 110 beats/min			
	BP	80/30			
	Auscultation of the heart	Pulse rapid, muffled heart tones			
C	ECG	STEMI			
Ŭ	Capillary refill test	The spot disappears 4 seconds after pressing *			
	Laboratory tests	Biochemical blood test			
	Skin	All the skin is cold and damp			
		Diagnostics and treatment massures			
	_	Diagnostics and treatment measures			
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved			
D	Pupillary photoreflex Muscle tonus	The pupils are reacting equally,			
D		The pupils are reacting equally, light reflex preserved			
D	Muscle tonus	The pupils are reacting equally, light reflex preserved Muscle tonus is normal*			
D	Muscle tonus Blood glucose	The pupils are reacting equally, light reflex preserved Muscle tonus is normal* 6,3 mmol/l Abdomen within normal			
D	Muscle tonus Blood glucose Abdominal palpation	The pupils are reacting equally, light reflex preserved Muscle tonus is normal* 6,3 mmol/l			
D	Muscle tonus Blood glucose Abdominal palpation Femoral arteries	The pupils are reacting equally, light reflex preserved Muscle tonus is normal* 6,3 mmol/l Abdomen within normal Rapid, weak filling			
D	Muscle tonus Blood glucose Abdominal palpation Femoral arteries Varicose veins	The pupils are reacting equally, light reflex preserved Muscle tonus is normal* 6,3 mmol/l Abdomen within normal Rapid, weak filling No varicose veins detected*			
D	Muscle tonus Blood glucose Abdominal palpation Femoral arteries Varicose veins Edema	The pupils are reacting equally, light reflex preserved Muscle tonus is normal* 6,3 mmol/l Abdomen within normal Rapid, weak filling No varicose veins detected* No edema detected* No visible injuries, no bleeding			

*The text will be voiced by the member of Commission

With properly conducted therapeutic measures, the indicators are normalized

Emergency medical care





STEMI. ST segment elevation in leads II, III, aVF, V4, V5, V6

Biochemical blood analysis						
Test	Result	Measurement	Reference			
Troponin I (hs-cTn)	0.85	ng/ml	Negative <0.1			
CK-MB	45	UNIT/L	<25			

Selecting of the reperfusion strategy:

0' Diagnosing STEMI* is a zero point in a time of reperfusion strategy (if the ECG of a patient with ischemic symptoms is interpreted as the presence of ST segment elevation). Patients with STEMI must undergo the PCI**

 \leq 120' <u>Primary PCI</u> is the preferred method of reperfusion; when it is possible, the patient should be brought to the angiography room within 90-120 minutes.

>120' If primary PCI cannot be provided within the first two hours after the diagnosis of STEMI, fibrinolytic therapy should be started immediately.

STEMI* - Acute myocardial infarction with the elevation of ST segment PCI ** - Percutaneous Coronary Intervention



Diagnostics and treatment measures

<120'

Doses of anti-platelet and anticoagulant therapy in patients undergoing <u>primary percutaneous</u> <u>coronary intervention</u>

- Acetylsalicylic acid 150-300 mg orally (or 75-250 mg IV if oral administration is not possible)
- *Prasugrel* 60 mg orally (if available)
- or Ticagrelor 180 mg orally (if available)

or Clopidogrel 300-600 mg orally (if Prasugrel or Ticagrelor are unavailable)

- Unfractionated heparin 5000 units (70-100 units/kg bolus (without the use of GP IIb/IIIa inhibitors))
- or Enoxaparin 0.5 mg/kg bolus
- Morphine sulfate 2-4 mg IV (increasing dose by 2-8 mg IV, repeated at 5-15 minute intervals)
- *Metoprolol* 5 mg (5 ml) IV (Can be repeated at 5-minute intervals or before PCI)
- *Norepinephrine* 12 µg/min (0.2-1 µg/kg/min)

>120'

Fibrinolytic agents

• *Alteplase* 15 mg bolus, then 0.75 mg/kg during the next 30 minutes (max 50 mg), then 0.50 mg/kg during 60 minutes (max 35 mg) up to overall dose 100 mg

or Reteplase 10 bolus units, then repeat after 30 minutes

or Tenecteplase - bolus based on body weight (single dose) in 5 seconds: $\leq 60 \text{ kg: } 30 \text{ mg} (6000 \text{ UNITS})$

or Streptokinase IV 1.5 million units over 30-60 minutes (if streptokinase or anistreplase was previously used)

- Acetylsalicylic acid 150-300 mg orally (or 75-250 mg IV if oral administration is not possible)
- *Clopidogrel* 30 mg orally
- *Enoxaparin* 30 mg bolus, with 15 minute interval, 1 mg/kg (max 100 mg)

or unfractionated heparin 60 units/kg bolus (maximum 4000 units), with subsequent initial infusion 12 units/kg/hour (maximum 1000 units/hour)

or Fondaparinux (only with Streptokinase) 2.5 mg bolus

- Morphine sulfate 2-4 mg IV (increasing dose by 2-8 mg IV, repeated at 5-15 minute intervals)
- Metoprolol 5 mg (5 ml) IV (Can be repeated at 5-minute intervals or before PCI)
- Norepinephrine 12 µg/min (0.2-1 µg/kg/min)

Ask about the time and decide on the treatment scheme.

Urgent echocardiography is indicated in patients with cardiogenic shock.

