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Theme 2

ALL-RUSSIAN SERVICE FOR DISASTER MEDICINE (VSMK)

- 2.1. Introduction.
- 2.2. Main Tasks of VSMK.
- 2.3. Organizational Structure of VSMK.
- 2.4. Service for Disaster Medicine of the Ministry of Health of the Russian Federation.

2.1. INTRODUCTION

All-Russian Service for Disaster Medicine of the Ministry of Health of the Russian Federation is an organizational and functional sector of the health care system of the Russian Federation intended for the organization and implementation of health-care services when implementing an emergency response in peacetime.

It performs its tasks in close cooperation with the management bodies of other branches of the system (health care provision, sanitary-hygienic and anti-epidemic activities, protection of motherhood and childhood, education, etc.).

2.2. MAIN TASKS OF VSMK

Characteristics of Medicosanitary After-effects of Emergency Situations

Health implications of an emergency are a complex characteristic of an emergency which determines the content, scope, and organization of health care for the population.

Clean-up of medical and sanitary after-effects of an emergency is assigned to forces of the All-Russian Service for Disaster Medicine and is a complex

of organizational, medical-evacuative, sanitary-hygienic and anti-epidemic measures, as well as measures for medical protection of the population and rescuers involved in the clean-up of emergency after-effects carried out in the center, zone, area of the emergency, for the purpose of:

- ▶ saving the lives of the affected (sick);
- ▶ faster recovery of their health;
- ▶ reducing the adverse impact on public health conditions (factors) that occurred due to the emergency;
- ▶ preventing the occurrence and spread infectious disease;
- ▶ maintaining the health and efficiency of personnel participating in the emergency response.

In the process of eliminating the health implications of an emergency (according to the criteria of the need of affected people for various types of health care and conditions for medical evacuation measures), there are several phases (stages):

- ▶ isolation phase, which lasts from the moment of the accident until the start of organized rescue operations;
- ▶ rescue phase which lasts from the beginning of rescue operations until evacuation of the affected people (patients) outside the affected area is completed. This period can last from several hours to 5–6 days;
- ▶ phase of recovery treatment (rehabilitation). This period includes providing medical assistance to victims in specialized and multidisciplinary medical organizations until the final outcome (recovery).

The content and scope of actions for elimination of health-related after-effects of emergency situations depend on many factors, and primarily upon the nature, scope and intensity of the disaster, the number of people in the emergency area, density and character of its location, timeliness alerts, and security protection, level of preparedness for disaster management etc.

The aftermath of an emergency becomes tragic due to the failure of medical organizations of inpatient and outpatient type, which significantly complicates the conditions of medical care and treatment of the affected.

In emergency zones (areas), the sanitary-hygienic and sanitary-epidemic condition usually deteriorates significantly, and there is a real threat of the emergence and growth of infectious diseases.

If a city, district or region lacks a sufficient number of trained medical organizations, forces and individual specialists, as well as necessary reserves of financial and material resources, their health systems are at risk and should rely mainly on medical units coming from other regions.

The main tasks of the All-Russian Service for Disaster Medicine are:

- ▶ organizing and implementing health care for the population during emergency management including local armed conflicts and terrorist acts;
- ▶ creating, training, preparing and improving management bodies, forces and services to take action in emergency situations;
- ▶ establishing and managing the reserves of the medical assets, financial and logistical resources, provision of an emergency supply of medicines during emergency response;
- ▶ training and enhancing the qualification of specialists, certification;
- ▶ developing methodical bases for training and participation of the population and rescuers in the provision of first aid in emergency situations;
- ▶ scientific research and international cooperation in the field of disaster medicine.

All-Russian Service for Disaster Medicine is based on general principles of health protection and medical care to the population adopted in this country.

Medical support is organized on the basis of a system of care by echelon for the affected with their evacuation to destination.

2.3. ORGANIZATIONAL STRUCTURE OF VSMK

VSMK is organized at the following levels:

- ▶ federal;
- ▶ interregional;
- ▶ regional;
- ▶ municipal;
- ▶ facility.

At each level, VSMK has management bodies (coordination, permanent and day-to-day management), forces (field hospitals and units, emergency response teams, specialized medical care teams, emergency medical teams, aviation medical teams, medical and nursing teams) and institutions.

