

# Clinical Manifestations and Associated Mortality Factors of COVID-19: A large population-based study in Northeast of Iran: 2020-2021

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## Abstract

**Background:** The emergence of the coronavirus disease in late 2019 (COVID-19) has become one of the greatest health problems of the 21st century. Many aspects of this viral disease are still hidden. The current study is conducted to investigate COVID-19's clinical manifestation, mortality factors, and their association with each other in the COVID-19 pandemic in Razavi-Khorasan province, Iran. **Methods & Materials:** This retrospective epidemiological population-based study was conducted from January 21, 2020, to March 20, 2021. The data including demographic characteristics and clinical presentations of the patients were extracted from the Medical Care Monitoring System (MCMC), disease management portal in the deputy of health and Hospital Information System (HIS). **Results:** A total of 80499 patients were admitted to all hospitals of Khorasan-Razavi University of Medical Sciences with laboratory/clinical COVID-19 confirmed disease, between January 2020 and March 2021. The male-to-female ratio was 1.10:1 and the mean age of our COVID-19 individuals was  $55.67 \pm 23.27$ . The most frequently reported presenting symptoms at admission were respiratory distress (58.2%), fever (36.7%), and cough (34.9%), and alternation in smell/taste (0.9%) was the less frequent. Being male, aging older than 60 years and having comorbidities were significantly associated with higher mortality rates. **Conclusion:** Due to the genetic mutations in the virus and the emergence of the new variants of the virus, clinical presentations, and mortality rates of the COVID-19 have been shifted through three reviewed waves. Further studies are needed to determine the impact of the new variants of the virus on individuals.

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