

Determining the model of spatial distribution pattern of Covid 19 disease in rural and urban areas of Ardabil province and managing high-risk areas in 2021

Abstract

Background: Covid-19 disease is highly contagious common in all ages and both sexes.

Aim: The present study investigates the model of spatial distribution pattern of Covid 19 disease in rural and urban areas of Ardabil province and the management of high-risk areas in 2021.

Materials and methods: In this retrospective study, patients referred to hospitals in Ardabil province from the beginning of the epidemic were studied. The registered data of the portal of the Ministry of Health, which is used equally for all medical universities in the country, in this study were received from the Deputy Minister of Health of Ardabil University of Medical Sciences. The Hazmer-Lemshow guideline was used to select the variables for logistic regression analysis. Analyses were performed using SPSS and ARCGIS software.

Results: The mean age of the all patients was 52.52 years and 49.1% of the patients were male. After eliminating the confounding effect of other variables, age (1.05), masculinity (1.20), hospitalization (3.92), ICU hospitalization (6.21) and positive PCR test result (2.14) were associated with Covid 19 death. . Analyses related to the spatial distribution pattern of the virus also showed that in general Ardabil city has the highest incidence of disease in the province and the probability of infection and disease transmission is highest in the central parts of Ardabil city and distant cities have less probability of transmission.

Conclusion: The findings of this study showed that hospitalization in the intensive care unit was the strongest predictor of death due to this disease. After that, they are in the next ranks, respectively, in terms of hospitalization and having a positive PCR result. Also, according to the analysis of spatial spread of the virus, Ardabil city was identified as a high-risk area and the center of virus spread in the province.

Key words:

Covid-19, spatial distribution , Ardabil province, high risk areas.