

Ministry of Health of Ukraine
Ukrainian Medical Stomatological Academy

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Head of Department



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**Methodical instructions
for independent work of students
during preparation for a practical (seminar) lesson
and in class**

Academic discipline	Training of reserve officers
Module № 1	Pre medical care in extreme situations
Topic of the lesson	Medical sorting in case of mass sanitary losses.
Course	2
Faculty	foreign students training specialty "Medicine", "Stomatology"

Actuality of theme:

An important component of successfully solving the problems of medical care for the elimination of the consequences of emergencies is the medical sorting of victims in emergencies. Medical sorting is especially important in dealing with the consequences of emergencies associated with the appearance in a short period of time of a large number of victims, most of whom require urgent medical care and evacuation from the emergency zone.

Specific goals:

- be able to assess the situation, the tactical situation
- be able to secure a dangerous place
- be able to communicate with the victim, the wounded
- be able to move the victim wounded
- be able to use the means of moving the victim, the wounded
- be able to find a dangerous place when changing the tactical situation
- be able to provide primary care to the victim, the wounded.
- know the place of departure when the tactical situation changes

Competences and learning outcomes, the formation of which is facilitated by the discipline (the relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the Standard).

According to the requirements of the standard, the discipline provides students with the acquisition of competencies:

-integral: The ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements. The ability of the individual to organize an integrated humanitarian educational space, the formation of a single image of culture or a holistic picture of the world.

-general: The ability to apply knowledge in practical situations. Ability to exercise self-regulation, lead a healthy lifestyle, ability to adapt and act in a new situation. Ability to choose a communication strategy; ability to work in a team; interpersonal skills. Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained. Definiteness and perseverance in terms of tasks and responsibilities.

-special (professional, subject): Ability to carry out medical and evacuation measures. Ability to determine the tactics of emergency medical care. Emergency care skills. Skills to perform medical manipulations.

Basic knowledge, skills, abilities necessary for studying the topic (interdisciplinary integration):

Names of previous disciplines	Acquired skills
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1. Human anatomy	Analyze information about the topographic and anatomical relationships of human organs and systems.
2. Normal physiology	Analyze human health under different conditions.
3. Medical and biological physics	Have knowledge of the physical basis and biophysical mechanisms of action of external factors on the systems of the human body.

Basic knowledge, skills, abilities necessary for studying the topic (interdisciplinary integration): Базові знання, вміння, навички, необхідні для вивчення теми (міждисциплінарна інтеграція):

Names of previous disciplines	Acquired skills
Human anatomy	Analyze information about the topographic and anatomical relationships of human organs and systems.
Medical and biological physics	Have knowledge of the physical basis and biophysical mechanisms of action of external factors on the systems of the human body. Explain the physical basis of diagnostic and physiotherapeutic (therapeutic) methods used in medical equipment. Interpret the general physical and biophysical laws that underlie human life.
Medical chemistry	Identify the types of chemical equilibrium for the formation of a holistic physico-chemical approach to the study of vital processes of the organism. Apply chemical methods of quantitative and qualitative analysis. Classify the chemical properties and transformation of bioinorganic substances in the life of the organism.
Analyze human health under different conditions.	Analyze human health under different conditions.

Tasks for independent work in preparation for class and in class.

The list of the basic terms, parameters, characteristics which the student should master at preparation for employment:

Term	Definition
1. Medical sorting	this is the distribution of victims into groups on the basis of the need for uniform treatment and prevention and evacuation measures in accordance with medical indications, the amount of medical care provided at this stage of medical evacuation and the adopted evacuation procedure.
2. Sorting categories	distribution of victims by health status and the need for uniform treatment and evacuation measures in accordance with medical indications.
3. Medical sorting card	medical registration form № 109-2 / o is a medical registration document designed to collect information about victims of emergencies during medical sorting.
4. Tasks of medical sorting	-determine the presence of vital signs of the victim and the nature of the injury; - to establish (by sorting groups) the necessity, priority and place of providing pre-hospital and hospital medical care to the victims; -determine the order of further evacuation of victims (place, priority, type of transport, position during transportation).