The federal level of VSMK includes:

- ▶ Service for Disaster Medicine of the Ministry of health of Russia;
- ▶ All-Russian Center for Disaster Medicine “Zaschita”, VSMK headquarters;
- ▶ Service for Disaster Medicine of the Ministry for Defense of Russia;
- ▶ forces and means under the Ministry of Health, Federal Medical and Biological Agency (FMBA), Ministry for Civil Defence, Emergency Management and Natural Disaster Response; Ministry of the Interior
- ▶ Rospotrebnadzor;

- ▶ Russian Railways etc.;
- ▶ Clinical and research institutions at the Russian Academy of Sciences.

Inter-regional and regional levels of VSMK:

- ▶ Inter-regional centers for disaster medicine:
 1. Central (Moscow);
 2. North-West (St. Petersburg);
 3. Volga (Nizhny Novgorod);
 4. South (Rostov-on-Don);
 5. Crimean (Simferopol);
 6. North Caucasus (Nalchik);
 7. Ural (Ekaterinburg);
 8. Siberian (Novosibirsk);
 9. Far East (Khabarovsk);
- ▶ forces and means of the Ministry of Health, FMBA, EMERCOM, Ministry of the Interior, Rospotrebnadzor, Russian Railways and other clinical and research institutions of RAS branches.

Territorial centers of disaster medicine (in each subject of the Russian Federation):

- ▶ governing bodies and health care institutions of constituent entities of the Russian Federation;
- ▶ medical organizations (including their forces) of federal executive authorities (Ministry of Health, FMBA, Ministry for Defense, Ministry of the Interior, Rospotrebnadzor, etc.);
- ▶ clinical and research institutions of RAS branches.

Municipal level:

- ▶ governing bodies, forces and establishment of local health authorities;
- ▶ health care organizations (including their forces) of the federal executive authorities.

Facility level:

- ▶ management bodies of the organization (structural unit or official, duty-dispatch service);
- ▶ force or organization for health care (medical unit, medical center, clinic).

The organization and rendering of medical care in emergency situations is performed by service of disaster medicine in accordance with the procedures established by the Ministry of Health of the Russian Federation.

According to the decision of the head of the service for the elimination of health aftermath of emergencies, taking into account its scale, the degree of potential danger, health implications, all the forces and means of service can

be involved in the emergency zone regardless of their level. The decision on medical evacuation is made by the head of the service.

2.4. SERVICE FOR DISASTER MEDICINE OF MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

Formations and establishments of the Service for Disaster medicine of Ministry of Health of the Russian Federation are independent medical structures for elimination of health-related aftermath of emergency situations.

They are represented by field (mobile) hospitals; emergency response teams; brigades for various purposes.

They are organized in accordance with approved standards and are provided with special medical equipment and devices.

The staff of regular forces work on a permanent basis and is funded by funds allocated to the Service for Disaster Medicine of this level.

Full-time personnel of the Service for Disaster Medicine of the Ministry of Health at the regional level are mobile teams of emergency medical care, including specialized mobile teams of ambulance and air medical and advisory teams.

These forces are the basis of a regional Service for Disaster Medicine.

At all levels of the All-Russian Service for Disaster Medicine non-personnel forces (hospitals, brigades, teams) are set up on the basis of medical and other organizations, which in the event of an emergency come under the operational control of the VSMK management bodies of the appropriate level. The responsibility for ensuring the preparedness of these units for emergency situations lies with the heads of the organizations concerned.

In addressing the issues of medical support of the population in emergency situations an important role is played by the All-Russian Center for Disaster Medicine “Zaschita” (VSMK) as a body of routine management which provides, in particular:

- ▶ coordination of the interaction of management bodies, as well as the use of forces and means of the service;
- ▶ development of scientific and methodological principles of the service;
- ▶ training, professional development and certification of specialists of the service;
- ▶ development of proposals to prepare the population for first aid, etc.

The main mobile medical and diagnostic organization of disaster medicine is a multidisciplinary field hospital of VSMK (fig. 2.1, see color insert). It is

intended for prompt approach to the area (zone) of an emergency situation, deployment, admission of victims, their triage, rendering primary health care, emergency and specialized medical care, preparation for evacuation, temporary hospitalization of nontransportable persons and care for them, as well as outpatient care for the population.