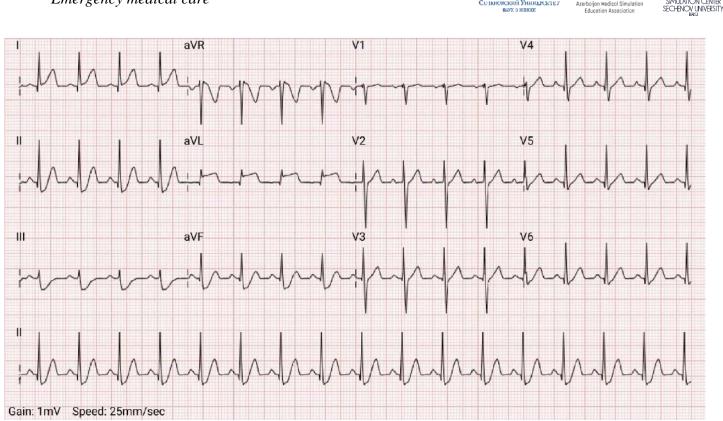


2. Acute coronary syndrome (ACS), NSTEMI, pulmonary edema

		ssess consciousness:
	Patient opens eyes, chest rises, respon	
•	Patency of airway	The airway is visually patent*
Α	Saturation	88
	When performing O2 insufflation	90
	Respiratory rate	24
B	Percussion of the lungs	Clear pulmonary sound on the left and right, dulling in the basal lobes*
	Auscultation of the lungs	Weakened vesicular breathing in the upper lobes, wet crackles in the lower lobes
	Trachea	Trachea is in normal position*
	Neck veins	Swollen*
	Pulse, heart rate	The pulse is symmetrical on both sides, weak, 110 beats/min
	BP	160/90
	Auscultation of the heart	Pulse is rapid, muffled heart tones
С	ECG	NSTEMI
C	Capillary refill test	The spot disappears 4 seconds after pressing*
	Laboratory tests	Biochemical blood test
	Skin	All the skin is warm, obvious cyanosis*
	_	Diagnostics and treatment measures
D	Pupillary photoreflex	Diagnostics and treatment measures The pupils are reacting equally, light reflex preserved
D	Pupillary photoreflex Muscle tone	The pupils are reacting equally,
D		The pupils are reacting equally, light reflex preserved
D	Muscle tone	The pupils are reacting equally, light reflex preserved Muscle tonus normal*
D	Muscle tone	The pupils are reacting equally, light reflex preserved Muscle tonus normal*
D	Muscle tone Blood glucose	The pupils are reacting equally, light reflex preserved Muscle tonus normal* 6.3 mmol/l
D	Muscle tone Blood glucose Abdominal palpation	The pupils are reacting equally, light reflex preserved Muscle tonus normal* 6.3 mmol/l Abdomen within normal*
D	Muscle tone Blood glucose Abdominal palpation Femoral arteries	The pupils are reacting equally, light reflex preserved Muscle tonus normal* 6.3 mmol/l Abdomen within normal* Rapid
D	Muscle tone Blood glucose Abdominal palpation Femoral arteries Varicose veins	The pupils are reacting equally, light reflex preserved Muscle tonus normal* 6.3 mmol/l Abdomen within normal* Rapid No varicose veins detected*
D	Muscle tone Blood glucose Abdominal palpation Femoral arteries Varicose veins Edema	The pupils are reacting equally, light reflex preserved Muscle tonus normal* 6.3 mmol/l Abdomen within normal* Rapid No varicose veins detected* No edema detected* No visible injuries, no bleeding

*The text will be voiced by the member of Commission With properly conducted therapeutic measures, the indicators are normalized

Emergency medical care



Non-STEMI. ST segment depression in leads II, III, aVF, V5, V6

Biochemical blood analysis						
Test	Result	Measurement	Reference			
Troponin I (hs-cTn)	0.6	ng/ml	Negative <0.1			
CK-MB	40	UNIT/L	<25			

Diagnostics and treatment measures

Doses of antiplatelet and anticoagulant therapy in patients with acute coronary syndrome without ST-segment elevation

- Acetylsalicylic acid 150-300 mg orally (or 75-250 mg IV if oral administration is • not possible)
 - Prasugrel 60 mg orally (if available) ٠
 - or Ticagrelor 180 mg orally (if available)
 - or Clopidogrel 300-600 mg orally (if Prasugrel or Ticagrelor are unavailable)
 - *Unfractionated heparin* 5000 units (70-100 units/kg) •
 - or Fondaparinux 2.5 mg/day subcutaneous (only before PCI)
 - Nitroglycerin 0.4 mg sublingually (every 5 minutes up to 3 doses)
 - Metoprolol 5 mg (5 ml) IV B. (Can be repeated at 5-minute intervals))
 - *Furosemide* 20-40 mg IV with repeated doses (up to 80 mg) •

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Azerbaijan Medical Simulation

Education Association

кокий Университет



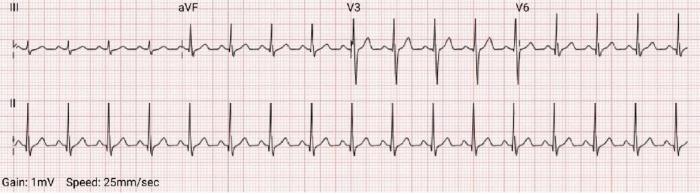
5. Anaphylactic snock						
When attempting to assess consciousness: Opens eyes, chest rise is observed, does not answer questions						
٨	Patency of airway	Edematous lips and tongue*				
A	Saturation	88				
	When performing O2 insufflation	94				
	D	21				
	Respiratory rate	24				
В	Percussion of the lungs	Clear pulmonary sound on the left and right*				
	Auscultation of the lungs	Rough respiration, dry wheezing over the entire surface of the lungs, stridor				
	Trachea	Trachea is in normal position*				
	Neck veins	Collapsed*				
	Pulse, heart rate	The pulse is symmetrical on both				
	Fuise, neuri raie	sides, weak, 110 beats/min				
	BP	80/30				
	Auscultation of the heart	Pulse is rapid, muffled heart tones				
	ECG	Sinus tachycardia				
C	Capillary refill test	The spot disappears 3 seconds after pressing*				
	Laboratory tests	Not required				
	Skin	The skin is hyperemic, warm to the touch, erythematous rash on the anterior surface of the chest*				
		Diagnostics and treatment measures				
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved				
D	Muscle tonus	Weakened muscle tonus*				
	Blood glucose	6.3 mmol/l				
	· ·					
	Abdominal palpation	Moaning on the examination of the upper abdomen*				
	Femoral arteries	Rapid, weak filling				
	Varicose veins	No varicose veins detected*				
E	Edema	No edema detected*				
	Back	No visible injuries, no bleeding detected*				
	Rectal examination	Not required*				
	Body temperature	37.4°				
kThe text	will be voiced by the member of Commissi					

3. Anaphylactic shock

*The text will be voiced by the member of Commission With properly conducted therapeutic measures, the indicators are normalized



