


ОҢТҮСТІК ҚАЗАҚСТАН <b>MEDISINA</b> <b>AKADEMIASY</b> «Оңтүстік Қазақстан медицина академиясы» АҚ	 <b>SKMA</b> -1979-	SOUTH KAZAKHSTAN <b>MEDICAL</b> <b>ACADEMY</b> АО «Южно-Казахстанская медицинская академия»
Department of Emergency Medicine and Nursing		044-57/19 ( )
Methodological recommendation for teachers on teaching clinical skills at the practical skills Center		P 1 of 8


## Methodological recommendation for teachers on teaching clinical skills at the practical skills Center

(using the execution algorithm)

**Specialty:** 6B10101 «General medicine»  
**Discipline:** «Emergency medical care 1, 2»  
**Course:** 5  
**Department:** «Emergency medical care and nursing»  
**Compiled by:** Auyezkhankyzy D.





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Department of Emergency Medicine and Nursing		044-57/19 ( )
Methodological recommendation for teachers on teaching clinical skills at the practical skills Center		P 3 of 8

**1. Name of the current skill:** Algorithm of tracheal intubation.

**2. Learning objectives:** To learn how to assess the terminal condition of patients, to get acquainted with the causes and manifestations of comatose states, to learn how to effectively ensure the patency of the respiratory tract and artificial lung ventilation.

**3. Time for briefing and working with mannequins:** 7 min.

**4. Time to acquire skills:** 30 min.

**5. Required theoretical knowledge of the skill:**

**Basic knowledge:**

- basic terminal states;
- methods of diagnosis of terminal conditions;
- basic clinical skills;
- the main medicines used in terminal conditions.

**By topic of the lesson:**

- sequence of emergency medical care measures in terminal conditions;
- technique of performing the triple Safar method;
- ensuring the patency of the respiratory tract and the safety of the patient during the entire time of the skill;
- the technique of suction of mucus from the respiratory tract;
- technique of tracheal intubation;
- the technique of ventilating with a respirator and assessment of the adequacy of ventilation;
- evaluation of the effectiveness of tracheal intubation;
- errors during tracheal intubation.

**6. Simulator, simulator, dummy, list of models:** simulator for tracheal intubation, laryngoscope with replaceable blades, intubation tubes.

**7. List of medical instruments and equipment:** masks, sterile gloves, sterile bandages, ambu bag, syringe, patch.

**8. The execution of skill:**

№	Step-by-step actions	Execution		
		Yes	Yes	Yes
1	Prepare the necessary tools: a laryngoscope with a straight (Miller blade) or curved (MAS blade) blade, a set of endotracheal tubes, sterile gloves, a phonendoscope, syringes, oxygen, drugs necessary for proper intubation: sedatives, muscle relaxants, Ambu bag, as well as auxiliary tools such as aspirators.			
2	Lay the patient on their back. Place a roller or other material under the head, neck, and shoulders, flexing the neck and raising the head until the external auditory canal lies in the same horizontal plane as the jugular cavity. Then tilt your head so that your face is aligned on a parallel horizontal plane; this second plane will be higher than the first.			
3	Establishment of intravenous access.			
4	Provide mechanical ventilation or preoxygenate the patient			

	with 100% oxygen. (The amount of oxygen inhaled through a mask with a non-reversing valve is sufficient for a spontaneously breathing patient.			
5	Perform rapid sequential induction and intubation (i.e., using intubation drugs). If necessary, clear the oropharynx of obstructive secretions, vomit, or foreign objects.			
6	Continued 3 to 5 minutes prior to intubation for spontaneously breathing patients, use an oxygen mask with 100% inhaled oxygen (FiO2) Patients who are not spontaneously breathing should be given about 8 breaths with maximum oxygen concentration when using the Ambu Bag.			
7	Insert Blade laryngoscope into the patient's mouth following the curve of the tongue Once the tip of the laryngoscope blade is behind the patient's tongue so that the opening of the glottis is in the middle of the upper half of the blade.			
8	Looking back at the patient, insert the endotracheal tube into the mouth on the right side and pass it behind tongue. At this point, we direct the tip of the tube through the vocal cords. Due to the rigidity of the stylet, this maneuver may require an assistant to pull the stylet up 1–2 cm while the tube continues to advance gently. Then advance the tube an additional 3–4 cm.			
9	Inflate the cuff with a sterile air syringe and remove the stylet completely. Ventilate the patient (8-10 breaths/minute, each breath is about 6-8 ml/kg or 500 ml and lasts about 1 second).			
10	Check with a tonometer that the tube is correctly positioned in the airways. Make sure the condition is stabilized through the indicators on the monitor			