The main units of the hospital are management, medical and diagnostic departments and support units. The main medical-diagnostic departments are admission-diagnostic, outpatient care, general surgery, traumatology, surgery, anesthesiology and intensive care, therapy, intensive care, pediatrics, laboratory, and the office for blood procurement and transfusion, etc.; the total number of hospital staff should be up to 50 people with a capacity of 100 beds.

The emergency departments of the hospital are specialized teams: surgery, pediatric surgery, trauma, neurosurgery, burns, ophthalmology, intensive care, extracorporeal detoxication, therapy, psychiatry, infectious disease, radiology, toxicology, etc.

A hospital of VSMK “Zaschita” can be deployed in full or partially. Depending on the nature of lesions (mechanical and thermal trauma, chemical and radiation injury) and profile of experts for the job, it can function in multidisciplinary options or as a surgical or toxicotherapeutic hospital. In addition, in places of mass congestion (refugees and internally displaced persons) due to armed conflicts or major terrorist acts, it is possible to use a hospital of VSMK “Zaschita” as a therapeutic, pediatric or tuberculosis hospital.

When fully deployed, the hospital might admit 250–300 victims a day.

For hospitalization of nontransportable victims the hospital can deploy a department of temporary hospitalization up to 150 beds.

The field hospital of VSMK “Zaschita” is also designed to provide advice and practical assistance to specialists of medical institutions in the emergency area and the deployment of hospitals of various profiles.

In the interregional and territorial centers of disaster medicine medical emergency response teams act as mobile medical units. They involve experts (crews) of local clinical hospitals and are intended for expeditious approach to an emergency zone rendering emergency medical care and emergency specialized medical care to the affected population.

Teams of specialized medical care are divided into professional (regular) and non-personnel ones. These are independent mobile units of the service for disaster medicine intended for the provision of specialized medical care to the affected and are used to strengthen medical institutions involved in the elimination of medical and sanitary aftermath of emergencies. Professional forces, as a rule, are part of the territorial centers.

The main tasks of the teams are:

- ▶ triage of victims in need of specialized medical care;
- ▶ provision of specialized medical care to victims and care for nontransportable affected persons;
- ▶ preparation of victims for evacuation to specialized medical institutions;
- ▶ provision of advisory and methodological assistance to specialists of medical institutions in the emergency area.

The status and standards of equipment of teams and groups are defined by the standard Regulations on supply for teams of specialized medical care of the Service for Disaster Medicine approved by the Ministry of Health of Russia.

Medical field teams of emergency medical care are set up on the basis of stations (substations, departments) of emergency medical care. The main tasks of a brigade are triage of victims, provision of appropriate emergency medical care and their evacuation from the center (zone) of an emergency situation.

Non-personnel medical and nursing teams are mobile units of the Service for Disaster Medicine, intended to provide medical assistance, organize and conduct triage and preparation of victims for evacuation directly to the emergency care center. They are set up on the basis of polyclinic institutions and health centers, as well as municipal, central district, inter-district, district hospitals.

VSMK forces can operate in the following modes:

- ▶ daily operation mode;
- ▶ high alert;
- ▶ emergency situation.

When there is no threat of emergency at facilities, in territories or water areas, the management bodies and forces of the service operate in the daily operation mode.

Decisions of heads of federal executive authorities, executive authorities of subjects of the Russian Federation, local governments and the organizations in whose territory there can arise emergency situations or are already in progress, can announce one of the following modes of functioning:

- ▶ the high alert mode in case of emergency threat;
- ▶ the emergency mode in case of ongoing emergency.

An important task of the Service for Disaster Medicine is continuous improvement of the management system of health forces and means involved in the elimination of health aftermath of emergency situations using new information technologies, especially the automated network of the immediate reporting (fig. 2.2, see color insert).

Preservation of life and health of the population of the Russian Federation in case of emergency and response to emergency situations caused by natural disasters and accidents is the most important state task of federal executive authorities, executive authorities of subjects of the Russian Federation and local governments.

All-Russian Service for Disaster Medicine addresses the issues of rapid response, mobilization of material and technical means and personnel in emergency situations in order to save lives and preserve the health of the largest number of people by providing them with all kinds of medical care in a timely manner and in full, elimination of epidemic foci, as well as creating a reserve of material assets and training in the provision of medical assistance to citizens including medical evacuation in emergency situations.