Diagnostics and treatment measures Make sure the patient is lying down and do not force him to sit or stand suddenly Stop patient's exposure to the allergen if possible Epinephrine 0.5 mg (0.01 mg/kg to 0.5 mg (which is 0.5 ml of 1 mg of adrenaline in a 1 ml ampoule)) intramuscularly into the anterolateral surface of the upper third of the thigh without dilution. Repeat the administration of epinephrine if the patient's condition does not improve after approximately 5 minutes. Infusion of 0.9% NaCl solution 500-1000 ml IV bolus Permissible: To reduce the risk of prolonged respiratory manifestations in a patient with anaphylaxis, it is recommended to use corticosteroids after the administration of epinephrine: Dexamethasone 8-32 mg IV drip infusion or Prednisolone 90-120 mg IV drip or bolus or Methylprednisolone 50-120 mg/ml IV bolus or Hydrocortisone 200 mg IV or Betamethasone 8-32 mg IV drip infusion For a patient with anaphylaxis, it is recommended to administer systemic antihistamines after stabilization, in the presence of skin and mucous membrane manifestations: Clemastin (Tavegil) 0.1% - 2 ml (2 mg) IV or IM or Chloropyramine (Suprastin) 2% - 1 ml (20 mg) IV or IM or Diphenhydramine (Dimedrol) 25-50 mg IV aVR V2 aVL V5 aVF V3 V6



Sinus tachycardia

When attempting to assess consciousness:						
	Patient opens eyes, chest rises, respon					
	Patency of airways	The airway is visually patent*				
A	Saturation	95				
	When performing O2 insufflation	-				
	Respiratory rate	26				
n	Percussion of the lungs	Clear pulmonary sound on the left and right*				
B	Auscultation of the lungs	Vesicular breathing on both sides				
	Trachea	Trachea is in normal position*				
	Neck veins	Collapsed*				
		T T				
	Pulse, heart rate	The pulse is symmetrical on both sides, weak, 110 beats/min				
	BP	80/40				
	Auscultation of the heart	Rapid				
	ECG:	Sinus tachycardia				
C	Capillary refill test	The spot disappears 4 seconds after pressing*				
	Laboratory tests	Complete blood count,coagulogram				
	Skin	All the skin is pale and cold to the				
		touch*				
		The pupils are reacting equally light				
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved				
D	Muscle tonus	Muscle tonus normal*				
	Blood glucose	6,3 mmol/l				
	Abdominal palpation	Moaning on the examination of the upper abdomen* Wooden belly*				
	Femoral arteries	Rapid				
	Varicose veins	No varicose veins detected*				
	Edema	No edema detected*				
E	Back	No visible injuries detected , tar-like fluid in the buttocks area*				
	Rectal examination	Black tarry masses on a finger. Melena*				
	Body temperature	36.6°				

4. Gastrointestinal (GI) hemorrhage

Diagnostics and treatment measures

*The text will be voiced by the member of Commission

With properly conducted therapeutic measures, the indicators are normalized



Diagnostics and treatment measures

- To maintain hemoglobin levels above 7 g/dl, packed *red blood cells* (erythrocytes) should be transfused
- *Erythromycin* 250 mg IV infusion, 20-30 minutes (30-90 minutes before the endoscopy)
- *Omeprazole* 80 mg bolus (with the subsequent infusion 8 mg/hour)

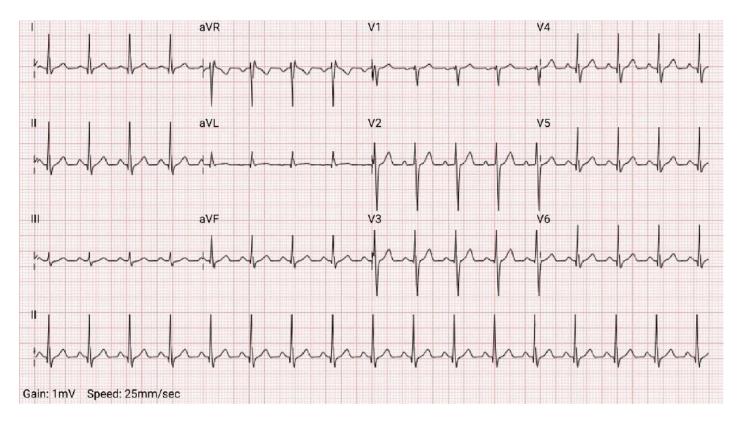
Additionally:

• Infusion of 0.9% NaCl solution 500-1000 ml IV bolus

General blood analysis							
Test	Result	Measurement	Reference				
Leukocytes (WBC)	4.15	10^9/L	4,00 - 8,80				
Erythrocytes (RBC)	1.81	10^12/L	3,80 - 5,30				
Hemoglobin (HGB)	60	g/L	117,00 - 160,00				
Hematocrit (HCT)	18.8	%	35,00 - 47,00				
Mean corpuscular volume of erythrocytes (MCV)	103.9	FL	81,00 - 101,00				
Mean hemoglobin content in erythrocytes (MCH)	33.1	pg	27,00 - 34,00				
Mean corpuscular hemoglobin concentration (MCHC)	319	g/L	310,00 - 360,00				
Platelets (PLT)	132	10^9/L	150,00 - 300,00				
Anisocytosis (RDW-CV)	21.5	%	11,50 - 14,50				
Platelet width distribution (PDW)	9.3	FL	9,00 - 17,00				
Mean platelet volume (MPV)	9.1	FL	8,00 - 12,00				
Thrombocrit	0.05	FL	0,1 - 3,5				
Neutrophils	2.09	10^9/L	1,88 - 6,34				
Lymphocytes	0.55	10^9/L	0,76 - 3,26				
Monocytes	0.48	10^9/L	0,12 - 0,97				
Eosinophils	0.01	10^9/L	0,02 - 0,44				
Basophils	0.02	10^9/L	0,00 - 0,06				
Neutrophils	66.4	%	47,00 - 72,00				
Lymphocytes (LYM)	17.5	%	19,00 - 37,00				
Monocytes	15.2	%	3,00 - 11,00				
Eosinophils	0.3	%	0,50 - 5,00				
Basophils	0.6	%	0,00 - 1,00				



Coagulogram						
Test	Result	Measurement	Reference			
aPTT	23,5	сек	28,6 - 33,6			
Prothrombin index	58,3	%	70-130			
INR	1.53	y.e.	0,9 - 1,25			
Fibrinogen	3.8	г/л	2 - 4			



