Abstract

Coronaviruses are zoonotic viruses and six species of Coronaviruses are known to cause human disease such as cause common cold, severe acute respiratory syndrome and the Middle East Respiratory Syndrome. In January 2020, scientists in Wuhan, China isolated a novel coronavirus (SARS-CoV-2), responsible for an outbreak of unknown pneumonia that had not been previously reported among humans. This virus spreads from person to person, through respiratory droplets, close contact, and by touching surfaces or objects contaminated by the virus. The incubation period varies between 2 days and 14 days. Symptoms usually include fever, cough, difficulty in breathing, pneumonia, severe acute respiratory syndrome. Older age and co-morbid conditions increase the fatality. Any person with a history of travel to and from COVID-19 affected countries in the past 14 days or anyone who has had close contact with a laboratory confirmed COVID-19 are suspect cases and needs evaluation. Currently no vaccine is available and treatment is mainly supportive. Measures at workplace should include- avoiding non-essential travel, identifying and isolating sick employees at the earliest, hand hygiene, respiratory hygiene, environmental hygiene and social distancing.

Keywords: Containment, prevention, SARS-CoV 2, travel, workplace

INTRODUCTION

Coronaviruses are distributed broadly among mammals including humans and birds. It appears that bats are their ancestral hosts. They belong to the family Coronaviridae, the name of which is derived from the Latin corona meaning crown or halo-like appearance, a characteristic feature of these viruses. Coronaviruses are enveloped, non-segmented, RNA virus.[1] Six species are known to cause human disease-229E, OC43, NL63, and HKU1 which cause common cold; severe acute respiratory syndrome coronavirus (SARS-CoV); and the Middle East Respiratory Syndrome coronavirus (MERS-CoV). Coronaviruses are zoonotic viruses causing respiratory, enteric and neurological diseases including humans. In humans, the disease spectrum varies from the common cold to more severe diseases such as MERS and SARS.[2,3]

In January 2020, scientists in Wuhan, China isolated a novel coronavirus (SARS-CoV-2), responsible for an outbreak of unknown pneumonia that had not been previously reported among humans. The World Health Organization (WHO) named this disease as COVID-19. On 30th January 2020, the WHO declared COVID-19 outbreak a “Public Health Emergency of International Concern” (PHEIC) based on the advice of the emergency committee under the International Health Regulations.[4,5]

DISEASE TRANSMISSION

Due to spillover events, that is, increased human-animal interaction, humans have acquired the virus. The virus spreads from person to person, through close contact (within about 3–6 feet), that is, through respiratory droplet expelled in the air during coughing or sneezing by an infected person. The virus can also spread by touching surfaces or objects contaminated by the virus and then touching one’s mouth, nose, or eyes. Persons showing symptoms are capable of transmitting the virus especially among close contacts.[6] Information such as the source of infection, other modes of transmission, a period of infectivity, attack rates, and immunity after infection are under investigation.[7]
Symptoms
The incubation period varies between 2 days and 14 days after exposure to an infected person. Symptoms include fever, cough, difficulty in breathing, pneumonia, severe acute respiratory syndrome. In some people, the disease can present as aches and pains, nasal congestion, runny nose, sore throat, or diarrhea. It is also possible that an infected person may not show any of these symptoms. In most of the cases (80%), the infection will be mild and need no special treatment. In severe cases, especially in the elderly and in those with comorbid conditions, the infection can lead to impaired kidney and liver function leading to organ failure and death. The overall case fatality rate is 2–3.4%. 

Criteria for evaluation for COVID-19
Any person fulfilling the following criteria should be evaluated for COVID-19:

1. Fever and/or signs/symptoms of lower respiratory illness (e.g. cough or shortness of breath) with or without the requirement for hospitalization.
2. A history of travel from China or places currently reporting confirmed cases of COVID-19 within 14 days of the onset of symptoms. These currently include Japan, the Republic of Korea, Italy, Iran, France, Spain and Germany.
3. Any person, including any health care professional, who has had close contact with a laboratory-confirmed COVID-19 patient within 14 days of the onset of symptoms.

Laboratory testing and treatment
Real-time reverse transcriptase (RT)-PCR diagnostic panel-based test kits are available to test upper and lower respiratory tract specimens collected from persons suspected to be infected with SARS-CoV-2. Currently, there is no specific antiviral treatment recommended for COVID-19. People with COVID-19 are treated with supportive care such as fluids, supplemental oxygen to help relieve symptoms, and severe cases require intensive care.

Health professionals should identify names, addresses, and phone numbers of the authorized laboratories and hospitals in the government and private sectors to refer suspected cases for diagnosis and management.

Prevention
At present, there are no vaccines to prevent COVID-19. Hence, the best way to protect against COVID-19 is to avoid exposure to persons suspected or confirmed to have COVID-19.

