

## ВАРИАНТ ОРГАНИЗАЦИИ РАБОТЫ ТЕРРИТОРИАЛЬНОГО ЦЕНТРА МЕДИЦИНЫ КАТАСТРОФ РЕСПУБЛИКИ КРЫМ ПРИ УГРОЗЕ ОДНОВРЕМЕННОГО СОВЕРШЕНИЯ НЕСКОЛЬКИХ ТЕРРОРИСТИЧЕСКИХ АКТОВ

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**Резюме.** Цель исследования – выбор оптимального формата действий формирований Службы медицины катастроф (СМК), скорой медицинской помощи (СМП), гражданской обороны (ГО), территориального центра медицины катастроф (ТЦМК) Республики Крым при реагировании на угрозу одновременного совершения нескольких террористических актов.

**Материалы и методы исследования.** Проанализирована работа бригад СМП и СМК Республики Крым по защите населения при угрозе одновременного совершения нескольких террористических актов в январе-апреле 2022 г.

**Результаты исследования и их анализ.** Обоснован расчёт количества и состава формирований по оказанию экстренной медицинской помощи (ЭМП) при первичном реагировании на угрозу одновременного совершения нескольких террористических актов на пяти и более разнорасположенных объектах (территориях) в одном населённом пункте или отдельном районе. Определены состав и задачи оперативной группы по предупреждению и ликвидации медико-санитарных последствий чрезвычайных ситуаций (ЧС), в том числе террористических актов. Отмечено, что обучение личного состава СМК по вопросам гражданской обороны и защиты в ЧС в системе дополнительного профессионального образования является наиболее перспективной формой подготовки персонала к работе в условиях угрозы (возникновения) чрезвычайных ситуаций

**Ключевые слова:** гражданская оборона, ликвидация медико-санитарных последствий, Республика Крым, скорая медицинская помощь, Служба медицина катастроф, территориальный центр медицины катастроф, террористические акты, чрезвычайные ситуации, экстренная медицинская помощь

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## THE OPTION OF ORGANIZING THE WORK OF THE TERRITORIAL CENTER FOR DISASTER MEDICINE OF THE REPUBLIC OF CRIMEA UNDER THE THREAT OF SEVERAL SIMULTANEOUS TERRORIST ACTS

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**Summary.** The aim of the study is to choose the optimal format of actions of the formations of the Disaster Medicine Service (DMS), Emergency Medical Service (EMS), Civil Defense (CD), Territorial Center for Disaster Medicine (TCDM) of the Republic of Crimea when responding to the threat of several terrorist acts occurring simultaneously.

**Materials and research methods.** The work of the emergency medical teams and disaster medicine service of the Republic of Crimea on the protection of the population in case of a threat of several terrorist acts occurring simultaneously in January-April 2022 was analyzed.

**Results of the study and their analysis.** Calculation of the number and composition of emergency medical service formations for primary response to the threat of several simultaneous terrorist acts at five or more differently located objects in one settlement or separate district was substantiated. The composition and tasks of the task force for prevention and elimination of medical and sanitary consequences of emergencies (terrorist acts) were defined. It is noted that the training of DMS personnel in civil defense and protection in emergencies in the system of additional professional education is the most promising form of personnel training for work under the threat (occurrence) of emergency situations.

**Key words:** civil defense, Disaster Medicine Service, elimination of medical and sanitary consequences, emergencies, emergency medical aid, Republic of Crimea, Territorial Center for Disaster Medicine, terrorist acts

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**Introduction**

The principles of emergency medical aid (EMT) to victims in emergency situations (ES) are based on the general provisions of the system of public health care and emergency medical aid [1, 2]. Recently, in the Republic of Crimea there were mass reports of simultaneous bombing of a number of educational institutions and socially significant objects, which could lead to a large number of victims in need of emergency medical care admitted to medical treatment organizations (MTOs). According to Order No. 388n of the Russian Ministry of Health "On Approval of the Procedure for the Provision of Emergency, including Specialized Emergency Medical Care" dated 20.06.2013, in each case of a threat of an emergency situation, mobile emergency medical teams are organized on duty. It should be noted that the capacity of ambulance and Disaster Medicine Service (DMS) as the most mobile formations of regional health care in case of a simultaneous threat of an emergency at dozens of facilities in one locality is limited by the available resources of the service "103", which does not allow to provide a full-time duty of emergency medical teams at the sites of possible events [3].

**The purpose of the study** is to choose the optimal format of the activities of the formations of the Disaster Medicine Service, Emergency Medical Care, Civil Defense of the State Budget Institution "Crimean Republican Center of Emergency Medicine and Emergency Medical Care" (further – TCDM) when responding to a threat of a terrorist act.

