

Crisis Management and Education in Health

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Abstract

The paper is devoted to the crisis management field in the emergency medical services (EMS) in case of emergency with mass health disabilities, and education of crisis management staff.

Acts related to EMS in the Czech Republic do not specify a particular professional profile and education targeted at emergency preparedness, crisis management on the list of medical professional staff. This fact is reflected in the personal equipment of EMS emergency preparedness workplaces in each region of the Czech Republic. In practice, the crisis management system is often faced with a lack of inadequately professionally trained and experienced staff. The paper suggests possible approaches to enhance the education effectiveness in the field of crisis management in pre-hospital emergency care.

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Keywords: Crisis management, major disaster, mass health disabilities, pre-hospital emergency care, emergency preparedness workplace, emergency medical services, education.

1. Introduction

Education and emergency preparedness go inseparably hand in hand. Maximum preparedness of society to prevent and manage emergencies can only be achieved through education targeted at all groups of population as well as preparation of professionals (Štorek, 2015).

It is the application of education as one of pillars encouraging and streamlining to the emergency preparedness in the healthcare sphere. Acquiring professional knowledge and skills, technical and

technological preparedness for dealing with emergencies, crisis situations, creating and updating legislation may result in the base for emergency preparedness of a particular ministry.

Crisis management is a system of targeted activities focused on managing emergencies or crisis situations, which are carried out by managers responsible for a particular sphere, e.g., healthcare (ministerial crisis management). It is applied in dealing with preventive measures (planning), emergency management (announce alert) and crisis situation (state of emergency announcement) (Štorek, 2015).

Preparation of individual ministries to prevent and manage emergencies and crisis situations in the Czech Republic result from the set of crisis legislation in 2000 and modified through content of Security strategies of the Czech Republic updated in 2015.

The Ministry of Health of the Czech Republic prepared the Concept of emergency preparedness where the health emergency preparedness is defined as *“a state of the health system ability to ensure at emergencies the healthcare to the population by professionally qualified staff to the extent adequate real situation in accordance with approved procedures within both internal and external operability of the system.”*

2. Crisis management and emergency preparedness in health in the Czech Republic

In terms of comprehensive health perspective, human resources can be categorized into separate groups with different relationship to performing security tasks in the individual health sectors:

- a) Health Administration Office staff,
- b) Staff of public health protection authorities,
- c) Staff of health services providers,
- d) Staff of medical equipment suppliers (Štorek, 2015).

Health services readiness to manage crisis situations is fundamentally conditioned by the human resources readiness. The prerequisite for the effective function consists in determining qualification and personal criteria for the staff – specialists within the system and their rigorous selection. In the Ministry of Health of the Czech Republic, the education in compliance with the confines of the law is carried out separately for university graduate staff, doctors as well as non-medical health professionals and other staff in the health sector. However, Acts pertaining to emergency medical services do not specify on the list of medical staff professions explicitly a particular professional profile and education targeted purposefully at emergency preparedness, crisis management (Fišer, 2013).

Education in the crisis management field is currently carried out by professional societies of Czech Medical Association of J .E. Purkyně – Society of Disaster and Emergency Medicine and Association of Healthcare Emergency Preparedness, and their affiliation with the healthcare in the Czech Republic through efficient collaboration with the health policy coordinator – the Ministry of Health of the Czech Republic, its specialized departments and cooperating institutes of education, i.e., Institute for Postgraduate Medical Education (Prague) and the National Centre of Nursing and Other Health Professions (Brno).

The activities of these institutions complement the cooperation with universities both in the field of lifelong learning, postgraduate education and accredited bachelor and master degree programs specialized in the field of crisis management or protection of the population; there can be mentioned University of Defence in Brno, Czech Technical University in Prague, and Tomas Bata University in Zlin. However, at the same time, in terms of emergency preparedness cannot be noted that university medical faculties manifest more significant activities.