Sinus tachycardia



5. Broncho-obstructive syndrome (BOS) against the background of bronchial asthma

When	attempting to assess consciousness: Patie			
W HCH	questions with			
	Patency of airways	The airway is visually patent*		
A	Saturation	85		
••	When performing O2 insufflation	92		
	Respiratory rate	25		
	Percussion of the lungs	Clear pulmonary sound on the left and right*		
B	Auscultation of the lungs	Rough breathing, severely labored expiration,dry wheezing over the entire surface of the lungs		
	Trachea	Trachea is in normal position*		
	Neck veins	Swollen*		
	_	Diagnostics and treatment measures		
	-	The mulae is summatriced on both		
	Pulse, heart rate	The pulse is symmetrical on both sides, weak, 110 beats/min		
	BP	135/80		
	Auscultation of the heart	Rapid		
C	ECG	Sinus tachycardia		
U	Capillary refill test	The spot disappears 2 seconds after pressing*		
	Laboratory tests	Not required		
	Skin	All the skin is warm, obvious cyanosis*		
Л	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved		
D	Muscle tonus	Muscle tonus normal*		
	Blood glucose	6.3 mmol/l		
	Abdominal palpation	Abdomen within normal*		
	Femoral arteries	Rapid		
	Varicose veins	No varicose veins detected*		
E	Edema	No edema detected*		
	Back	No visible injuries, no bleeding detected*		
	Rectal examination	Not required*		
	Body temperature	36.6°		

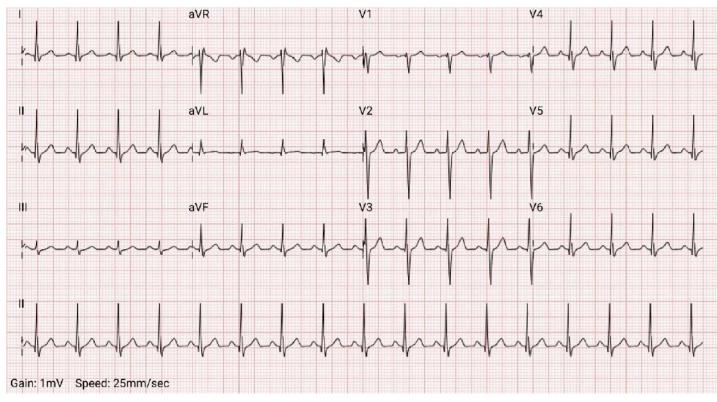
* The text will be voiced by the member of Commission

With properly conducted therapeutic measures, the indicators are normalized



Diagnostics and treatment measures

- Salbutamol 5 mg inhalation via nebulizer
- Ipratropium bromide 0.5 mg inhalation via nebulizer
- *Prednisolone* 40-50 mg/day tablet, or *Hydrocortisone* 100 mg IV Permissible:
 - *Magnesium sulfate* 1.2-2 g IV for 20 minutes



Sinus tachycardia

	0.1 unional y arter y thi on				
	When attempting to assess Patient opens eyes, chest rises, response				
	Patency of airways	The airway is visually patent*			
Δ	Saturation	84			
1	When performing O2 insufflation	90			
	I J G JJ				
	Respiratory rate	24			
D	Percussion of the lungs	Clear pulmonary sound on the left and right*			
B	Auscultation of the lungs	Vesicular breathing on both sides			
	Trachea	Trachea is in normal position*			
	Neck veins	Swollen*			
	Pulse, heart rate	The pulse is symmetrical on both sides, weak, 110 beats/min			
	BP	80/40			
	Auscultation of the heart	Heart sounds are frequent, muffled, diastolic shock on the pulmonary artery			
С	ECG	S1, Q3, T3			
U	Capillary refill test	The spot disappears 4 seconds after pressing*			
	Laboratory tests	Coagulogram, blood gases			
	Skin	All the skin is cold and damp.The skin of the upper half of the body is cyanotic*			
		Diagnostics and treatment measures			
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved			
D	Muscle tonus	Muscle tonus normal*			
	Blood glucose	6.3 mmol/l			
	Abdominal palpation	Abdomen within normal*			
	Femoral arteries	Rapid, weak filling			
	Varicose veins	A network of varicose veins was discovered on both lower limbs*			
E	Edema	No edema detected*			
	Back	No visible injuries, no bleeding detected*			
	Rectal examination	Not required*			
	Body temperature	36.6°			
		•			

6. Pulmonary artery thrombembolia (PATE)

*The text will be voiced by the member of Commission

With properly conducted therapeutic measures, the indicators are normalized

Emergency medical care



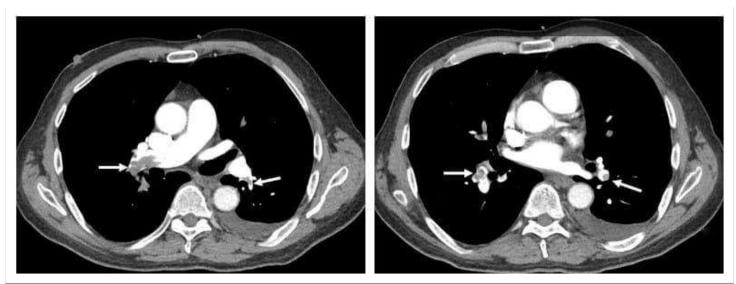


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Coagulogram					
Test	Result	Measurement	Reference		
D-dimer	8.2	µg/ml	<0.5		

Blood gases					
Test	Result	Measurement	Reference		
pH	7.47	-	7,35 - 7,45		
PaO2	34.5	mmHg	> 75		
PaCO2	19.2	mmHg	35 - 45		
Bicarbonates	14	mmol/L	22,0 - 30,0		
SpO2	84	%	95 - 100		
Sodium (Na)	145	mmol/L	135 - 145		
Potassium (K)	3.5	mmol/L	3,5 - 5,5		
Calcium (Ca)	0.49	mmol/L	1.15 - 1,29		
Chlorine (Cl)	102	mmol/L	98-106		
Anion deficiency	32.1	mmol/L	8 - 16		
Buffer capacity (BE)	-12	-	-2 +2		
Lactate	7.0	mmol/L	0,8 – 1.6		





Bilateral thrombembolia of the pulmonary artery. Arrows indicate filling defects (emboli).

