

Abstract

Influenza has accompanied humanity for centuries, and thousands of people have died from it for centuries. Every year, seasonal flu occurs regularly in the Czechia, caused by normally circulating flu viruses, in which minor changes occur. However, once every 10–20 years, a completely new subspecies of this virus will appear, which the human body has not yet encountered, as the virus undergoes major genetic changes. The aim of the work is to use statistical methods to reveal long-term patterns in the incidence of influenza in the Czechia from both temporal and regional point of view. The first partial goal is devoted to the regularity of the onset of the influenza epidemic in individual regions of the Czechia and the long-term development of the incidence of influenza, using the analysis of time series for the years 2007–2018. The first result of the work was the finding that the flu season in the Czechia has a regular onset with a deviation of one week and the incidence trend is declining in the studied years. The second partial goal is to evaluate and visualize in map the form of regional differentiation in the incidence of influenza epidemic at the regional level in the Czechia. The analysis showed that influenza spreads in the Czechia quite randomly and global patterns of spread do not apply here. The obtained results could be influenced by the fact that the Czechia is a small territory and there is no room for the expression of spatio-temporal patterns in the case of using data for regions. A recommendation for further analysis could be the collection of more detailed data allowing deeper analysis.

Key words: influenza, Czechia, spatiotemporal analysis, regional differentiation