Theoretical questions for the lesson:

1. The concept of "medical sorting".
2. The purpose of medical sorting.
3. Tasks of medical sorting.
4. Services involved in emergency response.
5. Criteria for introductory sorting.
6. Stages of medical sorting.

7. Sorting categories of medical sorting.

Practical work (tasks) performed in class:

1. Classify the victims by sorting categories and color designations (examples are given by the teacher).
2. Fill in the medical sorting card.

Topic content:

Medical sorting is the division of victims into groups according to the need for uniform treatment and evacuation and preventive measures in accordance with medical indications, the amount of medical care provided and the accepted evacuation procedure.

Sorting of victims is carried out at each medical evacuation (ME) and is carried out in all its functional units. The content of sorting depends on the tasks assigned to certain functional units and IU in general, as well as on the conditions of combat and medical conditions.

The purpose of medical sorting is to provide victims with timely treatment and prevention measures and their further evacuation.

The task of medical sorting is to determine the nature of the lesion, to establish the order, place (functional unit) of providing medical care (treatment) to victims, to determine the procedure for evacuation of victims: where to evacuate, in what turn, on what transport, in what position.

As a result of medical sorting on NO, the following main groups of victims are identified:

- those that pose a danger to others (infectious patients affected by toxic substances, bacterial agents, those with skin contamination and uniforms of radioactive substances above the permissible norms, who are in a state of sharp psychomotor arousal, etc.), and therefore subject to special treatment or insulation;
 - those in need of medical care at this stage of medical evacuation;
 - those who are subject to further evacuation without medical assistance;
 - those who are affected, incompatible with life (agonists) and need only symptomatic treatment and care
- those who must be returned to their units after receiving medical care and rest.

Depending on the tasks to be solved in the process of medical sorting of victims, there are two types: intra-point and evacuation-transport.

Intra-point sorting aims to divide the victims into groups to send them to the appropriate functional units of this stage of medical evacuation and to establish the order of their referral to these units.

Evacuation and transport sorting is carried out in order to divide the victims into groups in accordance with the evacuation purpose, sequence, methods and means of their further evacuation, as well as the need for medical support.

Intra-point and evacuation-transport sorting, as a rule, is carried out simultaneously, ie along with the allocation of the flow of victims who need appropriate medical care at this stage - determine the evacuation purpose, priority, method and means of evacuation of victims who do not need medical care at this stage.

Medical sorting, as a rule, is conducted on the basis of clarification of the diagnosis of the victim, his prognosis and therefore always has diagnostic and prognostic character. The results of medical sorting are marked with sorting marks, as well as registered in the primary medical card, medical history.

It is expedient to carry out medical sorting by sorting crews consisting of: a doctor, two nurses, two registrars and 1-2 units of nurses-carriers.

It is impossible to do without medical sorting in all cases when there is a need to provide medical care to several, and even more large number of victims.

Properly organized medical sorting contributes not only to the successful implementation of medical and evacuation support, but also the most rational use of forces and means of medical service.

MEDICAL SORTING GROUPS

Priority Group I or "Red Group" - victims in critical condition, with severe injuries that require immediate medical attention within minutes (60 minutes - "golden time" to deliver such victims to the nearest medical facility). This group most often includes victims with acute or impaired airway patency, severe pneumothorax, unstoppable bleeding, torso, neck or pelvic injuries with the development or risk of shock, amputation or risk of limb loss, eye injuries. Representatives of this group are evacuated to a medical facility in the first place.

Priority Group II or "Yellow Group" - victims with serious injuries that do not endanger life, limbs or eyesight and whose condition will not deteriorate within a few hours. This group most often includes victims with penetrating and blunt injuries without the development of shock, fractures, uncritical bleeding, facial injuries without airway obstruction, minor burns. Transportation of such victims to a medical facility may be postponed.