Diagnostics and treatment measures			
CT			
In patients with a high or intermediate clinical likelihood of PATE			
• Unfractionated heparin 5000 units (80 units/kg) IV bolus (with subsequent IV			
infusion 18 units/kg/hour)			
Thrombolysis:			
• <i>Alteplase</i> IV 100 mg for 2 hours			
or Streptokinase 250 000 units IV 1.5 million units over 30-60 minutes (if			
streptokinase or anistreplase was previously used)			
or Urokinase 4400 units/kg for 10 minutes, then 4400 units/kg/hour during 12-24			
hours			
 Norepinephrine - 12 μg/min (0.2-1 μg/kg/min) 			

7. Acute cerebrovascular accident (ACA), ischemic stroke				
When attempting to assess consciousness: Eyes closed, chest rise is observed, does not answer questions				
Patency of airways The airway is visually patent*				
٨	Saturation	88		
A	When performing O2 insufflation	94		
	Respiratory rate	12		
n	Percussion of the lungs	Clear pulmonary sound on the left and right*		
B	Auscultation of the lungs	Vesicular breathing on both sides		
	Trachea	Trachea is in normal position*		
	Neck veins	Normal*		
	Pulse, heart rate	The pulse is symmetrical on both sides, weakened, 55 beats/min		
	BP	230/120		
	Auscultation of the heart	Normal		
С	ECG	Sinus bradycardia		
C	Capillary refill test	The spot disappears 2 seconds after pressing*		
	Laboratory tests	Complete blood count, coagulogram		
	Skin	All the skin is warm and of normal color*		
	-			
D	Pupillary photoreflex	The right pupil is wider than the left, pupillary light reflex is absent on the right, preserved on the left		
D	Muscle tonus	Muscle tonus is weakened on the left, normal on the right*		
	Blood glucose	6.3 mmol/l		
		Diagnostics and treatment measures		
	Abdominal palpation	Abdomen within normal*		
	Femoral arteries	Regular		
	Varicose veins	No varicose veins detected*		
E	Edema	No edema detected *		
	Back	No visible injuries, no bleeding detected*		
	Rectal examination	Not required*		
	Body temperature	36.6°		

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Diagnostics and treatment measures

Un-enhanced CT

• For blood pressure >180/105, prescribe antihypertensive drugs:

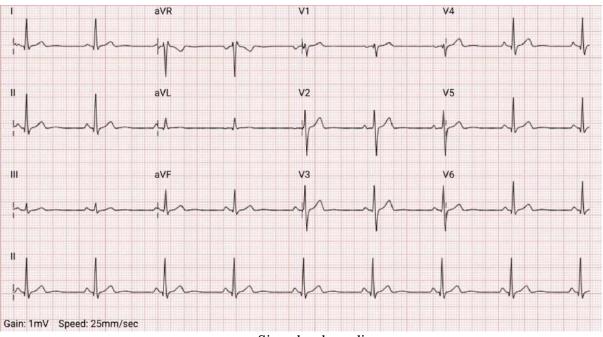
Labetalol 10-20 mg intravenously for 1-2 minutes, can be repeated once

or *Nicardipine* 5 mg/hour IV, titrate by 2.5 mg/hour every 5 to 15 minutes, maximum 15 mg/hour

or *Clevidipine* 1-2 mg/hour intravenously, titrate by doubling the dose every 2-5 minutes until the desired blood pressure is achieved; maximum 21 mg/hour

• Alteplase 50 mg IV (0.9 mg/kg with an initial injection of 10% bolus over 1 minute (maximum dose 90 mg over 60 minutes))





Sinus bradycardia

Coagulogram						
TestResultMeasurementReference						
aPTT	31.7	sec	28,6 - 33,6			
Prothrombin time	10.8	sec	9,2 - 12,2			
PTI	97	%	70 - 130			
INR	1.01	au	0,9 - 1,25			
Prothrombin time	22	sec	18 - 24			
Fibrinogen	3.7	g/l	2 - 4			
Plasminogen	81	%	71 - 101			
D-dimer	7.02	µg/ml	<0.5			

Biochemical blood analysis					
Test Result Measurement Reference					
Troponin I (hs-cTn)	< 0.1	ng/ml	Negative <0.1		
CK-MB	7.88	UNIT/L	<25		





General blood analysis					
Test	Result	Measurement	Reference		
Leukocytes (WBC)	6.3	10^9/L	4,00 - 8,80		
Erythrocytes (RBC)	4.8	10^12/L	3,80 - 5,30		
Hemoglobin (HGB)	139	g/L	117,00 - 160,00		
Hematocrit (HCT)	41.6	%	35,00 - 47,00		
Mean corpuscular volume of erythrocytes (MCV)	91.2	FL	81,00 - 101,00		
Mean hemoglobin content in erythrocytes (MCH)	30.5	pg	27,00 - 34,00		
Mean corpuscular hemoglobin concentration (MCHC)	334	g/L	310,00 - 360,00		
Platelets (PLT)	435	10^9/L	150,00 - 300,00		
Anisocytosis (RDW-SD)	36	FL	34,00 - 46,00		
Anisocytosis (RDW-CV)	12.8	%	11,50 - 14,50		
Platelet width distribution (PDW)	12.2	FL	9,00 - 17,00		
Mean platelet volume (MPV)	10.2	FL	8,00 - 12,00		
Platelet large cell ratio (P-LCR)	30	%	13,00 - 43,00		
Thrombocrit	0.18	FL	0,1-3,5		
Neutrophils	3.5	10^9/L	1,88 - 6,34		
Lymphocytes	1.76	10^9/L	0,76 - 3,26		
Monocytes	0.65	10^9/L	0,12 - 0,97		
Eosinophils	0.24	10^9/L	0,02 - 0,44		
Basophils	0.01	10^9/L	0,00 - 0,09		
Neutrophils	53	%	47,00 - 72,00		
Lymphocytes	27	%	19,00 - 37,00		
Monocytes	9	%	3,00 - 11,00		
Eosinophils	2.4	%	0,50 - 5,00		
Basophils	0.1	%	0,00 - 1,00		

8. Hypoglycemia

	8. Hypogly		
	On attempt to Patient opens eyes, chest rises, respo		
	Patency of airways	The airway is visually patent*	
A	Saturation	95	
	When performing O2 insufflation	98	
	Respiratory rate	18	
D	Percussion of the lungs	Clear pulmonary sound on the left and right*	
B	Auscultation of the lungs	Vesicular breathing on both sides	
	Trachea	Trachea is in normal position*	
	Neck veins	Normal*	
		The pulse is symmetrical on both sides,	
	Pulse, heart rate	weakened, 110 beats/min	
	BP	135/80	
	Auscultation of the heart	Rapid	
С	ECG	Sinus tachycardia	
C	Capillary refill test	The spot disappears 2 seconds after pressing*	
	Laboratory tests	Not required	
	Skin	All the skin is damp, sticky, and trembling is felt*	
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved	
D	Muscle tonus	Muscle tonus normal*	
	Blood glucose	2.0 mmol/l	
		Diagnostics and treatment measures	
	Abdominal palpation	Abdomen within normal*	
	Femoral arteries	Rapid	
	Varicose veins	No varicose veins detected*	
E	Edema	No edema detected *	
	Back	No visible injuries, no bleeding detected*	
	Rectal examination	Not required*	

