EMS Annual Meeting Abstracts
Vol. 15, EMS2018-567, 2018

A comparison of meteorological and biometeorological characteristics with medical data of emergency medical service in Ústí nad Labem

Martin Novák (1,2)

(1) Czech Hydrometeorological Institute, Regional Branch in Ústí nad Labem, Kočkovská 18, 400 11 Ústí n.L., Czech Republic (novakm@chmi.cz), (2) Jan Evangelista Purkyně University in Ústí nad Labem, Faculty of Environment, Department of Natural Sciences, Králova Výšina 3132/7, 400 96 Ústí nad Labem, Czech Republic

Key words:
biometeorology, biometeorological forecast, bioweather, medical data, emergency

Introduction
Studies of relations between (bio)meteorological characteristics and medical data are very important to a bioweather forecast verification. Czech Hydrometeorological Institute (CHMI) publishes Biometeorology Forecast (BMF) for Czech republic since 1993. The BMF is calculated by basic meteorological characteristics (air temperature, humidity, vertical profile of air temperature, occurance of selected meteorological phenomenas) and circulatory factors (described by the changes of air-masses).

Data and methods
The meteorological data come from CHMI meteorological stations in Ústí nad Labem (Ústí nad Labem – Kočkov and Ústí nad Labem – Vaňov). These stations are situated in different altitudes. Vaňov (WMO 11503) is lowest part of the city in Labe river valley (150 m asl) and Kočkov (11502) is the highest place of the city (375 m asl).
The medical data are descended from Emergency Medical Service (EMS) of the Ústecký Region in Ústí nad Labem (northern Bohemia). An original database of the medical data included information about all of the emergency interventions. These data were purged from scheduled interventions, interventions for women to birth and interventions from other EMS centres than Ústí nad Labem city.
Both kind of data (meteorological and medical) were selected from 9-years long period (2009-2017). This selection was limited by the long of daily medical data range from the EMS.

Conclusions
The results of this article shows relations between the meteorological and biometeorological characteristics and forecasted BMF values and suddenly EMS actions. These results are influenced by some changes of EMS system (this influence is discussed).