Priority Group III or "Green Group" - victims with minor injuries and violations, the deterioration of which is unlikely within a few days. This group most often includes victims with fractures of small bones, blows, dislocations, abrasions and scratches, minimal burns. Victims in this group may well resort to self- and mutual assistance, which does not require medical training.

Priority Group IV or "Black Group" - the dead or dying who received non-life-threatening injuries. Assistance to such victims is not detected at all or has an analgesic and emollient nature and is manifested last.

The concept of medical sorting: introductory, primary, secondary and evacuation.

1) Introductory sorting - performed by employees of the Ministry of Emergencies and the Ministry of Internal Affairs, giving priority to the removal (removal) of the wounded from the affected area;

2) Primary medical sorting - the division of victims into groups depending on the severity of the condition and mark them with individual colors;

3) Secondary medical sorting - determining the priority in providing medical care to victims of the red group.

4) Evacuation sorting - determining the order of evacuation, the position of the body in space, escort, mode of transport and place of hospitalization.

A mass case is a situation in which two or more people are injured as a result of an illness or the action of a damaging factor.

When sorting a special approach requires the wounded:

- which have unexploded ordnance left. Such patients should be separated and treated immediately, using special treatment procedures for such wounded;

- Wounded with an infection received in a pain field using nuclear and / or biological and / or chemical weapons. Such victims must be decontaminated before admission to a medical facility. Pre-hospital care can be provided on the street near the medical facility with the help of properly protected staff;

- Wounded prisoners of war or detainees - it is important to identify suicide bombers and "human mines-surprises" in time by carefully inspecting, disarming and weeding out all victims before they are admitted to medical care areas, including the sorting area;

Topic content:

The development of a rescue plan for the victim in the area of fire must always be in the first place, even when assistance to the victim is essential. After obtaining permission from the commander to move the wounded from the firing zone to the shelter area, it is necessary to plan the number of rescuers and the number of fighters from the fire cover team. Plan in advance the ways of approach and departure, determine the most dangerous directions. Plan and distribute among the evacuation team places in the firing zone that can be used as temporary protection in the event of a change in combat situation. Check all personal weapons, personal protective equipment and necessary medical equipment of all members of the evacuation team. Remind all evacuation team members to communicate and how to work in the affected area. Next, try to establish voice contact with the victims. When establishing voice contact with the wounded, demand from the wounded actions to get out of the firing zone on their own, and if necessary - to apply a tourniquet. In 3 cases when the injured person cannot help himself, voice communication with him is maintained constantly until the moment of contact. Such actions are aimed at reducing the risk of combat injury to all soldiers during the evacuation of the wounded.

The following principles must be followed when assisting victims in tactical situations:

1. wait for the completion of the combat mission and obtain permission from the commander for evacuation;

2. take all measures for personal safety and reduce the risk of inappropriate injuries among personnel;

3. provide assistance to the victim only in accordance with their professional training and to the extent determined by the tactical zone.

Evacuation of the wounded from enemy fire during the execution of tasks requires rapid, clear and coordinated action of the entire reconnaissance group. When evacuating the wounded should act very quickly, not giving the enemy time

to assess the situation and take measures to block and destroy the rescue team. Good medicine can be a bad tactic. The health instructor needs to know what he is doing and when he needs to do it. A medically correct intervention performed at the wrong time can lead to additional unjustified injuries. In the city, the wounded must be moved to the best tactical conditions as soon as possible before they can be assisted. Snipers are especially dangerous in urban areas due to the large number of places for firing points. Open areas are often under enemy surveillance. It is necessary to use various means to rescue the victims and methods that prevent the active actions of the enemy (firepower, sabotage, smoke, specially designed or improvised devices for moving the wounded, evacuation slings with carbines, etc.). The rescuer and the wounded must be out of range of the enemy to provide comprehensive assistance. If you are under fire and the tactical situation allows, use a tourniquet to stop the bleeding, which is life-threatening. Then move quickly with the victim to a safe place where you can give him extra help. Such a place can be under cover, inside a building or anywhere where there is no shelling. 4 5. On the shoulders. With a rope and a raincoat-tent. Dragging the handle on the unloading vest. On the side of the knee. Crawling on the back 1. Moving technique In modern conditions, the individual equipment of each serviceman (body armor, helmet, small arms, etc.) increases his average weight by 23-32 kg. As a result, moving the victim may be problematic.