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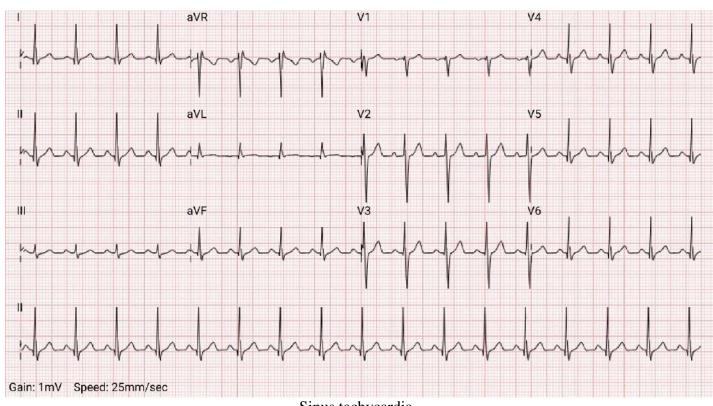


Diagnostics and treatment measures

If $\leq 3.3 \text{ mmol/L}$

If hypoglycemia is suspected in a person who has signs or symptoms of mild hypoglycemia, is conscious and able to swallow:

• Glucose or dextrose tablets (15-20 g)



Sinus tachycardia



9. Tension pneumothorax (obstructive shock)

When attempting to assess consciousness: Patient opens eyes, chest rises, responses to questions with moans				
	Patency of airways	The airway is visually patent*		
Α	Saturation	88		
· ·	When performing O2 insufflation	93		
	Respiratory rate	24		
D	Percussion of the lungs	Clear pulmonary sound on the left, tympanic resonance over the whole surface of the right lung*		
B	Auscultation of the lungs	Vesicular breathing on the left, not heard on the right		
	Trachea	Displaced leftward*		
	Neck veins	Swollen *		
		Diagnostics and treatment measures		
		The pulse is symmetrical on both		
	Pulse, heart rate	sides, weakened, 110 beats/min		
	BP	80/40		
	Auscultation of the heart	Pulse rapid, muffled heart tones		
С	ECG	Sinus tachycardia		
C	Capillary refill test	The spot disappears 4 seconds after pressing*		
	Laboratory tests	Not required		
	Skin	All the skin is cold, obvious cyanosis*		
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved		
ν	Muscle tonus	Muscle tonus normal*		
	Blood glucose	6,3 mmol/l		
	Abdominal palpation	Abdomen within normal*		
	Femoral arteries	Rapid, weak filling		
	Varicose veins	No varicose veins detected*		
E	Edema	No edema detected*		
	Back	No visible injuries, no bleeding detected*		
	Rectal examination	Not required*		
	Body temperature	36.0°		

*The text will be voiced by the member of Commission

With properly conducted therapeutic measures, the indicators are normalized

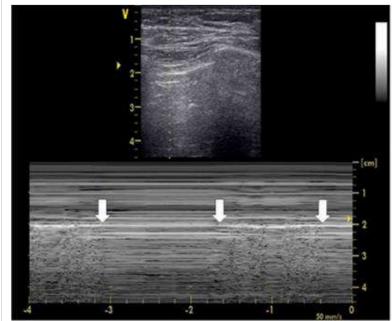


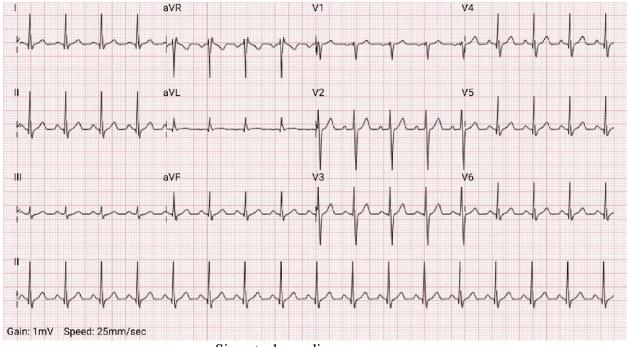
Diagnostics and treatment measures

Ultrasonography, X-ray

- Treat the skin of the chest in the area of the anterior chest wall with an antiseptic solution 0.05% aqueous solution of chlorhexidine bigluconate or 70% ethyl alcohol solution
- Infiltration anesthesia of the skin and subcutaneous tissues with lidocaine
- *Puncture* of the pleural cavity in the 2nd intercostal space along the midclavicular line on the upper edge of the underlying rib (cannula 14-16 g)