**Materials and research methods.** The functioning of units of the Emergency Medical Service and Territorial Disaster Medicine Service of the Republic of Crimea while reacting to a potential threat of an emergency situation (an act of terrorism) on the territory of the Republic in January-April 2022 was analyzed.

The organization and implementation of medical support of the population under the threat of terrorist acts, as well as the creation, preparation, preparedness and improvement of management bodies, formations and institutions of the DMS of the Republic of Crimea to act in an emergency in the following areas were evaluated:

- work of a dispatcher post for collecting information, notification, transferring calls to ambulance crews and mobile emergency response teams (MERT);
- bringing the Disaster Medicine Service and ambulance units in readiness and work under the threat of emergencies;
- civil defense activities and protection of the population from emergencies, including terrorist attacks [4-6].

**Research results and their analysis.** The TCDM includes the following structural subdivisions for rendering emergency and urgent medical aid to the citizens of the Republic of Crimea: an ambulance service consisting of 7 stations and 25 substations of the emergency medical services and 54 permanent locations for the emergency medical

teams; a department of the Disaster Medicine Service; a department for emergency consultative medical aid and medical evacuation; Republican Telemedical Center.

According to the existing standard, the Republic of Crimea should have at least 191 ambulance teams. As of the end of 2021, only 158 ambulance teams and three emergency medical teams of the Emergency Medical Service of the Republic of Crimea were functioning. There is a deficit of 37 emergency medical teams. The share of the various EMTs on the line: 108 paramedics (70.2%); 44 general practitioners (28.5%); 2 specialized (1.3%).

In each case of a terrorist threat, an DMS emergency response team or an EMT team is sent to the place of the alleged event to be on duty.

Thus, on January 21, 2022, when signals were received about the threat of simultaneous terrorist attacks of mass character at 27 sites in one settlement and more than 5 sites in two other urban districts, 28 EMTs and 3 DMS emergency response teams were sent on duty. The peculiarity of the terrorist attack was that the vast majority of follow-up reports were received in the first 2 hours after the first report.

It was found that in a short period of time to ensure security at these facilities in one settlement, almost 75% of the outreach EMTs serving the area were involved. At the same time, the time teams were on duty for medical support of demining activities ranged from 1 to 8 hours, which had a negative effect on the provision of emergency and urgent medical care to the population.

Taking into account the existing deficit of medical personnel and EMTs in the Republic of Crimea, in order to optimize the work of EMTs in case of emergency response and mass terrorist acts in one settlement and separate district, the following algorithm of organization of allocation of EMTs for ensuring demining and elimination of possible medical and sanitary consequences of emergency was proposed.

If there is a threat of an emergency or mass terrorist acts in one populated area or a separate district, when 5 or more remote objects can be attacked or become out of order, the head of the EMT station (substation) of the service area shall not simultaneously send EMTs to each vulnerable object. The place of gathering of the emergency formations (EMTs, emergency response teams, teams of specialized medical aid) is determined, taking into account its optimal remoteness both from the epicenters of emergency and from MTO of the region, ready to receive the victims, where the task force for prevention and elimination of emergency consequences is formed (Table).

The task force consists of the head of the emergency station / substation (head of the group); Civil Defense Commissioner; personnel of the teams.

The functions of the task force for prevention and elimination of the consequences of emergencies located at the as-

sembly point of the emergency medical aid formations include:

- ensuring personal safety and the safety of crews arriving at the assembly point of the emergency medical aid formations;
- organizing communications: with the operative headquarters for emergency prevention and liquidation of the response area; with the dispatch service of the ambulance station (substation); with the dispatch service of the TCDM; with other emergency services;
- report to the TCDM dispatcher on arrival of the task force to the place of gathering of the formations;
- constant communication with operational headquarters of objects for prevention and liquidation of emergencies, heads of rescue operations;
- management of subordinate forces and means involved in emergency response in accordance with the decisions of the head of emergency response.

Thus, justified and developed an algorithm of action for the allocation of EMTs and emergency response teams in case of the threat of an emergency, committing mass terrorist acts simultaneously on five or more differently located objects in one locality or district. The key point is to determine the place of assembly of EMT formations, taking into account its optimal remoteness from both the epicenters of emergency and MTOs, ready to receive the victims, in which operational group on prevention and elimination of consequences of emergency (terrorist acts) is formed, as well as to calculate the number of allocated EMT formations.