Methods that can be used when moving the wounded:

1. individual movement;
2. extraction;
3. removal;
4. drawing;
5. use of improvised and regular means of removal.

Previously, the technique of initial relocation of victims was based on the use of only one rescuer, rarely two. Due to the increase in the weight of the combat equipment of the fighter, this method was considered difficult and inexpedient to perform. Therefore, there was a need for new approaches to moving the victim on the battlefield.

Ways to evacuate the wounded from the shelling sector

1. Crawling like a platoon
2. Crawling on his knees
3. Overflow
4. Walking / running

As soon as the wounded person is evacuated to the nearest place safe from enemy fire, he should be given first aid immediately (first of all, stop the bleeding, enter the painkiller). If the combat situation allows, the wounded are given first aid in full. In difficult combat situations, the wounded are transported to the collection point, and the support subgroup distracts the enemy, not giving him the opportunity to pursue the rescue team. First aid in full, in this situation, is provided as soon as possible (the group will break away from the pursuit of the enemy).

Individual movement technique is a specific technique for self-movement in the shelter. Tactical training scenarios make it possible to practice such types of

movement in conditions as close as possible to combat. Under favorable tactical and medical conditions, a wounded soldier must move to a safe place on his own.

Procrastination is a technique designed to move the victim over short distances. During the distraction, the victim remains inconspicuous. This technique is easier to perform than trying to lift a severely injured person, and allows the rescuer to use a set of weapons. Procrastination by one person. This technique allows the rescuer and the victim to be less visible. However, it is very difficult to move a heavy victim in a bent (lying) position. Each movement is carried out at very limited distances and requires considerable physical effort from the rescuer.

Manipulation № 1 Pulling in the supine position

Step 1. Bring the wounded man's hand behind his head and grab him by the opposite shoulder. In a state of coma or clinical death, no signs of damage to the cervical spine. Therefore, turning on the abdomen should be performed with mandatory insurance of the cervical spine. The hand wrapped behind the head protects the neck and plays the role of an axis, which significantly accelerates and facilitates the rotation of the wounded on the abdomen.

Step 2. Grasp with your hand the shoulder of the wounded, which is farther from you, and your foot - his shin. At the same time lean close to the wounded. Capture of the opposite shoulder and capture of a shin with the leg will allow to roll the wounded on itself as quickly as possible and with the minimum efforts.

Step 3. With a sharp motion, turn over with the wounded man on his back. The time of turning the wounded man on his stomach in a supine position for further transportation to the shelter should not exceed 5 seconds.

Step 4. Take your weapon by the strap in your left hand. Grasp the belt of the wounded man's weapon and the strap of his bulletproof vest with his right hand, and then move to the shelter, pushing off the ground with his right foot and left hand, or vice versa. Holding the belt of the weapon and the strap of the bulletproof vest in one hand allows you to rigidly fix the wounded when moving, and if necessary, quickly use his weapon. The wounded person should be transported in the "lying on his stomach" position, using his left leg and right arm to move. During transportation, you should be ready at any moment to open a barrage of fire from a machine gun located behind the wounded fighter, who took the wounded to the shelter, grabs the straps of the bulletproof vest and abruptly pulled into the shelter with the wounded. The fighter who took the wounded to the shelter straightens his legs and stops any attempts to move in a "lying on his back" position. It is easier and faster to pull out two fighters in the form of a passive load - at the moment of capture of straps of an unloading vest. The fighter who delivered the wounded must straighten his legs and not interfere with the actions of the assistant.