Sinus tachycardia

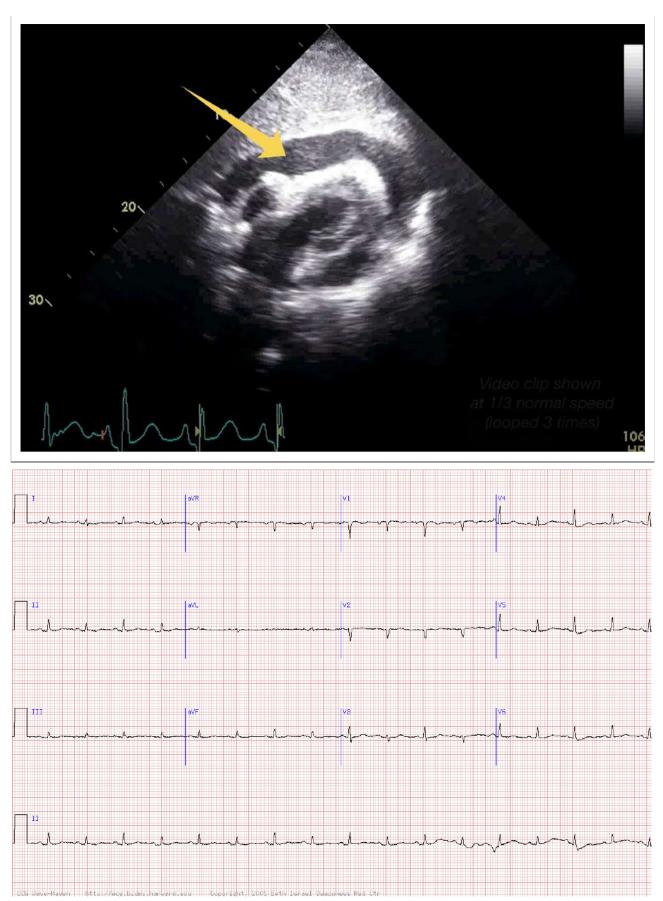
10. Cardiac tamponade	
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	10. Calulat tal	inponauc		
When attempting to assess consciousness: Patient opens eyes, chest rises, responses to questions with moans				
	Patency of airways	The airway is visually patent *		
Α	Saturation	91		
	When carrying out insufflation with <i>O</i> ₂	94		
	_			
	Respiratory rate	18		
р	Percussion of the lungs	Expanded boundaries of cardiac dullness*		
B	Auscultation of the lungs	Vesicular breathing on both sides		
	Trachea	Trachea is in normal position*		
	Neck veins	Swollen *		
	Pulse, heart rate	Pulse is the same on both sides, 110 beats/min, paradoxical pulse		
	BP	80/50		
	Auscultation of the heart	Rapid, muffled		
C	ECG	Signs of pericarditis, low voltage of QRS complex and electrical alternation		
	Capillary refill test	The spot disappears 4 seconds after pressing*		
	Laboratory investigations	Not required		
	Skin	All the skin is pale, cold, damp*		
Diagnostics and treatment measures				
D	Pupillary photoreflex	The pupils are reacting equally, light reflex preserved		
D	Muscle tonus	Muscle tonus normal*		
	Blood glucose	6,3 mmol/l		
		-		
	Abdominal palpation	Abdomen within normal*		
	Femoral arteries	Rapid		
	Varicose veins	No varicose veins detected*		
Ε	Edema	Relative swelling*		
	Back	No visible injuries, no bleeding detected*		
	Rectal examination	Not required*		
	Body temperature	36.6°		

*The text will be voiced by the member of Commission With properly conducted therapeutic measures, the indicators are normalized

Emergency medical care





Signs of pericarditis, low voltage of QRS complex and electrical alternation in II, V1, V3, V4 leads

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Diagnostics and treatment measures

Echo-CG

- Treat the skin of the chest in the area of the anterior chest wall with an antiseptic solution 0.05% aqueous solution of chlorhexidine bigluconate or 70% ethyl alcohol solution
- Give an elevated position to the head end of the couch (angle 30°)
- IV sedation
- morphine 0.1 mg/kg

or phentanyl 25-50 µg and midazolam 3-5 mg

• Infiltration anesthesia of the skin and subcutaneous tissues with lidocaine

Pericardiocentesis (Larrey method) is carried out with a 16G needle between the left costal arch (attachment of the cartilage of the VII rib to the sternum) and the base of the xiphoid appendix

13. Regulatory and methodological guidelines for the station passport

1. 2023 ESC Guidelines for the management of acute coronary syndromes: Developed by the task force on the management of acute coronary syndromes of the European Society of Cardiology (ESC)

https://academic.oup.com/eurheartj/advancearticle/doi/10.1093/eurheartj/ehad191/7243210?login=false

ACC/AHA Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction—Executive Summary

https://www.ahajournals.org/doi/full/10.1161/01.cir.0000134791.68010.fa

Kəskin koronar sindromun diaqnostika və müalicəsi üzrə klinik protokol <u>https://isim.az/upload/File/reports/54_KKS_W.pdf</u>

2. 2023 ESC Guidelines for the management of acute coronary syndromes: Developed by the task force on the management of acute coronary syndromes of the European Society of Cardiology (ESC)

https://academic.oup.com/eurheartj/advancearticle/doi/10.1093/eurheartj/ehad191/7243210?login=false

2014 AHA/ACC Guideline for the Management of Patients With Non–ST-Elevation Acute Coronary Syndromes: Executive Summary https://www.ahajournals.org/doi/10.1161/cir.000000000000133

Kəskin koronar sindromun diaqnostika və müalicəsi üzrə klinik protokol https://isim.az/upload/File/reports/54_KKS_W.pdf Emergency medical care



3. European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances <u>https://www.cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-2021-Ca.pdf</u>

Anafilaktik şok üzrə klinik protokol (2-ci nəşr, yenilənmiş) https://isim.az/upload/File/reports/anafilaktik2022.pdf

4. ACG Clinical Guideline: Upper Gastrointestinal and Ulcer Bleeding https://journals.lww.com/ajg/fulltext/2021/05000/acg_clinical_guideline_upper_gastrointestinal_and.14.aspx

Diagnosis and management of acute lower gastrointestinal bleeding: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

https://www.esge.com/diagnosis-and-management-of-acute-lower-gastrointestinal-bleedingesge-guideline/

5. European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances <u>https://www.cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-2021-Ca.pdf</u>

Bronxial astmanın diaqnostika və müalicəsi üzrə klinik protokol (2-ci nəşr, yenilənmiş) https://isim.az/upload/File/reports/astma2022.pdf

6. 2019 Guidelines on Acute Pulmonary Embolism (Diagnosis and Management of) ESC Clinical Practice Guidelines <u>https://academic.oup.com/eurheartj/article/41/4/543/5556136?login=false</u>

European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances <u>https://www.cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-2021-Ca.pdf</u>

7. Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association <u>https://www.ahajournals.org/doi/full/10.1161/STR.000000000000211?rfr_dat=cr_pub++0pu</u> <u>bmed&url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org</u>

İşemik insultun diaqnostika və müalicəsi üzrə klinik protokol https://isim.az/upload/File/reports/28_Isemik_Insult.pdf

8. European Resuscitation Council Guidelines 2021: First aid https://www.cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-2021-Fi.pdf

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Şəkərli diabet (tip 2) xəstəliyinin diaqnostika və müalicəsi üzrə klinik protokol <u>https://isim.az/upload/File/reports/shekerlidiabet2021.pdf</u>

9. European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances <u>https://www.cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-</u>2021-Ca.pdf

10. 2015 ESC Guidelines for the diagnosis and management of pericardial diseases: The Task Force for the Diagnosis and Management of Pericardial Diseases of the European Society of Cardiology (ESC)

Endorsed by: The European Association for Cardio-Thoracic Surgery (EACTS) <u>https://academic.oup.com/eurheartj/article/36/42/2921/2293375</u>

14. Criteria for the assessing the accredited person's actions

In the electronic checklist, the assessment of the correctness and sequence of actions performed by the accredited person is carried out by activating the buttons:

"Yes" - the action was performed;

"No" - the action was not performed

Each item is entered by a member of the ASC into the electronic checklist

*In case of incorrect or incomplete execution of an action by an accredited person, the result from the members of the ASC will not be announced.