Control Questions

1. Main tasks of the All-Russian Service for Disaster Medicine (VSMK).
2. The organizational structure of the VSMK.
3. Characteristics of forces and means of VSMK.
4. Service for Disaster Medicine of the Ministry of Health of the Russian Federation.
5. Regular and non-personnel forces of VSMK.
6. Tasks and structure of a field multidisciplinary hospital of the All-Russian Center for Disaster Medicine “Zaschita”.
7. Teams of specialized medical care.
8. Characteristics of medical teams.
9. High alert mode.
10. Emergency mode.

Theme 3

MEDICAL AND EVACUATION SUPPORT FOR POPULATION IN EMERGENCY SITUATIONS

- 3.1. Introduction.
- 3.2. Essence of the System of Medical and Evacuation Support.
- 3.3. Types and extent of medical care.
- 3.4. Stages of medical evacuation.
- 3.5. Triage of the affected persons.
- 3.6. Medical evacuation.

3.1. INTRODUCTION

Major factors affecting the implementation of the modern system of medical and evacuation support for the population in disaster areas are the following: massive, simultaneous occurrence of losses among the population, diverse nature and severity of lesions, the occurrence of new diseases (radiation sickness, etc.), destruction of buildings and constructions in towns and villages, complicating the deployment and operation of the arriving medical units and establishments, as well as losses among medical staff, disruption of regular health care facilities, possible contamination of vast territories, water sources and food by radioactive, toxic substances and other chemicals, pathogens of various infectious diseases (including especially dangerous infections), bacterial means, biological (bacteriological) warfare, etc., elevated epidemic tension in the areas (foci) of disaster.

3.2. ESSENCE OF THE SYSTEM OF MEDICAL AND EVACUATION SUPPORT

The doctrine of disaster medicine is a set of basic (main) principles underlying the service activity; it involves: uniform understanding of the tasks

of the Service for Disaster Medicine; medical uniform understanding of the origin and development of abnormalities resulting from exposure to various damaging factors; uniform views on the principles and methods of care and prevention of lesions in both peace- and wartime; the presence of a unified system of sanitary-hygienic and anti-epidemic measures in disaster areas; the existence of a single, brief and specific system of medical records; all open injuries (wounds) of peacetime and wartime are primarily infected (bacterial contamination); the only reliable method of preventing infection is timely debridement of wounds; most individuals with open injuries (wounds) require early debridement; debridement undertaken within the first hours after the injury yields the best prognosis for their outcome; the scope of medical care, the choice between treatment options and medical evacuation depends not only on medical indications, but mainly on the situation with medical evacuation.

The **system of medical and evacuation** support implies research-based principles of medical care and treatment in combination with the evacuation of victims and the use of available forces and means.

In this country, a mixed system combining the principle of on-the-spot care and “evacuation on purpose” is used.

The basic requirements for the provision of medical care and treatment in the modern system are: continuity in the provision of medical care and treatment of patients, consistency in the provision of health care, timeliness of medical care and treatment of victims, broad specialization of medical care.

All losses among the population are described as **total casualties**.

All total casualties are divided into irretrievable and temporary.

Irretrievable casualties include the dead, drowned, and missing.

Temporary casualties include the wounded and patients who were incapacitated for a period of not less than 1 day and arrived at medical stations or medical institutions.

3.3. TYPES AND SCOPE OF MEDICAL CARE

The **type of medical care** is a set of therapeutic and preventive measures performed by medical personnel of certain qualifications, having appropriate medical equipment for specific medical indications.

Types of medical care:

- 1) primary health care;
- 2) specialized, including high-tech, medical care;
- 3) emergency, including specialized, medical care;
- 4) palliative care.

Primary health care includes primary pre-medical, primary medical and primary specialized health care.

Primary pre-medical care is provided by paramedics, midwives and nursing personnel.

The main activities of primary pre-medical care are the following:

- ▶ artificial ventilation of the lungs by introducing a guedel airway;
- ▶ placing respiratory protection (gas mask, respirator, cotton-gauze bandage) on the affected person while being in the infected area;
- ▶ drug infusion;
- ▶ administration of anesthetics and cardiovascular drugs;
- ▶ parenteral administration or ingestion of antibiotics, anti-inflammatory, sedative, anticonvulsant and antiemetic drugs;
- ▶ administration of sorbents, antidotes, etc.;
- ▶ monitoring the applied tourniquets, dressings and transport immobilization;
- ▶ applying aseptic and occlusive dressings.

