100% of respondents including: ensure all ambulance services maintain readiness for MCIs; conduct joint training and exercise programs; adopt a common model for managing MCIs; and recognize the authority of only one on-site EMS commander. One policy that was proposed was that the senior EMS officer arriving on-site should not necessarily take over command and was endorsed by 92% in the 2nd e-Delphi cycle. Variability among experts according to origin country was noted concerning: (1) assign ambulances to off-duty EMS staff; and (2) dispatch two BLS and two ALS ambulances as an automatic MCI response.

Conclusion: Clear policies shared by all EMSs are needed to ensure effective management and maximal life-saving capacity in MCIs. The study presents consensus-based solutions to varied challenges common to EMS worldwide. Additional studies are needed to further develop policies into measurable and comparable international standards.

Evaluation of the Situation of Trainings Provided by Çanakkale 112 Ambulance Services

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Study/Objective: The purpose of this study is to evaluate the present situation as of November 1, 2016, in regard to in-service training provided by the Training Unit of Çanakkale 112 Emergency Medical Services (CEMS).

Background: It is important to constantly update and improve personnel training in Emergency Medical Services. The following trainings are provided to personnel in pre-hospital health services: Basic Module Training (BMT), Trauma and Resuscitation Training (TRT), Advanced Life Support Training (ALST), Child Advanced Life Support Training (CALST) and Training for Ambulance Driving Techniques (TADT).

Methods: The study is a descriptive epidemiological study. The data was obtained from the records by Training Unit of CEMS. Of those, 57,5% (n = 227) are Emergency Medical Technicians (EMTs); 20,0% (n = 79) are Emergency Medical Technicians (Paramedics). In all, 89,88% of all of the personnel (n = 307) received the BMT; 90,1% (n = 308) received the TRT; 71,6% (n = 245) received the CALST; 61,1% (n = 209) received the ALST. Only 37,0% of them received the TADT. 97% of EMT’s (n = 220) received the BMT; 99,0% of them (n = 224) received the TRT; 78,0% of them (n = 177) received the CALST; 70,0% (n = 160) received the ALST; 32,0% (n = 72) received the TADT. Further, 86,0% of paramedics (n = 68) received the BMT; 87,0% of them (n = 69) received the TRT; 67,0% of them (n = 53) received the CALST; 53,0% (n = 42) received the ALST; and, 23,0% (n = 18) received the TADT. 25,0% of doctors received the BMT; 12,0% of them (n = 2) received the TRT; 38,0% (n = 6) received the CALST and 12,0% (n = 2) received the ALST.

Conclusion: It was concluded that since the BMT and TRT were performed in the city of Çanakkale, the participation percentage of EMS personnel was high; on the other hand, since the ALST and CALST were performed in the city of Bursa, the participation percentage of EMS personnel was lower.


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Study/Objective: The aim of the study was to analyze changes in quality and time delays in prehospital stroke management, and their influence on Door-to-Needle Time (DNT).

Background: Interval between stroke onset and thrombolysis determine the efficacy. Guidelines for stroke management were introduced in 2008 in Tallinn Emergency Medical Services (TEMS). Since 2014, the requirement of pre-arrival information by phone call of a possible thrombolysis patient to the West Tallinn Central Hospital (WTCH)-SS neurologist is in the TEMS guidelines. Since 2014, thrombolysis starts on Computed Tomography table (CT) at WTCH-SS.

Methods: Data of all consecutive thrombolysed stroke patients were recorded prospectively since January 1, 2005 to November 1, 2016 at WTCH-SS. Ambulance records of thrombolysed and non-thrombolysed stroke patients managed by TEMS were retrospectively analysed since 2009. Analysis was conducted for three periods: 2005–2009, 2009–2011, and 1/1–1/11/2016.

Results: TEMS records were analyzed for 3666 stroke, including 243 thrombosed, patients during selected periods. Changes are depicted in the table. The exact time of onset was recorded on 38,9% (2009–20011) and on 62,4% (2016) of TEMS records. TEMS response time with ECG performed or ECG monitoring was 26.8 and 24.8 minutes, respectively versus 18.2 minutes without ECG. The pre-arrival information of possible thrombolysis to WTCH-SS was recorded in 28.7%. With pre-arrival information mean DNT was 25.8 versus 50.3 minutes without prior call. Changes are depicted in the table. The exact time of onset was recorded on 38,9% (2009–20011) and on 62,4% (2016) of TEMS records. TEMS response time with ECG performed or ECG monitoring was 26.8 and 24.8 minutes, respectively versus 18.2 minutes without ECG. The pre-arrival information of possible thrombolysis to WTCH-SS was recorded in 28.7%. With pre-arrival information mean DNT was 25.8 versus 50.3 minutes without prior call.

Conclusion: TEMS adherence to guidelines has improved, but ECG is performed. DNT times have improved at WTCH-SS. The factors for improved DNT were related to pre-arrival information of possible thrombolysis patients by TEMS and start of thrombolysis in CT.