Considering professional competence of an emergency preparedness specialist, the essential education framework is listed in the Act no. 240/2000 Coll., on crisis management and amending certain acts where it is stated in § 29c, paragraph 4 as follows: *“Only a person meeting the requirements of professional competence can be determined as a security liaison employee. A professionally qualified person means one who has accomplished higher education by completing an accredited study program providing comprehensive knowledge about ensuring the security of the Czech Republic, protection of population or crisis management, or has at least three-year experience in one of these fields.”*

It has to be noted that the Ministry of Health of the Czech Republic understands the education in healthcare habitually in terms of medicine. It does not always respect adequately the need for education in non-medical approaches, which, however, are an indispensable component of emergency preparedness with mass health disabilities; in addition with broadwise support. This fact in turn leads to the nonexistence of some education institutions with accredited study program of a particular field, which subsequently results in staff competence at healthcare emergency preparedness workplaces. The current demand for professional education within healthcare crisis management is also reflected in the conclusions of the Population protection concept until 2020 with a view to 2030 where inter alia is stated that *“the possible solution to the existing situation is to increase the emphasis on the education system, closer theory-practice linkage and also efficient use of security research results”* (Population protection concept, 2014).

2.1 Emergency medical services workplace in the Czech Republic

In the Czech Republic, medical rescue chain and its individual components involved in the elimination and rescue operations are specified in so called “crisis acts”. The first article is a layman first aid, the second one – professional pre-hospital emergency care provided by emergency medical services, and the third one – professional hospital emergency care (Urbánek, 2013).

Emergency medical services providing professional pre-hospital emergency care follows particularly the Act no 374/2011 Coll., on emergency medical services where the emergency preparedness workplace is also indicated as well as the activities specification for coordination as follows:

- tasks arising for providers of emergency medical services from the crisis plan, region, emergency planning and Integrated Rescue System documentation,
- education and training to perform tasks of the emergency medical services provider within the sphere of crisis management, urgent care medicine and emergency medicine,

- education and training of the Integrated Rescue System units to perform urgent resuscitation,
- communication means to perform tasks of the emergency medical services provider within the Integrated Rescue System and in crisis management.

Furthermore, there is an integrated rescue system trauma plan proposal and its amendments proposals.

However, in the Integrated Rescue System law regulations, a priori, there is no unified management system specified. In the Czech Republic, individual regions (14 regions) are founders of the Integrated Rescue System. Therefore, there are 14 models of emergency preparedness workplaces.

3. Results and discussion

Different organization structure of the Integrated Rescue System in each region contributes to the disunity while performing tasks stipulated by law. Such a discrepancy in the Integrated Rescue System structure resulted also from the investigation conducted in selected emergency preparedness workplaces of emergency medical services in the Czech Republic (Švarcová, 2016).

In some Integrated Rescue System organizations, the implementation of education and training are excluded from the jurisdiction of emergency preparedness section and are included within the department of human resources, medical care, and organization headquarters. Target areas of education in urgent care medicine and emergency medicine are ensured on a high level corresponding to the European standards; however, less attention is paid to crisis management at emergencies when the need for close coordination of the Integrated Rescue System sections is required, e.g., in case of emergencies with mass health disabilities.

The survey results also showed that heads of emergency preparedness sections are knowledgeable and educated in medicine field; however, they do not always pass the necessary additional education in crisis management branch. The similar situation in education focused on crisis management or preparedness is among the staff of a particular section; and they are those who participate in critical crisis documentation preparation and are responsible for its quality elaboration.

The preparedness of the Integrated Rescue System organization to deal with emergencies results from many factors; however, in terms of the emergency preparedness, there can be defined key areas as follows:

- level of crisis documentation preparation and its continuous updating and incorporating newly developed threats,
- accomplished methodological and testing exercises,
- implementation of experience from real-world interventions into those areas (WHO, 2012).

Partial discrepancies were found between the purpose of executed exercises and emergencies with mass health disabilities, which are specified resulting from the risk analysis in the region crisis documentation. There was found disunity in the administrative documentation approach in terms of accomplished exercises: number of participants and their frequency of participation, focus on intervention strategy and tactics.

Consequently, there has been no objective evaluation system developed so far so that emergency preparedness workplaces of emergency medical services could be assessed using relevant criteria.

The overview of above mentioned aspects from the investigation conducted in selected regions of the Czech Republic is presented in table no. 1.