Advantages: This technique allows the rescuer and the victim to be less visible. During transportation, the sanitary instructor is maximally protected.

Disadvantages: the equipment is difficult to perform and requires a lot of energy from the rescuer; slow movement of the wounded compared to other methods.

Manipulation № 2 Stretching in a standing position.

Option № 1 Grasp the strap of the wounded vest with one hand and lift the upper part of his body, with the other hand hold your weapon, bend your legs at the knees and move the wounded.

Advantages: relatively fast method of moving the wounded.

Disadvantages: risk of injury.

Option № 2 If other fighters can cover the health instructor with fire, the wounded person should be taken by both straps of the bulletproof vest and pulled in a half-bent position.

Advantages: relatively fast method of moving the wounded.

Disadvantages: it is not possible to use the weapon during the pull; threat of injury.

Option № 3 "Give your watch" or "Rescue grip" Run your left hand under the left armpit of the wounded. Grasp the left forearm of the wounded in the upper third (near the elbow joint) with your left hand. Run your right hand under the right armpit of the wounded. Grasp with the right hand the upper left forearm of the wounded in the lower third (the area of the wrist joint, or the place where the watch is worn). Climb with the wounded on half-bent legs. The wounded man's feet only touch the ground with their heels. Carry out evacuation of the wounded moving a back forward. At injury of the left hand capture is carried out for the right hand in mirror reflection.

Advantages: fast method of transportation of the wounded (small area of friction); the rescuer is maximally protected.

Disadvantages: backward movement; it is not possible to use the weapon during the pull.

Manipulation № 3 Procrastination by two people. This technique is easier for rescuers and allows you to move much faster. It requires much less effort, but rescuers are in a higher position than when using semi-sitting equipment. Rescuers have more opportunities to use weapons. The wounded man is transported by two fighters, pulling the straps of the bulletproof vest, and it is necessary, if possible, to cover them with fire.

Advantages: fast method of transporting the wounded.

Disadvantages: the risk of injury to fighters moving. Transfer by two persons. One fighter, coming from behind, takes the wounded man's bulletproof vest by the straps or "rescue grip", the other - by the legs or by crossing his legs at the bottom of his pants. Evacuation of the wounded - feet forward.

Advantages: fast method of transportation of the wounded; speed of transportation. Common disadvantages of distraction methods:

1. These methods are only suitable for short distances. Carrying on the shoulders.

2. They require a significant concentration of forces to distract a heavy, fully equipped fighter. The health instructor must take into account the principles of physics (friction, inertia, mass) when moving.

3. Depending on the method of distraction used by the rescuer, it may be more or less visible to the enemy.

4. There is no optimal place to capture the victim in order to move him.

Disadvantages: Most types of removal are not easy to perform due to the increased weight of a soldier in full gear. However, below are some ways to quickly take the victim to a shelter. They should be performed carefully, as the rescuer and the victim are in a high position.

Carrying on the shoulder is a technique of moving the victim by one person. This method can be used when evacuating the wounded from the cab or cabin of the car. However, in practice, it is almost impossible to put the victim in full gear on his shoulder and transfer him to a shelter. Note that the victim, shown in the picture, is light (without a bulletproof vest and weapon), and the rescuer is bigger than him. Therefore, the use of shoulder transfer in practice is not recommended.

It is much easier to carry the victim on his back to the shelter. Grasp the wrist and forearm of the wounded soldier over one shoulder and lean forward, pulling him off the ground. Carrying by two people: Two rescuers grab the victim's wrists and place him on opposite shoulders, lean forward and lift him to move. Carrying with two lifeguards is easier than with one.

Advantages: fast method of transporting the wounded.

Disadvantages: threat of injury to moving soldiers; can cause increased pain in the wounded.

