

## ALGORITHM FOR SCENARIO CARDIOGENIC PULMONARY EDEMA

### for 5th year students for the OSQE

1. Wear gloves before starting the assignment.
2. Call for help, report the probable diagnosis.
3. Verbalize the call of the EMS team to the patient.
4. Verbalize the delivery of 100% oxygen through the facial mask.
5. Assess the condition of:
  - a. consciousness - address the patient loudly, tap the patient on the chest.
  - b. breathing - perform a triple reception according to Safar: extension of the head, removal of the lower jaw, opening of the mouth. After that, bring your ear to the patient's open mouth and act according to the rule "hear, feel, see" - follow the movements of the chest wall, feel and hear breathing. Normally, a person breathes 2-4 times in <10 seconds.
  - c. circulation - palpate the pulse on the carotid artery, be sure to measure blood pressure.

**NB!!!** The patient's condition meets the conditions of the task, that is, the vital indicators of the simulator coincide with those indicated in the preamble.

6. Verbalize the patient's ECG data request.

**NB!!!** The ECG assessment should be verbalized loudly, for example, "Sister, take an ECG." In the absence of verbalization, the ECG will not be provided.

7. Give instructions for providing I / O access. To do this, say loudly "Nurse, install a peripheral venous catheter!".
8. Begin sublingual administration of glyceryl trinitrate at a dose of 0.4 mg every 3-5 minutes until the systolic pressure is above 100 mm Hg.

**NB!!!** Select a syringe/vial labeled "Glyceryl Trinitrate", verbalize the sublingual administration of the drug. The introduction must be verbalized with an indication of the route of administration and dose. No physical injection is performed!

9. Reassess the patient's condition (hemodynamics, consciousness, breathing).
10. Verbalize the monitoring of saturation, heart rate, heart rate, blood pressure and level of consciousness until the arrival of the ambulance team.

**Do not forget to** take the route sheet and personal items after completing the task.

## ALGORITHM FOR SCENARIO ANAPHYLAXIA

### for 5th year students for the OSQE

1. Wear gloves before starting the assignment.
2. Call for help, report the diagnosis and assign tasks.
3. Diminish all possible allergens!
4. Check condition of:
  - a. consciousness – speak loudly to the patient, palpably pat him on the shoulders.
  - b. breathing - perform a triple Safar maneur: extension of the neck, movement of the lower jaw, opening of the mouth. After that, bring the ear to the patient's mouth and act according to the algorithm "hear, see, feel" - watch the movements of the chest, feel and listen to the breath. Normally, in <10 seconds a person performs 2-4 respiratory movements .
  - c. circulation - perform pulse palpation of the carotid artery.

**NB !!!** The patient's condition coincides with the condition in the task list, i.e. HR and RR correspond to those in the task list.

5. Verbalize giving of oxygen through the face mask.
  6. Provide IV access. To do this, say during the exam: "Nurse, install a peripheral intravenous catheter for the patient!".
  7. Start the infusion of crystalloid solutions 20 ml / kg, verbalize lifting the patient's feet by 30 \* using a roller / pillow.
  8. Inject Adrenaline as an intramuscular injection of 0.3 mg 0.18% solution in the upper outer third of the thigh.
- NB !!!** Select a syringe / vial labeled "Adrenaline 0.18%" and demonstrate its introduction into the indicated area. The introduction must be verbalized with an indication of the route of administration, dose and frequency. Physical injection of the solution should not be performed !
9. Re-evaluate the patient's hemodynamics (pulse and blood pressure).
  10. Verbalize patient transfer to ICU for further treatment.

**Do not forget** to take the route sheet and personal items after completing the task.

### **ALGORITHM FOR SCENARIO ASYSTOLE/PEA for 6th year students for the OSQE**

1. Wear gloves before starting the assignment.
  2. Assess the risk and placement of the patient on a flat hard surface.
  3. Check condition of:
    - a. consciousness – speak loudly to the patient, palpably pat him on the shoulders.
    - b. breathing - perform a triple Safar maneur: extension of the neck, movement of the lower jaw, opening of the mouth. After that, bring the ear to the patient's mouth and act according to the algorithm “hear, see, feel” - watch the movements of the chest, feel and listen to the breath. Normally, in <10 seconds a person performs 2-4 respiratory movements .
    - c. circulation - perform pulse palpation of the carotid artery.
- NB !!!** The patient's condition coincides with the condition in the task list, i.e. HR and RR correspond to those in the task list.
4. **Call for help, report the diagnosis and assign tasks**
  5. Request a device for ECG evaluation ( preferably Autonomous External Defibrillator with the ability to assess the rhythm ).
  6. Along with calling for help , start CPR with chest compressions :
    - a. **2 fingers above the xiphoid process, place the base of the palm of the main hand , the fingers of which are parallel to the patient’s ribs and do not touching the chest ; the hand of the other hand is placed on top. The trunk is tilted forward so that your shoulders horizontal axis coincides with the axis of the sternum of the patient. Arms straight .**
    - b. **pressing on the chest are carried out with a frequency of 100-120 per minute, depth 5-6 cm; the ratio of compressions and breaths 30: 2.**
  7. Inhalations to the patient are performed using an AMBU bag or with the availability of personal protective equipment according to the “mouth-to-mouth ” method , while re-providing the airway with a triple Safar maneur . Duration of inhalation should not exceed 6-8 s., With watch for swelling of the chest.
  8. After 5-6 cycles of CPR or 2 min. Re-evaluate the patient's consciousness , respiration, and circulation . In the absence of vital indicators - continue with CPR.