Table 1. Emergency preparedness workplaces in selected regions of the Czech Republic

Region	Organization structure	Emergency preparedness human resources	Planning documentation	Exercises record
		- number of persons/ education - workload	- level of trauma plan announcement for emergencies	for 2010 - 2015
1	Emergency preparedness workplace is subordinated to the director of emergency medical services, operating inspector is a part of a structure	- 6 /higher education - emergency preparedness, education exercise, training, Social Psychological Interventions	- activation level II over 15 affected or more than 5 exit sites	kept
2	Emergency preparedness workplace is subordinated to the health care section/medical care	- 2/ higher education - emergency preparedness , exercise	- activation level II in case of 3-20 affected	not kept
3	Emergency preparedness workplace is subordinated to the health care section/medical care	- 2 / higher education - emergency preparedness , exercise, education	- activation level II in case of 20-50 affected + reserves activation	not kept
4	Emergency preparedness workplace is subordinated to the director of emergency medical services	- 2/ higher education - emergency preparedness , exercise, education	- activation level II not subject to number of affected, decision based on circumstances	kept
5	Emergency preparedness workplace is subordinated to the director of emergency medical services, Emergency preparedness workplace has its own organizational structure	- 2/ higher education - emergency preparedness, Social Psychological Interventions	- activation level II over 15 persons or more than 5 exit sites	kept only cooperative exercises with Integrated Rescue System
6	Emergency preparedness workplace is subordinated to the director of emergency medical services, operating inspector is a part of a structure (paid from crisis)	- 3/ higher education - emergency preparedness , exercise	- activation level II over 5 persons or more exit sites than in a shift	kept only cooperative exercises with Integrated Rescue System

4. Proposals for the unification of education system – crisis management in health

The level and quality of the ministerial crisis management preparation is the basis for further particular readiness of individual ministerial management levels and individual providers of health services as well as readiness to coordinate the preparation within the ministry (Štorek, 2015).

Some foreign studies highlight the advantages of a central management system, which leads to facilitating communication among regions, a certain unification of medical equipment and supplies, finance guaranteed by the state, guiding the staff education and adherence to uniform operating procedures at emergencies/crisis situations (Hirsch, & Carli, 2015). The structure of the emergency preparedness workplace of emergency medical services would be also unified as well as its workload. On the contrary, the advantages of decentralized system are seen by Germany, Poland, Austria, etc.

In the Czech Republic, there is no unified view of the parties in question, i.e., Association of Emergency Medical Services, Union of Health and Social Services of the Czech Republic (Emergency Medical Services section), Czech Medical Society and founders (regions) of individual organizations of Emergency Medical Services.

The negatives of a central management system are seen in the increase of administrative machinery: current regional headquarters would be kept and, in addition, the General Directorate of the Emergency Medical Services of the Czech Republic would have to be established. Regional specific differences would not be respected, and finally, the establishing of “monopolistic environment” would not enable mutual comparison of individual emergency medical services and would lead to loss of performance motivation. The proposal to change the system would call for amendment of legislation or, possibly, introducing new ones.

Alternative solutions of education requirements in terms of staff working in the field of crisis management in emergency medical services (the above mentioned Act no. 240/2000 Coll., on crisis management and amending certain acts) appears insufficient with respect to the emergency preparedness workplace specialization. Only higher education with a particular professional specialization should be required as an entrance education for an emergency preparedness staff.

In terms of further continuous education, the Ministry of Health of the Czech Republic should define uniform educational standards, work out accredited programs with relevant study curricula and implement them gradually in professional careers including financial support of the education system.

5. Conclusion

The Ministry of Health in addition to security ministries is one of branches where the crisis management implementation is unavoidable. Its role and significance are growing under substandard conditions, such as emergencies with mass health disabilities (changes in natural and social environment) (Štorek, 2015).

The requirement of a proactive approach to health system preparedness, i.e., health professionals, health services providers, medical equipment, technology, medical logistics including control system entities call for the “ministerial emergency preparedness management” (Štorek, 2015).

In terms of emergency medical services with a closer focus on the emergency preparedness sector, new solutions have to be considered primarily in the organizational structure, staffing facilities, staff education and finally in its content.

In order to meet these requirements, the solution is offered from the central level, i.e., from the Ministry of Health of the Czech Republic; it might establish some unification or centralization of major sections of emergency medical services. The procedure would be appropriate in the individual stages of individual sections of emergency medical services. The methodological procedure has to master meeting vertical control (methodological management of the Ministry of Health) and horizontal management (the territorial unit interests).

Readiness of the crisis management workplaces staff has to be created, maintained and enhanced through the comprehensive educational process. It is necessary to establish a comprehensive system of pre and post-graduate education for different target groups.

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