8. Triage due to road accidents in Bulgaria – a questionnaire survey of self-assessment of readiness of emergency medical care center in Blagoevgrad region

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Medical triage (MT) is an important practical tool in the healing process within the scope of Emergency medicine specialty in the country. The main field of application and implementation of MT mostly refers to the teams of the emergency medical care center (EMCC). The experience in this direction is significant for the terrestrial medical transport teams in the country. The E79 main road and the Struma highway are part of the infrastructure in Blagoevgrad region which is served by 10 branches of the EMCC-Blagoevgrad. The knowledge and skills of the teams at EMCC-Blagoevgrad to provide **medical triage** to the victims in the event of road accidents (RA) is an essential element of the team preparation, due to the high frequency of serious car accidents in southwestern Bulgaria. (1-6)

Purpose. The aim of the study is to examine and analyze the readiness of medical teams of EMCC and Self-assessment of readiness to provide **medical triage** in case of mass trauma due to road accident.

Materials and methods A questionnaire survey with the teams of EMCC-Blagoevgrad region was conducted - 300 respondents. (Fig.1.) On the other hand available (EMCC and GDFSCP) databases are researched and analyzed as well for 10-year period.

Results and discussions. Over 10 years, more than 5,000 people died in the RA, and around 9,000 people were injured every year in Bulgaria. (Table 1.) (5,6) For the period January – March 2019, in the RA more than 100 people die, and 1500 injured. (5) The survey shows that 60% are seriously injured. Of these by the nature of trauma: with immediate vital disturbances group T1 (20-40%); group T2 (20%); T3 (40%); T4 (20%). (Fig.2.) Specialists with Emergency Medicine specialty in EMCC is only about 1% of the staff. The importance of MT is reported by about 60% of staff, but just 5% say they know how. More than 80% say there should be specific MT training. (1)The development of a postgraduate program of training for physicians, medical assistants and nurses working at EMCC-Blagoevgrad and the introduction of this program in the form of compulsory regular annual training is an important stage for maintaining a constant high level of readiness of the medical staff of EMCC-Blagoevgrad for the medical triage of victims due to road accidents. This program can also serve as an element of a larger risk reduction program to reduce the risk of fatal injuries in road accidents of any type on the territory of the country as a whole. On the other hand, this program can be used as the basis for implantation it in other regions with a high concentration of road accidents, and across the country for enhancing the overall level of competence of the medical staff in the EMCC system in Bulgaria.

Key words: Medical triage, mass injuries, traffic accidents, emergency medical care center, Bulgaria

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Table 1. Deaths and injuries for the period 2009 to 2018 due to road accidents in Bulgaria and Blagoevgrad region (Source GD"FSKP" - Mol)

TOTAL in Blagoevgrad region			Year	TOTAL in Bulgaria		
RA	Died	Injured		RA	Died	Injured
	18	377	2018	6690	611	8471
288	26	351	2017	6880	682	8680
364	39	433	2016	7404	708	9374
303	34	380	2015	7226	708	8973
300	27	394	2014	7015	660	8640
661	7	239	2013	7016	601	8776
1297	34	363	2012	6717	601	8193
348	27	442	2011	6638	657	8303
335	45	432	2010	6610	775	8080
333	26	418	2009	7068	901	8674

Fig.1. Two-dimensional gender distribution and professional status at EMCC for all affiliates in Blagoevgrad region (Bulgaria). Relative share (%).

Fig.2. T1 - life-threatening condition damage with a high probability of death if you do not take immediate interventions (shock; burning over 20%); T2 - severe injuries (need urgent medical assistance, an unstable /potentially unstable emergency patient); T3 - moderate damage (a stable emergency patient); T4 - agonizing, life-incompatible injuries (Brain death syndrome, 90% burning)

Conclusions. There is a significant number of victims of road accidents in the country. The distribution of MT in sub-types specifies it. The need for MT implementation by EMCC teams is available. These teams are the main contractors of **Medical Triage** and need specialized training about MT application. This study gives the idea of expanding and reaching a higher level of skills and knowledge by preparing a comprehensive training program on conducting medical triage in road accident victims.