15. Checklist

	Scenario 1 - 8				
№	Action of the accredited person	Evaluation Criteria			
1	Made sure there is no danger to himself/herself and the victim (looks around, safety gesture)	□ yes	🗆 no		
2	Assessed consciousness	□ yes	🗆 no		
3	Ensured the availability of the kit, and called assistant(s)	□ yes	no 🗆 no		
4	Put on gloves and asked an assistant to put on gloves	\Box yes	🗆 no		
5	A - Correctly assessed the airway patency	\Box yes	no 🗆 no		
	B - Correctly and fully assessed the activity of the respiratory system:	-1			
6	Pulse oximetry, provision of oxygen therapy	\Box yes	🗆 no		
7	Chest percussion	\Box yes	🗆 no		
8	Percussion of the lungs	□ yes	🗆 no		
9	Determination of respiration rate (RR)	□ yes	🗆 no		
10	Examination of the trachea and neck veins	\Box yes	🗆 no		
	C - Correctly and fully assessed the activity of the cardiovascular system:				
11	Assessment of pulse simultaneously on the carotid and radial artery	□ yes	🗆 no		
12	Measurement of arterial blood pressure (BP)	□ yes	🗆 no		
13	Auscultation of the heart	\Box yes	🗆 no		
14	Placement of electrodes, interpretation of ECG	□ yes	🗆 no		
15	Blood sampling, commenting on test results if necessary	□ yes	🗆 no		
16	Check of rash blanching at pressure symptom	□ yes	🗆 no		
17	Assessment of skin color	□ yes	🗆 no		
	D - Correctly and fully assessed the neurological status:				
18	Pupils' response	□ yes	🗆 no		
19	Assessment glucose levels in capillary blood	□ yes	🗆 no		
20	Assessment of muscle tonus	□ yes	🗆 no		
	<i>E</i> - Correctly and fully assessed the indicators of general condition:				
21	Abdominal palpation	□ yes	🗆 no		
22	Palpation of pulse in the femoral arteries on both sides	□ yes	🗆 no		
23	Examination of the back, rectal examination if necessary	□ yes	🗆 no		
24	Examination of the legs and popliteal areas for the presence of varicose veins	□ yes	🗆 no		
25	Palpation of the foot dorsum and the legs to determine the presence of edema	□ yes	🗆 no		
26	Measurement of the body temperature	□ yes	🗆 no		
27	If necessary, assigned additional examinations and correctly interpreted results	□ yes	🗆 no		
28	Correctly called EMS	□ yes	🗆 no		
29	Correctly arrived at diagnosis	□ yes	🗆 no		
	Assigned correct and full treatment				
30	Used only indicated medications	□ yes	🗆 no		
31	Where necessary, used additional medications	□ yes	🗆 no		
32	Used the optimal route of administration	□ yes	🗆 no		
33	Used correct dosage	□ yes	🗆 no		
34	Followed priorities of administration	□ yes	🗆 no		
35	Followed the sequence of ABCDE examination	□ yes	🗆 no		
36	Made an attempt of repeated ABCDE examination	□ yes	🗆 no		
37	Commented on his /her actions out loud	□ yes	🗆 no		



Scenario 9, 10

N⁰	•		Evaluation Criteria		
1	Made sure there is no danger to himself/herself and the victim (looks around, safety gesture)	□ yes	🗆 no		
2	Assessed consciousness	□ yes	🗆 no		
3	Ensured the availability of the kit, and called assistant(s)	□ yes	🗆 no		
4	Put on gloves and asked an assistant to put on gloves	□ yes	🗆 no		
5	A - Correctly assessed the airway patency	□ yes	🗆 no		
	B - Correctly and fully assessed the activity of the respiratory system				
6	Pulse oximetry, provision of oxygen therapy	□ yes	🗆 no		
7	Chest percussion	□ yes	🗆 no		
8	Percussion of the lungs	□ yes	🗆 no		
9	Determination of respiration rate (RR)	□ yes	🗆 no		
10	Examination of the trachea and neck veins	□ yes	🗆 no		
	<i>C</i> - Correctly and fully assessed the activity of the cardiovascular system:	1			
11	Assessment of pulse simultaneously on the carotid and radial artery	□ yes	🗆 no		
12	Measurement of arterial blood pressure (BP)	□ yes	🗆 no		
13	Auscultation of the heart	□ yes	🗆 no		
14	Placement of electrodes, interpretation of ECG	□ yes	🗆 no		
15	Blood sampling, commenting on test results if necessary	□ yes	🗆 no		
16	Check of rash blanching at pressure symptom	□ yes	🗆 no		
17	Assessment of skin color	□ yes	🗆 no		
	<i>D</i> - Correctly and fully assessed the neurological status:				
18	Pupils' response	□ yes	🗆 no		
19	Assessment glucose levels in capillary blood	□ yes	🗆 no		
20	Assessment of muscle tonus	□ yes	🗆 no		
	<i>E</i> - Correctly and fully assessed the indicators of general condition:	• • • • • • • • • • • • • • • • • • •			
21	Abdominal palpation	□ yes	🗆 no		
22	Palpation of pulse in the femoral arteries on both sides	□ yes	🗆 no		
23	Examination of the back, rectal examination if necessary	□ yes	🗆 no		
24	Examination of the legs and popliteal areas for the presence of varicose veins	□ yes	🗆 no		
25	Palpation of the foot dorsum and the legs to determine the presence of edema	□ yes	🗆 no		
26	Measurement of the body temperature	□ yes	🗆 no		
27	If necessary, assigned additional examinations and correctly interpreted results	□ yes	🗆 no		
28	Correctly called EMS	□ yes	🗆 no		
29	Correctly arrived at diagnosis	□ yes	🗆 no		
	Assigned correct and full treatment				
30	Conducted aseptic treatment of the intended puncture area	□ yes	🗆 no		
31	Anesthetized the intended puncture area	□ yes	🗆 no		
32	Correctly identified the location and performed the puncture	□ yes	🗆 no		
33	Did not use unscheduled medical preparations	□ yes	🗆 no		
34	Followed the sequence of ABCDE examination	□ yes	🗆 no		
35	Made an attempt of repeated ABCDE examination	□ yes	🗆 no		
36	Commented on his /her actions out loud	□ yes	🗆 no		