Primary health care is provided by general practitioners, family doctors, and pediatricians.

Primary health care is divided into emergency and delayed care. The limitation of providing just emergency care is due to the fact that the station of medical evacuation is to admit a large number of victims, exceeding its capacity.

Emergency care includes:

- ▶ asphyxia relief;
- ▶ arresting external bleeding;
- ▶ anti-shock measures;
- ▶ bladder catheterization or puncture;
- ▶ partial special treatment of victims arriving from radiological and chemical foci;
- ▶ administration of antidotes, anticonvulsants, bronchodilators, and antiemetics;
- ▶ degassing of wounds contaminated with persistent toxic substances;
- ▶ gastric lavage with a probe when chemical or radioactive substances have entered the stomach;
- ▶ administration of antitoxic serum in case of poisoning by bacterial toxins and non-specific prevention of infectious diseases.

Activities that may be delayed include:

- ▶ eliminating the defects of primary first aid (bandages, adjusting transport immobilization);
- ▶ changing dressings on a wound contaminated with radioactive substances;

- ▶ procaine block with injuries of moderate severity;
- ▶ antibiotic injections and tetanus seroprophylaxis in open wounds and burns;
- ▶ symptomatic agents in conditions that do not threaten the victim's life.

Primary specialized health care is provided by specialist doctors including specialist doctors of medical organizations that provide specialized, including high-tech, medical care.

Depending on the set of medical and preventive measures, the scope of medical care may be full or reduced. The reduced volume implies forced abandonment of measures that may be delayed. At the same time, only life-saving measures are undertaken.

First aid before medical care is provided in case of accidents, injuries, poisoning and other conditions and diseases that threaten their lives, by way of self- and mutual assistance, as well as by persons obliged to provide first aid. First aid is usually provided with the help of improvised means.

Below is the list of conditions requiring first aid.

1. Unconscious state.
2. Respiratory and circulatory arrest.
3. External bleeding.
4. Foreign bodies of the upper respiratory tract.
5. Injuries to various areas of the body.
6. Burns, effects of high temperatures, thermal radiation.
7. Frostbite and other effects of low temperatures.
8. Poisoning.

Measures of first aid are as follows.

1. Activities to assess the situation and ensure a safe environment for first aid.
2. Calling the emergency medical service, other special services whose employees are obliged to give first aid according to the Federal law or a special rule.
3. Checking whether the victim is conscious.
4. Measures to restore airway patency and determine the signs of life in the victim.
5. Measures for cardiopulmonary resuscitation until the victim shows signs of life.
6. Measures to maintain airway patency.
7. Measures to assess the victim and provide temporary arrest of external bleeding.
8. Actions for detailed inspection of the victim in order to identify the signs of injury, poisoning and other conditions threatening his life and

health, and to provide with the first aid once such conditions have been identified.

9. Giving the victim an optimal body position.
10. Monitoring the victim's condition (consciousness, breathing, blood circulation) and psychological support.
11. Transferring the victim to the emergency medical team, other special services.

The aid provided in the first 30 minutes after an accident significantly reduces the mortality rate. Failure to provide the aid to seriously affected people within the first hour results in their death in 30% of cases.

3.4. STAGES OF MEDICAL EVACUATION

A stage of medical evacuation is the forces and means of medical service (health care) deployed on the ways of the evacuation of the affected for the purpose of their admission, triage, rendering medical care, treatment and preparation, if necessary, for further evacuation.

The modern system of medical and evacuation support provides for deployment of two stages of medical evacuation: **pre-hospital** and **hospital**. They differ from each other not only in the composition of staff and equipment but also in the scope (content) of medical and preventive measures. However, the deployment scheme and the operation of each phase follow some general principles (fig. 3.1; fig. 3.2, see color insert).

