Challenges in emergency medical care center in Bulgaria in case of mass traumatism during disaster situations - epidemiological survey

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Background. According to the data of the General Directorate of Fire Safety and Civil Protection (GDFSCP) various disasters with a traumatic defeat (OTD) occur in Bulgaria. The leading place for mass trauma is caused by transport accidents, fire, floods. Mass trauma in the OTD is a challenge for emergency medical care center (EMCC) teams in the country. System of EMCC play a critical role in the continuum of ensuing medical care during each stage of calamities. Good knowledge of mass traumatism, causes, mass disaster manifestations are an important basis for making the right decisions for action by the EMCC teams.

Methods. A questionnaire survey was conducted with the teams of EMCC-Blagoevgrad region about the knowledge of mass trauma in OTD. The study runs through two periods. The first period is 2013-2014. Through a survey, data from the EMCC staff (more than 300 respondents) on the problematic areas of knowledge, preparation and readiness for action have been studied. The data were collected and archived electronically. Data from survey were processed with IBM SPSS Statistics19. Available (EMCC, NSI and GDFSCP) databases about disasters and mass traumatism (with an emphasis from 2010-2017, Table 1.) are researched and analyzed as well.

Results. This report presents some of the major issues faced by the teams in an outbreak of traumatic defeat. In general, the staff is male - nearly 60% of the respondents, and almost ½ of the staff is between the ages of 46 and 60. Over 50% of respondents claim that OTD's behavioral instructions are well-known (Figure 1), but more than half think they do not have got Disaster response equipment (Figure 2).Survey data show that 1/3 of respondents claim that the health effects of OTD are known. Most of the trauma in the OTD by the respondents is distributed to: slightly injured (40%), moderate and severely injured (60%), 20% of whom require specialized medical assistance.They estimate that the victims of shock are predominant (Figure 3). More than half can not determine the level of preparedness for teams to react to mass traumatism in disasters. Almost 2/3 say they need regular team training (Figure 4).

Conclusion. Mass trauma is assessed as considerable in OTD. There are medical standards for the treatment of traumatic injuries in hospital, but the work of the EMCC teams in OTD has specific characteristics. The situation is seriously complicated. Field actions are dynamic at resource constraints. There is a need for timely and well-coordinated action by EMCC teams. For medical workers in EMCC is important to have regular training.

Table 1. Losses by crisis events 2010-2017 – total for the country. (source: * NSI; 2018)

Indicators	Crisis events - in numbers	Damages determined - thousand BGN
Total	3 577	65 243
Fires	2 448	1 061
Landslides	71	9 632
Floods	184	30 617
Storms, tornado, windspout, whirlwind	29	3 267
Hailstorms	5	10
Snowstorms (snowfall)	87	351
Accidents with vehicles	734	20 052
Others	19	253

* Data are based on the annual reports presented in NSI by 83 municipal administrations.

Figure 1. Disaster action instructions.

Figure 2. Disaster response equipment.

Figure 3. Type of traumatic injury in OTD.

Figure 4. Self-assessment of training needs for OTD actions.