In addition, in order to provide a comprehensive response to the cases of a one-time threat of a number of terrorist acts, taking into account the need to process, receive and transmit a large volume of information, the DMS dispatch post was transferred to round-the-clock duty (2 persons) with the reactivation of a previously equipped backup workplace of the dispatcher [7-9]. Such variant of work requires

involvement of free of shift paramedics of DMS department with emergency response teams and mobile medical detachment, trained in the volume of 36 hours on additional professional program "Advanced training of duty dispatch services, integrated with "112" system".

In connection with the measures taken to optimize the number of TCDM staff and to bring the staffing table in line with the regulatory requirements for the employees of the civil defense structural subdivisions, from July 2020 the positions of authorized persons for civil defense tasks were introduced in the department of emergency medicine services with emergency response teams and a mobile medical unit.

In January-April 2022 the organizational and staffing structure of the department of emergency medicine with emergency response teams and mobile medical detachment was represented by three blocks:

- a 24-hour dispatch post (operational dispatch DMS post) — paramedics to receive calls and transfer them to the ambulance teams;
- three emergency response teams, of which one medical anesthesiologist-resuscitation and two paramedics;
- four positions of Civil Defense Commissioner.

Thanks to the work aimed at interchangeability of employees of the EMT department with emergency response teams (training of personnel in civil defense and protection from emergencies, training in working with the "112" system), opportunities were created to reinforce the duty shift of the DMS dispatch post, conduct additional civil defense and personnel protection activities by the DMS's own forces.

This organization of work of EMT formations was tested on February 24 and 25, 2022 in real conditions of responding to a threat of terrorist attacks. As a result, at 34 social infrastructure facilities that were attacked, 8 EMTs were on duty instead of 34. This format of response made it possible to free up for the provision of emergency medical care when working in the mode of day-to-day operation 26 ambulance teams and to save 150 thousand rubles.

Thus, the suggested variant of the organization of the response to the threat of mass terrorist acts in five or more simultaneously separated objects (territories) in a single settlement / a separate region, makes it possible to involve the forces and means of the emergency medical services rationally, minimizing the negative consequences of distracting the ambulance crews from servicing the calls of the population.

### Conclusion

Optimization of an order of duty of the emergency medical aid formations in case of arrival of information on threat of emergency, including acts of terrorism, simultaneously on several objects of different distance assumes creation of a point of temporary accommodation of EMT teams, emergency response teams taking into account its optimum remoteness both from epicenters of emergency, and from MTOs of the region, ready to accept victims, and creation of operative group on prevention and liquidation of consequences of emergency.

2. Additional professional education of specialists of the outreach teams of emergency response teams on civil defense and protection in emergencies, employees of the dispatch services of TCDM integrated with the system "112", allows to optimize the activities of the DMS in the threat of a terrorist attack at the expense of involvement of their own staff.

Таблица /Table  
**Расчёт количества и состава бригад скорой  
медицинской помощи**  
Calculation of the number and composition of emergency  
medical teams

Количество одновременно возникающих очагов ЧС The number of simultaneously occurring foci of emergencies	Количество бригад Number of teams	Особые условия по составу бригад Special conditions for the composition of teams
5	Не менее 2 Nevertheless 2	1 врачебная, 1 фельдшерская 1 medical, 1 paramedic
6–10	Не менее 4 Nevertheless 4	2 врачебные, 2 фельдшерские 2 medical, 2 paramedic
11–15	Не менее 5 Nevertheless 5	2 врачебные, 3 фельдшерские 2 medical, 3 paramedic
16–20	Не менее 6 Nevertheless 6	2 врачебные, 4 фельдшерские 2 medical, 4 paramedic
21–25	Не менее 8 Nevertheless 8	3 врачебные, 5 фельдшерских 3 medical, 5 paramedic
> 25	Не менее 10 Nevertheless 10	3 врачебные, 7 фельдшерских 3 medical, 7 paramedic