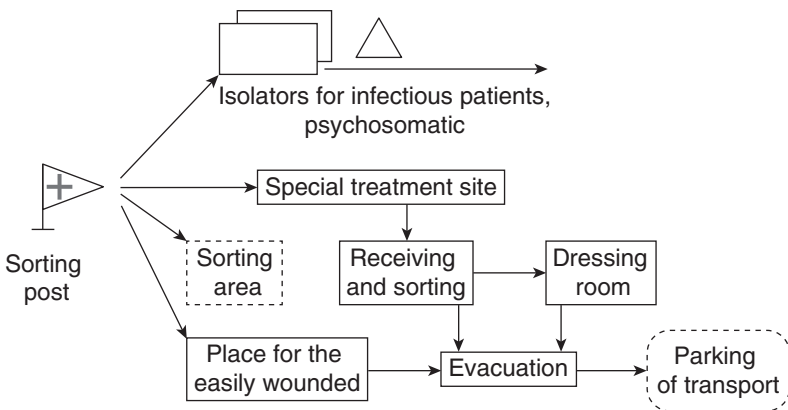


Fig. 3.1. Schematic diagram of deploying stages of medical evacuation

The following issues are addressed in the functional units of a deployed stage of medical evacuation:

- ▶ admission, registration and triage of victims;
- ▶ special treatment of the affected (sanitary treatment, decontamination, degassing, disinfection);
- ▶ provision of appropriate medical care to the affected;
- ▶ treatment of the affected (patients);
- ▶ preparation of the affected for further evacuation;
- ▶ isolation of infectious patients and persons with reactive psychosis.

At the pre-hospital stage of medical evacuation, primary medical care is provided, at the hospital stage – primary specialized care. The stages of medical evacuation should be ready for rapid deployment and operation in all conditions.

3.5. TRIAGE OF THE AFFECTED

The most important factor affecting the organization of medical care in an emergency situation is the massive, simultaneous occurrence of sanitary losses. This circumstance will be further aggravated by the failure or forced evacuation of medical institutions located in the emergency zone. In this regard, there is an urgent need to use special methods and technologies to minimize losses in emergency situations. The most important organizational measure to ensure the accomplishment of this task is triage.

The basics of triage were developed by the great Russian surgeon N. Pirogov (fig. 3.3, see color insert).

Triage is a distribution of the affected groups based on the need for uniform therapeutic, preventive and evacuation measures depending on medical indications and specific conditions of the situation.

Medical sorting begins at staging areas and is then carried out at the stages of medical evacuation.

Depending on the task, triage is divided into:

- ▶ on-site;
- ▶ evacuation and transportation.

Triage is based on diagnosis and is of a prognostic nature.

Triage is carried out by sorting teams consisting of a doctor, two paramedics (nurses), two registrars. The solution is fixed in the primary medical document and triage tags which are attached to the clothes of the affected person (fig. 3.4, 3.5).

Diagram of a conveyor method of work of the sorting team.



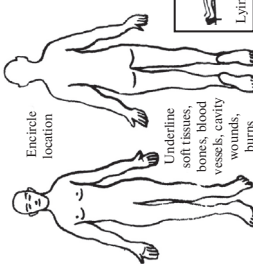
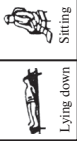

STUB OF THE PRIMARY MEDICAL CARD	ISOLATION																				
<p>_____ minutes _____ 20 _____</p> <p>military location _____ military unit _____</p> <p>_____</p> <p>Last name _____ Name _____</p> <p>ID card / ID tag _____</p> <p>Injured/Fell ill _____ hour _____ minute _____ 20 _____</p> <p>Evacuated to _____</p> <p>by plane, medical automobile (underline)</p> <p style="text-align: center;">  (encircle) </p>	<p style="text-align: center;">MEDICAL AID</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:80%;">Underline</td> <td style="width:20%;">Dose (write down)</td> </tr> <tr> <td>Injected: antibiotics</td> <td></td> </tr> <tr> <td>Antitetic serum, antigas gangrene serum</td> <td></td> </tr> <tr> <td>antidote (which)</td> <td></td> </tr> <tr> <td>anesthetic agents</td> <td></td> </tr> <tr> <td>Produced:</td> <td></td> </tr> <tr> <td>blood transfusions,</td> <td></td> </tr> <tr> <td>blood substitutes,</td> <td></td> </tr> <tr> <td>immobilization,</td> <td></td> </tr> <tr> <td>bandage</td> <td></td> </tr> </table> <p>_____</p> <p>Diagnose _____</p>	Underline	Dose (write down)	Injected: antibiotics		Antitetic serum, antigas gangrene serum		antidote (which)		anesthetic agents		Produced:		blood transfusions,		blood substitutes,		immobilization,		bandage	
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Fig. 3.4. Version of the primary medical document