Litter. At present, the personnel of combat units can be provided with a significant variety of burdens for carrying victims. The stretcher is equipped with three pairs of hinged handles, which allows the evacuation of the wounded by 6 servicemen at once. The peculiarity of the use of this type of burden is that when loading the wounded on them, it is necessary to take into account the position of the wounded's head, which should not hang over their edge. Evacuation of the wounded is carried out with feet forward. This is due to the fact that according to statistics, those who go ahead fall more often. The peculiarity of these burdens is that the evacuation can be carried out by stairs and with the use of a rope crossing. In a folded state, the burden is carried by one fighter. In the expanded state, two people, four, or even ten people can be involved in the evacuation of the wounded. The stretcher is equipped with special straps to fix the wounded.

Dorsal boards can be used by first aiders as a means of moving the wounded. The wounded are usually wearing a neck collar and immobilized accordingly before moving.

Transporting the pelvis of a wounded person with a broken bone on a stretcher is placing a roller under the knees with the legs tied together at the knees with the main end of the stretcher, in which position it is easier for him to breathe.

Algorithm for transferring the wounded on suspicion of damage to the femurs and pelvic bones.

1. Put the unfolded bulletproof vest on a stretcher.

2. Carry out the most careful transfer of the wounded on a stretcher is possible only with the help of clear coordination of actions of four fighters.

3. On a stretcher under the knees of the wounded on a bulletproof vest to put a roller from clothes or a raincoat-tent. The first number. With his left hand he holds the head of the wounded, and with his right he grabs the upper part of the

tunic. The second number. With his right hand he grabs the middle part of the tunic in the "roll", and with his left he grabs the waist belt. Third and fourth numbers. Hold the wounded man's thighs with both hands. At the command of the second number, the wounded man is carefully transferred from the ground to the stretcher, holding his legs in the "frog pose". Placing the wounded with injuries of the pelvis or femur on the shield (body armor), with a roller under the knees, will allow him to carry in a protective position "frog" with the least pain and additional damage.

Materials for self-control:

Materials for self-control:

Test tasks:

1. What is meant by medical sorting?

a) medical sorting - is the distribution of the wounded and sick on the basis of the need for uniform treatment - evacuation and preventive measures in accordance with medical indications, the amount of medical care and the accepted procedure for evacuation;

b) medical sorting is the distribution of the wounded and sick according to the severity of the injury in accordance with the medical indication. the amount of medical care and the accepted evacuation procedure;

c) medical sorting is the distribution of the wounded and sick according to the location of the wound in accordance with medical indications and the amount of medical care;

d) medical sorting is the distribution of the wounded and sick by the duration of exposure to the affecting factor.

2. The purpose of medical sorting is:

a) In providing first aid to victims

b) In the earliest possible evacuation of the wounded from the affected area

c) In conducting an initial medical examination with the provision of qualified

specialized medical care

d) In providing the wounded and sick with timely medical treatment preventive measures and their further evacuation

e) In determining the need, priority and place of provision of wounded and sick

Rome medical care.

3. The basis of medical sorting of victims are the following main features:

a) localization of the lesion

b) evacuation purpose

c) danger to others, medical, evacuation signs

d) the severity of the lesion

e) the order of assistance

4. Depending on the tasks that are solved in the process of medical care. care for the wounded and sick, there are the following types:

a) transport, point, diagnostic

b) point, clinical and diagnostic

c) diagnostic, transport

d) intra-point, evacuation and transport

e) diagnostic, evacuation and transport

Standards of answers to tests:

1.a

2.g.

3.c

4.g.

1. To search for victims in large areas, the most effective is to use:

a) search groups;

b) specially trained dogs;

c) the method of sanitary "rake";

d) mechanized means of cleaning

2. Withdrawal of the victim from the battlefield is carried out:

a) before the provision of PMD;

b) after the provision of PMD

c) during the provision of PMD on the battlefield

3. The process of searching for victims on the battlefield begins:

a) from the very beginning of hostilities;

b) at the end of the battle;

Standards of answers to tests:

1.g.

2.b

3.a

Literature

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