Int J Biol Med Res.2021 ;12(1):7256-7258

Contents lists available at BioMedSciDirect Publications

International Journal of Biological & Medical Research

Journal homepage: www.biomedscidirect.com

# Review article
# Working in Lap of corona virus disease (covid -19) at HMCH Hazaribagh Jharkhand

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**ARTICLE INFO**

Keywords:
*COVID-19*
*Healthcare worker*
*workplace*
*pandemic*
*Isolation*
*quarantine*

**ABSTRACT**

Health care workers involved in caring of patients other than covid isolation and covid ward faces mental stress, physical exhaustion. They do not know the status of patient coming to hospital.Working in emergency and OPD they faces difficulty in triage decisions, where to admit the patients( without covid test)either in isolation or general ward with other patients.Patients admitted to health facility for other reasons are particularly vulnerable to infection from super – spreading events.There is always risk of getting infection while doing some procedure such as non-invasive ventilation , Bag and mask ventilation,drug administration and others.Risk of infection is always higher among professionals ,who work in close proximity to patients.Jharkhand, where pandemic is escalating,there are major gaps in respone capacity,especially in human resourses and protective equipment.Even low cost interventions such as face mask, hand senitizer,proper hand washing may be challenging,as is physical distensing in over crowded hoapital. Without adequate protection,covid -19 mortality may be high among health care workers.



## Introduction

Coronaviruses are zoonotic viruses 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). 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 any person who has had close contact with a laboratory confirmed COVID-19 are suspect cases and needs evaluation.

The outbreak of corona virus in December 2019 started in China and it was decleared a pandemic in March 2020 by World health organization.It has affected more than 200 countries around the world.It become a major concern for people and government across the world due to its impact on individuals as well as on public health.Infectiousness and the quick spread across the world make it an important event in every ones life , often evoking fear.

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## TRANSMISSION OF DISEASE

According to current evidence, covid -19 virus is primarily transmitted between people through respiratory droplets and contact routes.It can be transmitted through droplets of different sizes; when the droplet particles are > 5-10 micro meter in diameter, they are referred to as respiratory droplets, and when < 5 micro meter are refered to as droplet nuclei[2]. Transmission occurs when a person is in close contact ( within 1 meter )with someone who has respiratory symptoms (e.g. coughing or sneezing ) and is therefore at risk of having his / her mucosae ( mouth and nose ) or conjunctiva exposed to potentially infective respiratory droplets.It may also occur through fomites in the immediate environment around the infected person[3]. Therefore, transmission of covid -19 virus can occur by direct contact with infected people and indirect contact with surfaces in immediate environment or with the objects used on the infected person (e.g. stethoscope , thermometer.etc.). In the context of covid -19, airborne transmission may be possible while doing specific procedure like endotracheal intubation, airway suctioning, nebulization ,bag and mask ventilation, cardiopulmonary resuscitation and many more invasive and non invesive procedure. There is some evidence that virus may lead to intestinal infection and be present in feaces.[4]

## SYMPTOMS;

COVID -19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization. Most common symptoms are; Fever,dry None

cough, tiredness. Less common symptoms; Aches and pain,sore throat, diarrhoea,conjunctivitis, headache,loss of taste or smell,rash on skin, discolouration of fingers or toe. Serious symptoms; Difficulty in breathing or shortness of breath, chest pain or pressure,loss of speech or movements. Serious symptoms need immediate medical attention and hospitalization. On average it takes 5-6 days from when someone is infected with virus for symptoms to show,however it can take upto 14 days.[5]

**CRITERIA OF EVALUATION OF COVID-19**

Any person fulfilling the following criteria should be evaluated for COVID-19[6]

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 foreign countries or red zone with in India

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 symptom.

**LABORATORY TEST**

Two types of test are available; (1) viral test ; it indicates the presence of current infection.(2) Antibody test; it suggests whether a person had a past infection.It may not revel a current infection because it can take 1-3 weeks after infection for the body to make antibody. Various test for covid -19 are; rapid antigen test,nucleic acid amplification test (NAAT )which gives results in 2 hours, and RT-PCR ( nasopharyngeal swab ), which gives results in 8-12 hours. 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.[6]

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 AND PRECAUTIONS**

At present, there are no vaccines to prevent COVID-19.[6] Hence, some simple precautions can reduce the chances of spread of covid -19 infection.

- Facemask is essential for every healthcare worker at their working place. facemask should be a medical mask 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.

- Hand hygiene: Hands have to be washed often with soap and water for at least 20 s, especially after touching patients and any procedure. 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.

- A distance of at least 1 meter should be maintained between individuals and patients who came to OPD and emergency and must wear face mask. . Mass gatherings should be avoided.

- Fever clinic should be instituated for screening before going to OPD or emergency. Any experience of fever, cough, and breathing difficulty with travel history or had close contact with a confirmed/suspected case of COVID-19 within 14 days should be reported immediately to the health facility.

- Environmental hygiene should be maintained especially in working station. 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 healh workers are traveling out after work they should maintained personal hygien at all times.

**GUIDELINES AT WORKPLACE[7-9]**

- Any health worker 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.

- Separate sick healthworker—any of them who reports sick to the workplace or becomes sick at the workplace should be separated from other. They should be educated about respiratory hygiene and should be sent home or to a isolation or to quarantine immediately depending on the severity of symptoms.

- To prevent transmission of the disease the worker 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, medical equipments are frequently wiped using disinfectant or cleaning agents.

- Travel history of each workers should be taken before joing to duty,if possible 14 days of quarantine should be instituated.

- Informational/educational materials about “Do's and Don'ts”, personal hygiene, and other relevant health messages should be displayed at prominent places.

**ACKNOWLEDGEMENT**

The authors would like to thanks all staff working at OPD and emergency who followed all such protocols,taken precautions till now and shared all experience of working place. Authors also thanks Dr Khushboo for collecting all protocals instructed by government and writing the draft of the paper.

**CONFLICT OF INTEREST:** None

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