### 9. Tasks:

- Assessment of the patient's condition.
- Conducting tracheal intubation and ensuring adequate ventilation.

### 10. The materials for the lesson:


#### Test questions:

1. The complication of orotracheal intubation does not include:


- A. nosebleed
- B. laryngospasm
- C. bronchospasm
- D. aspiration
- E. damage to the vocal cords

2. Orotracheal intubation at the prehospital stage is contraindicated in

- A. preserved consciousness
- B. cardiogenic shock

ОҢТҮСТІК ҚАЗАҚСТАН <b>MEDISINA</b> <b>AKADEMIASY</b> «Оңтүстік Қазақстан медицина академиясы» АҚ	 SOUTH KAZAKHSTAN <b>MEDICAL</b> <b>ACADEMY</b> АО «Южно-Казахстанская медицинская академия»
Department of Emergency Medicine and Nursing Methodological recommendation for teachers on teaching clinical skills at the practical skills Center	044-57/19 ( ) P 5 of 8

- C. jaw fracture
- D. difficulty breathing of a stridorous nature
- E. liquorrhea
3. During orotracheal intubation, the distal end of the intubation tube inserted into the trachea of an adult male to a depth of 28 cm is most likely to be located
- A. in the oropharynx
- B. in the middle third of the trachea
- C. on the bifurcation of the trachea
- D. in the right main bronchus
- E. in the left main bronchus
4. Tracheal intubation at the prehospital stage is indicated
- A. only when breathing stops
- B. always at a breathing rate of less than 4 per minute
- C. always with shortness of breath more than 30 breaths per minute at normal body temperature
- D. always with shortness of breath more than 40 breaths per minute
- E. always in a comatose state
5. Tracheal intubation at the prehospital stage is always indicated for
- A. hypoglycemic coma
- B. cardiogenic shock
- C. poisoning with sleeping pills accompanied by coma
- D. damage to the cervical spine
- E. stressed valve pneumothorax
6. The reason for difficult intubation of patients with Down's disease is:
- A. inability to open the oral cavity
- B. displacement of the larynx forward and upward with deformation of the cartilaginous skeleton
- C. ankylosing of the atlanto-occipital articulation (inability to straighten the head)
- D. a sharp increase in the upper incisors, making it difficult to examine the glottis and intubation tube
- E. large tongue
7. In patient A.54 years old, after intubation of the trachea, the doctor found the absence of a chest excursion, the results of capnography FETCO<sub>2</sub> ↓28mm.Hg, cyanosis of the lips and nail beds. During auscultation of the lungs – silent respiratory noises on both sides, swelling of the epigastric region. The cause of this condition is:
- A. intubation of the esophagus
- B. hypoventilation
- C. intubation of the right main bronchus
- D. perforation of the trachea
- E. intubation of the left main bronchus
8. A 20-year-old patient with an injury to the anterior surface of the neck was taken to the emergency department. Slowed down. Cyanotic. Pronounced signs of blood loss. Tracheal defect in the wound. Incorrect choice of tactics:
- A. intubation of the trachea through a tracheal defect
- B. intubation of the trachea by the orotracheal route
- C. intubate the patient in the presence of a surgeon (increased bleeding is possible)
- D. carry out anti-shock measures
- E. sanitize the trachea and bronchial tree
9. Necessary conditions for intubation:

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Department of Emergency Medicine and Nursing	044-57/19 ( )
Methodological recommendation for teachers on teaching clinical skills at the practical skills Center	P 6 of 8

- A. presence of a gastric tube
  - B. hyperventilation
  - C. lack of consciousness
  - D. complete muscle relaxation
  - E. exclusion of aspiration of gastric contents
10. Complications of oro- and nasotracheal intubation do not include:
- A. dental damage
  - B. muscle twitching
  - C. nasal passage injuries
  - D. soft tissue injuries of the oral cavity
  - E. laryngospasm, bronchospasm

### 11. Criteria for the evaluation of the implementation of:

**Completed:** according to clinical skills, the student completed 10 step-by-step actions. Correctly assessed the patient's condition and performed tracheal intubation completely correctly. Correctly assessed the effectiveness of the activities carried out.

**Partially completed:** according to clinical skills, the student completed 5-6 steps of 10 step-by-step actions. I did not fully assess the patient's condition and performed tracheal intubation. I did not correctly determine the effectiveness of the activities carried out.

**Not completed:** according to clinical skills, the student did not complete 10 step-by-step actions. They could not correctly assess the patient's condition and perform tracheal intubation. The effectiveness of the activities carried out was not evaluated.


### 12. References:

#### Basic literature:

1. The state program of healthcare development of the Republic of Kazakhstan "Health" on 2021-2024 years
2. Order of the Ministry of health of the Republic of Kazakhstan dated July 3, 2017 No. 450 "on approval Of the rules for emergency medical care in the Republic of Kazakhstan".
3. Vertkin A., Sveshnikov K. Guidelines for emergency medical care. Moscow. – E. publishing house – 2017. - 560 p.
4. Emergency care in a therapeutic clinic. Under the editorship of A. V. Gordienko. - Speclit. - 2017. - 229 p.
5. Urgent outpatient and polyclinic cardiology: a brief guide / V. V. Ruksin. - 2nd ed. - Moscow: GEOTAR-Media, 2016. - 255 p
6. Emergency medical care. Clinical recommendations. Under the editorship of S. F. Bagnenko. - GEOTAR-Media. - 2018. - 896 p.

#### Additional literature:

1. Acute cardiac care. Edited By p. p. Ogurtsov, V. E. Dvornikov. - GEOTAR-Media. - 2016. - 272 p.
2. Clinical Protocol of diagnosis and treatment "Sudden death". Approved by the joint Commission on the quality of medical services of the Ministry of Health of the Republic of Kazakhstan dated June 23, 2016. Protocol No. 5.


ОҢТҮСТІК ҚАЗАҚСТАН <b>MEDISINA</b> <b>AKADEMIASY</b> «Оңтүстік Қазақстан медицина академиясы» АҚ	 SOUTH KAZAKHSTAN <b>MEDICAL</b> <b>ACADEMY</b> АО «Южно-Казахстанская медицинская академия»
Department of Emergency Medicine and Nursing Methodological recommendation for teachers on teaching clinical skills at the practical skills Center	044-57/19 ( ) P 7 of 8

3. Emergency medical care. Clinical recommendations / ed. by S. F. Bagnenko, Moscow: [B. I.], 2015. -871 p.

4. Emergency care for children: Handbook: translated from German. / - M. : Medpress-inform, 2014.

**13. Standard of correct answers based on evaluation materials:**

<b>1</b>	<b>A</b>
<b>2</b>	<b>C</b>
<b>3</b>	<b>Д</b>
<b>4</b>	<b>B</b>
<b>5</b>	<b>C</b>
<b>6</b>	<b>E</b>
<b>7</b>	<b>A</b>
<b>8</b>	<b>B</b>
<b>9</b>	<b>Д</b>
<b>10</b>	<b>B</b>

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<p>Methodological recommendation for teachers on teaching clinical skills at the practical skills Center</p>		<p>P 8 of 8</p>