- Hand hygiene: Hands have to be washed often with soap and water for at least 20 s, especially after going to the bathroom, before eating, when hands are visibly dirty and after blowing your nose, coughing, or sneezing. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol.
- Respiratory hygiene: Mouth and nose should be covered while coughing or sneezing with a tissue and throw the tissue into a closed bin followed by hand hygiene. It is also advised to cough into the bend of the elbow.
- A distance of at least 1 m (3 feet) should be maintained between individuals and those having coughing, sneezing, and fever. Crowded places and mass gatherings should be avoided.
- Regular screening for fever should be instituted and employees who have mild respiratory symptoms are advised to stay at home. Any experience of fever, cough, and breathing difficulty especially if the employee has traveled to any of the countries reporting COVID-19 cases or had close contact with a confirmed/suspected case of COVID-19 within 28 days should be reported immediately to the health facility.
- WHO does not recommend the use of facemask by healthy people. Facemasks are recommended for people who show symptoms of COVID-19 to help prevent the spread of the virus to others. Using facemask is crucial for health workers and people who are taking care of a suspected or a confirmed case in close settings (at home or in a health care facility). If a mask is worn, a medical mask is to be used, ensuring that it fits well and that there are no gaps between the mask and the face. Masks should be discarded in a closed bin when it is damp, followed by hand hygiene. Individuals should avoid touching the nose, mouth, and eyes when the mask is on.
- Environmental hygiene should be maintained especially in common areas used by employees like restrooms and canteens. Regular cleaning and disinfection of frequently touched objects and surfaces using regular disinfectants is necessary. Windows and doors should be kept open for cross-ventilation.
- In case employees are traveling out on work they should be advised to be cautious and avoid visiting live animal markets, wet markets, or animal product markets. Consumption of raw or undercooked animal products should be avoided. Personal hygiene should be maintained at all times.

Travel advisory
Currently, the WHO does not recommend any international travel or trade restrictions, based on the currently available evidence. However, WHO has suggested that countries should be prepared for containment, active surveillance, early detection, isolation and case management, contact tracing and prevention of the onward spread of SARS-CoV-2 and to share data with WHO. Ministry of Health and Family Welfare (MOHW), Government of India has advised to refrain from travel to China and refrain from nonessential travel to Singapore, Spain, France, Germany, Japan, Republic of Korea, Iran, and Italy.

Quarantine and risk of transmission
Quarantine is separating a person or group of people who have been exposed to the COVID-19 case but have not yet developed illness (symptoms) from others who have not been exposed, in order to prevent the person-person spread of the
virus. The duration of quarantine depends on the incubation period of COVID-19, which is 14 days from the last date of exposure.[6,8,9] MOHFW has also suggested quarantine of 14 days for people returning from China, Singapore, Japan, Republic of Korea, Iran, Italy, Spain, France and Germany.[10] People released from COVID-19 quarantine are not considered a risk for spreading the COVID-19.[6,8]

### Suggested interim guidelines for workplaces[11-13]

- Any employee with symptoms of acute respiratory illness like fever (temperature more than (100.4°F [37.8°C]), with mild respiratory symptoms, should be encouraged to stay at home. Those who are having severe respiratory symptoms such as difficulty in breathing should seek health care at the earliest, and if possible, with prior appointment.
- Separate sick employees—any employee who reports sick to the workplace or becomes sick at the workplace should be separated from other employees. These employees should be educated about respiratory hygiene and should be provided a medical mask and sent home or to a hospital immediately depending on the severity of symptoms.
- To prevent transmission of the disease the employers should be flexible with policies regarding sick leave.
- The importance of respiratory hygiene and hand hygiene by all employees should be emphasized. Make sure adequate tissue paper and soap/hand sanitizers are available in the workplace.
- Studies suggest that the COVID-19 virus may persist on surfaces for a few hours or up to several days and, therefore, regular environmental cleaning is recommended with a disinfectant. Make sure the workplace, workstations, and commonly used surfaces like doorknobs, washrooms, keyboards, telephone, remote controls are frequently wiped using disinfectant or cleaning agents.
- Travel advice to employees—specific travel advice should be provided to employees traveling to and from China and countries with active infection. Employees returning from affected countries should stay at home for 14 days irrespective of the presence or absence of symptoms.
- Informational/educational materials about “Do’s and Don’ts”, personal hygiene, and other relevant health messages should be displayed at prominent places.

**Please Note:** COVID-19 is an emerging viral disease and for the latest updates please visit the WHO or MOHFW GOI websites.

MOHFW GOI Helpline number: +91-11-23978046;

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### Conflicts of interest

There are no conflicts of interest.

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