

Jordan University of Science and Technology

Predictors of COVID-19 severity and hospitalization: A survey-based study from Jordan

Authors: Hassan M Kofahi, Samer F Swedan, Omar F Khabour, Refat M Nimer

Abstract: Objectives To explore the possible predictors of severe illness and hospitalization due to COVID-19 among Jordanians. Method The study was cross-sectional, survey-based and was conducted from March to July of 2021. Individuals who had recovered from COVID-19 (n = 2148) were recruited in the study. Participants were categorized according to the severity of COVID-19 infection and hospitalization. The study sample was stratified according to age, gender, body mass index (BMI), comorbidities, family income, smoking status, and ABO blood groups. Risk factors were investigated using the Chi-square test and multivariate logistic regression analyses. Results Severe illness and hospitalization were associated with older age, males, individuals with comorbidities, higher BMI, and lower-income. No significant differences were found in the incidence of severe illness or hospitalization frequency between the ABO groups or between smokers and non-smokers. Multivariate logistic regression analyses predicted male gender, being older than 40, having a BMI of over 30, having 3 or more comorbidities, and low family income as risk factors for severe COVID-19 outcomes. Conclusion Age was the strongest predictor for severe COVID-19 outcome, followed by having 3 or more comorbidities and to a lesser extent male gender and obesity. These results could help target at-risk groups with infection prevention measures including prioritizing primary COVID-19 vaccines, as well as booster doses.