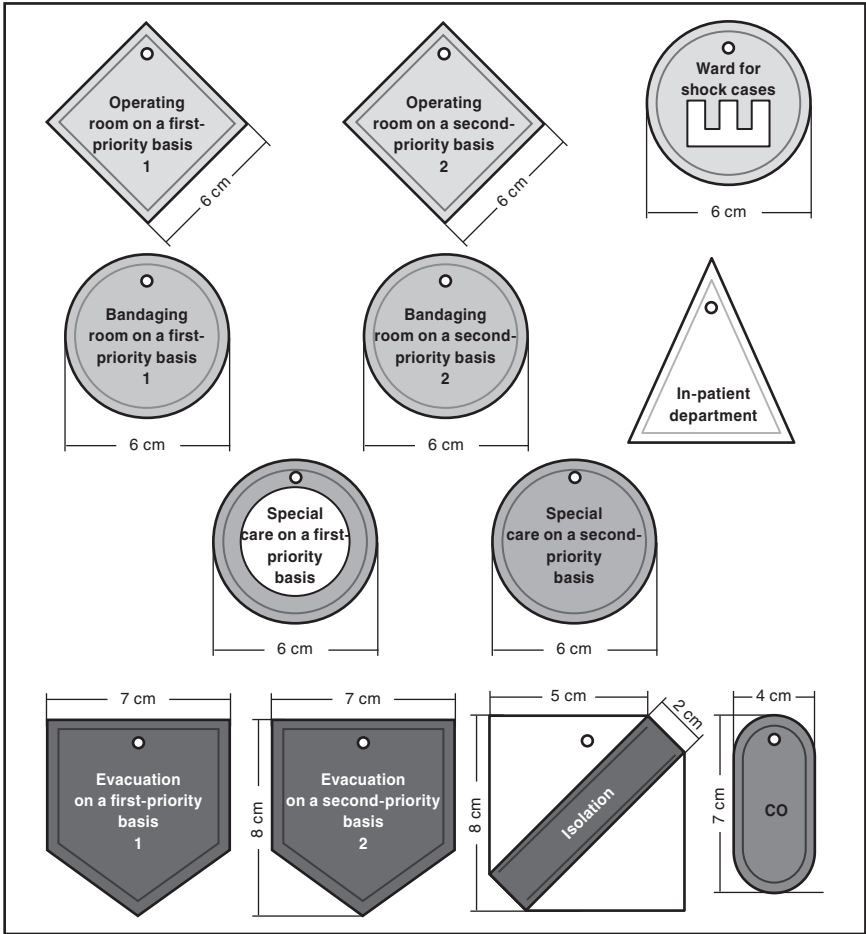


Fig. 3.5. A triage tag

On the basis of assessment (as a rule, the simplest methods are used) the doctor takes the screening decision, dictates to the registrar the findings to be entered in the primary health card and instructs the nurse about the required medical interventions. Then the doctor with another nurse passes to the next victim (fig. 3.6, 3.7, see color insert).

When performing triage of victims arriving from various centers of emergency they are classified into the following categories:

- ▶ persons posing threat to others (infectious patients, those infected with hazardous chemicals or radioactive substances, patients with reactive psychosis);
- ▶ affected persons in need of medical assistance at this stage of medical evacuation;
- ▶ persons who can be cared for at the next stage (including delayed medical care);
- ▶ slightly or minimally injured;
- ▶ persons in a state of agony, needing only relief of suffering.

When a large number of affected people arrive for medical evacuation, triage allows minimizing the mortality rate and preventing life-threatening complications.

3.6. MEDICAL EVACUATION

In addition to medical care and treatment, the medical evacuation system includes transportation. Transportation is the removal of the affected people from the center of an emergency and their transfer to a stage of medical evacuation or a hospital. The purpose of transportation is timely delivery of the affected to the institution, where they will be provided with full medical care, treatment and rehabilitation.

