



## The Novel COVID-19 Infections in Iran: Management and Challenges

Shiva Kargar <sup>1\*</sup>, Mostafa Peyvand <sup>1</sup>, Fateme Hajizadeh <sup>2</sup>

<sup>1</sup> Student Research Committee, Zahedan University of Medical Sciences, Zahedan, Iran

<sup>2</sup> Boshehr University of Medical Sciences, Boshehr, Iran

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#### \*Corresponding Author:

Shiva Kargar

Student Research Committee, Zahedan University of  
Medical Sciences, Zahedan, Iran.

#### Email:

Shivakargar@yahoo.com

#### Tel:

+98-9174255456

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### Dear Editor

The novel coronavirus (COVID-19) was first identified in Wuhan, China, in December 2019 among a cluster of patients that presented with an unidentified form of viral pneumonia with a shared history of visiting the Huanan seafood market. The pathogen has been identified as a novel enveloped RNA Betacoronavirus that has currently been named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and has a phylogenetic similarity to SARS-CoV. The World Health Organization (WHO) declared coronavirus disease 2019 (Covid-19), caused by SARS-COV2, is a public health emergency of international concern (1) which is a threat to all countries including Iran.

COVID-19 arrived in Iran from China. By February 19, 2020, two patients in Qom city were confirmed as SARS-CoV-2 positive. Afterward, the disease spread very rapidly in adjacent provinces near Qom, such as Tehran, Markazi, Isfahan, and Semnan provinces, and shortly thereafter in all 31 provinces of the country. During the first 20 days of the epidemic, 7,161 cases of COVID-19 were reported in the country in which Tehran, Qom, and Mazandaran were the three provinces that had the highest number of patients. It was recognized that the start points of the outbreak were the northern provinces of the country and the main reason was the new year trips that a huge amount of people took (2).

Due to the high speed of the virus spread and lack of vaccine and specific treatment, it has caused challenges in the various fields of health, economic, political, and social life for all countries



including the Iranian government. The coincidence of the corona epidemic with the New Year holiday and starting the New Year traveling by a huge group of people to different areas of the country resulted in a high prevalence of the virus. Ignoring personal hygiene, improper self-medication, lack of adequate infrastructure and per capita hospital beds and equipment in some cities, taking unconfirmed medications, leaving contaminated gloves and masks in the environment, relying on incorrect information in cyberspace, traffic on the streets, and restriction and deprivation resulted from international sanctions, the difficulty of importing some essential medicines, are some other effective factors in the occurrence of this disaster (3).

The spread of the virus was so high on Jun 8th, 2020 the number of cases and mortality were 173832 and 8351, respectively. This growing trend of infection and mortality in Iran was alarming and critical (4).

Faced with such a grim situation, the Iranian government has taken a series of unprecedented rigorous measures. The first and also the most essential step was forming the control and prevention management command center which is directly guided by the highest officials of the country such as president and vice president. Also, it is highly demanded that all organizations should have a close relation and consistency in this matter.

The prevention actions are based on culturalization and providing the required education to the people regarding the current situation of the outbreak. The prevention methods are addressed as observing personal hygiene, staying at home, and avoiding family gatherings and ceremonies. Considering this fact that most of the infection has happened in the public places, the Iranian government took different actions in facing the virus which could be named as closing the schools, universities and all training centers for long term, establishing regulation for inbound and outbound travels, closing the public, social, sport, scientific and artistic places. Closing cafes and restaurants and emphasizing on home-based

quarantine, reducing office working hours, canceling the congregational prayer and Jumu'ah prayer (Friday prayer), disinfecting busy places such as bus stops, subways, and bus rapid transits (BRTs), are other actions which have been taken by the Iranian government to decrease the spread of the virus (5).

Besides, mobilizing the government agencies and hospitals, increasing the number of coronavirus diagnosis test, enhancing the mask production and distributing them freely in the deprived areas, active screening in the passengers' transfer stations at the entry and exit points of the cities, screening all people via a telephone number (+ 98 4030) and a website (salamat.gov.ir), using telemedicine system capacity and also standard and active diagnosis was followed as the necessary steps to control the spread of the virus (6).

To prevent the spread of new coronavirus, the cooperation of health workers, governments, and the general public with each other is highly required. It is hoped that Covid-19 prevention, control, and treatment will be achieved through vaccine and antiviral agents' production as well as health care measures in the near future.

It is important to note, animal diseases have always been transmitted to humans and most of the new infectious diseases are caused by animals. Therefore, climate change and globalization are changing the way humans and animals are treated. The danger is likely to be greater in the future, and countries need to be on the alert and strengthen their public-health surveillance (7).

The prevalence of Covid-19 is a serious reminder of the ongoing challenge of emerging and re-emerging infectious pathogens and the need for constant monitoring, rapid diagnosis and strong research to understand the basic biology of new organisms and our susceptibilities to them, as well as to develop effective countermeasures. The way that the people and the politicians in different areas of society realize how and in what way manage and lead the crisis is an important issue. In this regard, the specialist must take time, investigate the situations and get experiences from this crisis and similar ones and come up with the



proper behavior patterns for people and governments.

### Key words

Covid-19, Challenge, Management, Iran

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