9. **At 2 minutes, you must give the command to the nurse to inject Epinephrine intravenously in a dose of 1 mg every 3-5 minutes .**  
**NB !!!** Administration of an Epinephrine must be verbalized loudly, for example, "Nurse, administered intravenously 1 mg of Epinephrine!". In the absence of verbalization - not done .
10. Simultaneously with the continuation of the compression and after the introduction of adrenaline it is necessary to verbalize the need for rhythm assessment using an ECG.  
**NB !!!** Carrying out an assessment of an electrocardiogram is necessary to verbalize loudly, for example " Nurse, take an electrocardiogram!". In the absence of verbalization - an ECG will not be provided. **IMPORTANT:** For the ECG assessment is given no more than 10 seconds! If you are not sure about the diagnosis of ECG - continue the chest compressions.
11. After the signal “ One minute left ”:
  - a. continue CPR in the amount of 1 cycle;
  - b. assess the patient's vital functions ;
  - c. verbalize possible causes of cardiac arrest according to the “4H and 4T” rule .

**Do not forget to take the route sheet and personal items after completing the task.**

#### **ALGORITHM FOR SCENARIO VT/VF for 5th year students for the OSQE**

1. **Wear gloves before starting the assignment.**
2. **Assess the risk and placement of the patient on a flat hard surface.**
3. **Check condition of:**
  - a. consciousness – speak loudly to the patient, palpably pat him on the shoulders.
  - b. breathing - perform a triple Safar maneuver: extension of the neck, movement of the lower jaw, opening of the mouth. After that, bring the ear to the patient's mouth and act according to the algorithm “hear, see, feel” - watch the movements of the chest, feel and listen to the breath. Normally, in <10 seconds a person performs 2-4 respiratory movements .
  - c. circulation - perform pulse palpation of the carotid artery.
- NB !!!** The patient's condition coincides with the condition in the task list, i.e. HR and RR correspond to those in the task list.
4. **Call for help, report the diagnosis and assign tasks**
5. Request a device for ECG evaluation ( preferably Autonomous External Defibrillator with the ability to assess the rhythm ).
6. Along with calling for help , start CPR with chest compressions :
  - a. **2 fingers above the xiphoid process, place the base of the palm of the main hand , the fingers of which are parallel to the patient’s ribs and do not touching the chest ; the hand of the other hand is placed on top. The trunk is tilted forward so that your shoulders horizontal axis coincides with the axis of the sternum of the patient. Arms straight .**
  - b. **pressing on the chest are carried out with a frequency of 100-120 per minute, depth 5-6 cm; the ratio of compressions and breaths 30: 2.**
7. Inhalations to the patient are performed using an AMBU bag or with the availability of personal protective equipment according to the “mouth-to-mouth ” method , while re-providing the airway with a triple Safar maneuver . Duration of inhalation should not exceed 6-8 s., With watch for swelling of the chest.
8. After 5-6 cycles of CPR or 2 min. Re-evaluate the patient's consciousness , respiration, and circulation . In the absence of vital indicators - continue with CPR.
9. **At 2 minutes, you must give the command to the nurse to inject Epinephrine intravenously in a dose of 1 mg every 3-5 minutes .**  
**NB !!!** Administration of an Epinephrine must be verbalized loudly, for example, "Nurse, administered intravenously 1 mg of Epinephrine!". In the absence of verbalization - not done .
10. Simultaneously with the continuation of the compression and after the introduction of adrenaline it is necessary to verbalize the need for rhythm assessment using an ECG.

**NB !!!** Carrying out an assessment of an electrocardiogram is necessary to verbalize loudly, for example "Nurse, take an electrocardiogram!". In the absence of verbalization - an ECG will not be provided.

**IMPORTANT:** For the ECG assessment is given no more than 10 seconds! If you are not sure about the diagnosis of ECG - continue the chest compressions.

11. In the diagnosis of VF / FT without a pulse :
  - a. verbalize performance defibrillation ("Away from the patient! Attention, charge!"), the first charge of two phase defibrillator - 200 J, single phase - 360 J. All further charges - 360 J.
  - b. Amiodarone 300 mg IV after the third ineffective charge and 150 mg after the fifth ineffective charge.
12. After the signal " One minute left " :
  - a. continue CPR in the amount of 1 cycle;
  - b. reassess the patient's vital functions ;
  - c. verbalize possible causes of cardiac arrest according to the "4H and 4T" rule .

**Do not forget to** take the route sheet and personal items after completing the task.