The route of medical evacuation is the route by which the removal and transportation of the affected is carried out.

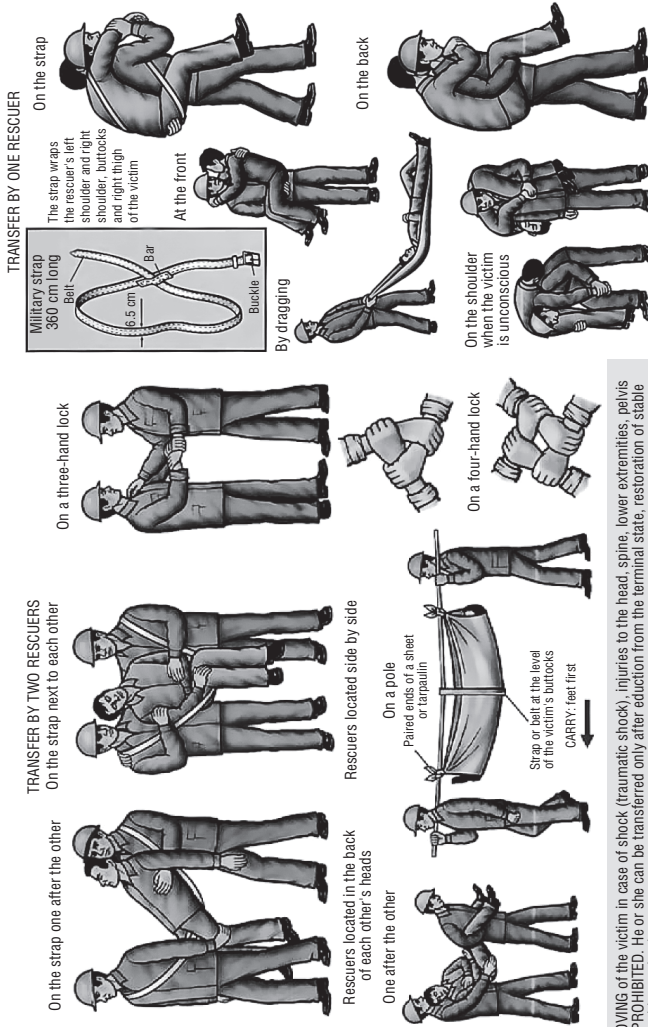
The arm of medical evacuation is the distance from the point of departure of the affected person to the destination.

The evacuation direction is the sum of evacuation routes and stages of medical evacuation located on the way.

Medical evacuation begins in the center of an emergency and is completed in a medical facility where the patient receives the full amount of medical assistance, undergoing treatment and rehabilitation.

Rapid evacuation of the affected to the stages of medical evacuation and to medical institutions is a prerequisite for timely provision of medical care.

In conditions of massive, simultaneous occurrence of sanitary losses evacuation of the affected people can be carried out not only by sanitary transport but also with the help of other vehicles (fig. 3.8; fig.3.9, see color insert). Due to implementation of the concept of developing of air medical service, Russia, is now expanding the use of aircraft and helicopters for medical evacuation (fig. 3.10, 3.11, see color insert). This type of medical evacuation is considered to be the fastest and safest.



MOVING of the victim in case of shock (traumatic shock), injuries to the head, spine, lower extremities, pelvis is PROHIBITED. He or she can be transferred only after eduction from the terminal state, restoration of stable breathing and pulse

Fig. 3.8. Methods of removing the affected. (<https://yandex.ru/images/search?p=2&text>)

When organizing medical evacuation from the center of sanitary losses, one usually tries to ensure uniform distribution of patients between stages of medical evacuation and medical institutions. Transfer of affected persons from one institution to another is minimized. Caregivers seek to avoid transferring the patients from one stretcher to another; a rotating pool of stretchers is used. For implementation of the above principles of medical evacuation support, the current situation in a particular emergency area is taken into account.

Control Questions

1. The main provisions of the doctrine of disaster medicine.
2. Goals and objectives of medical and evacuation support. Staged care with evacuation to destination.
3. Types of medical care.
4. Primary health care.
5. Primary medical care.
6. Primary specialized health care.
7. Stage of medical evacuation: its definition and tasks.
8. Triage: its definition, types.
9. Characteristics of triage categories.
10. Medical evacuation.