## СПИСОК ИСТОЧНИКОВ

1. Гончаров С.Ф., Быстров М.В., Бобий Б.В. Актуальные вопросы организации оказания экстренной медицинской помощи в разных режимах деятельности // *Скорая медицинская помощь*. 2017. Т. 18, №4. С. 4-9.
2. Олещенко С.С., Буглак Г.Н., Золотарева В.И., Люлько О.М. Организация работы станции скорой медицинской помощи в чрезвычайных ситуациях: Методические рекомендации. Симферополь: Изд-во Корниенко А.А., 2019. 80 с.
3. Гончаров С.Ф., Бобий Б.В. Медицинское обеспечение населения при террористических актах: Учебное пособие для врачей. М.: ФГБУ ВЦМК «Защита», 2016. 79 с.
4. Баранова Н.Н. Медицинская эвакуация пострадавших: состояние, проблемы. Сообщение 2 // *Медицина катастроф*. 2019. №1. С. 42-46.
5. Баранова Н.Н., Гончаров С.Ф. Критерии качества проведения медицинской эвакуации: обоснование оценки и практического применения // *Медицина катастроф*. 2019. №4. С. 38-42.
6. Гончаров С.Ф., Быстров М.В., Баранова Н.Н., Гусева О.И., Попов В.П., Романов В.В., Чубайко В.Г., Сахно И.И. Мобильные медицинские формирования Службы медицины катастроф Министерства здравоохранения Российской Федерации // *Медицина катастроф*. 2019. №3. С. 5-11.
7. Королёва В.В. Структурно-функциональная модель профессионального образования // *Интерактивная наука*. 2016. №9. С.28-34.
8. Оболонский Ю.В., Олещенко С.С., Сафонов В.В. Инновационный подход и возможные пути развития для достижения целевых показателей национальных проектов на примере оказания скорой медицинской помощи, а также скорой специализированной медицинской помощи первичного звена здравоохранения Государственного бюджетного учреждения здравоохранения Республики Крым «Крымский республиканский центр медицины катастроф и скорой медицинской помощи» // *Живая психология*. 2019. Т.6, №3. С. 155-192.
9. Радченко И.В. Организация, планирование и ведение мероприятий гражданской обороны в здравоохранении Российской Федерации: Учебное пособие для врачей. М.: ФГБУ ВЦМК «Защита». 2015. 42 с.

## REFERENCES

1. Goncharov S.F., Bystrov M.V., Bobiy B.V. Actual Issues of Organization of Emergency Medical Care In Different Modes Of Activity. *Emergency Medical Care*. 2017;18;4:4-9 (In Russ).
2. Olefirenko S.S., Buglak G.N., Zolotareva V.I., Lyulko O.M. *Organizatsiya Raboty Stantsii Skoroy Meditsinskoy Pomoshchi v Chrezvychaynykh Situatsiyakh* = Organization of Work of the Ambulance Station in Emergency Situations. Methodological Recommendations. Simferopol, Kornienko A.A. Publ., 2019. 80 p. (In Russ).
3. Goncharov S.F., Bobiy B.V. *Meditsinskoye Obespecheniye Naseleniya pri Terroristicheskikh Aktakh* = Medical Support of the Population in Terrorist Acts: A textbook for doctors. Moscow, VTsMK Zashchita Publ., 2016. 79 p. (In Russ).
4. Baranova N.N. Medical Evacuation of Victims: Their State, Problems. Report 2. *Meditsina katastrof* = Disaster Medicine. 2019;1:42-46 (In Russ.). <https://doi.org/10.33266/2070-1004-2019-1-42-46>
5. Baranova N.N., Goncharov S.F. Quality Criteria for Medical Evacuation: Substantiation of Assessment and of Practical Use. *Meditsina Katastrof* = Disaster Medicine. 2019;4:38-42 (In Russ.). <https://doi.org/10.33266/2070-1004-2019-4-38-42>
6. Goncharov S.F., Bystrov M.V., Baranova N.N., Guseva O.I., Popov V.P., Romanov V.V., Chubayko V.G., Sakhno I.I., Mobile Medical Formations of Service for Disaster Medicine of Ministry of Health of Russian Federation. *Meditsina Katastrof* = Disaster Medicine. 2019;3:5-11 (In Russ.). <https://doi.org/10.33266/2070-1004-2019-3-5-11>
7. Koroleva V.V. Structural and Functional Model of Vocational Education. *Interactive Science*. 2016;9:28-34 (In Russ).
8. Obolonskiy Yu.V., Olefirenko S.S., Safonov V.V. Innovative Approach and Possible Ways of Development to Achieve the Targets of National Projects on the Example of Emergency Medical Care, as well as Emergency Specialized Medical Care of Primary Health Care of the State Budgetary Healthcare Institution of the Republic of Crimea "Crimean Republican Center for Disaster Medicine and Emergency Medical Care". *Zhivaya Psikhologiya* = Living Psychology. 2019;6;3:155-192 (In Russ).
9. Radchenko I.V. *Organizatsiya, Planirovaniye i Vedeniye Meropriyatiy Grazhdanskoy Oborony v Zdravookhraneni Rossyskoy Federatsii* = Organization, Planning and Management of Civil Defense Measures in the Healthcare of the Russian Federation. A Textbook for Doctors. Moscow, VTsMK Zashchita Publ., 2015. 42 p. (In Russ).

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