

# Persuasive clinical brief note on management of patients diagnosed with COVID-19 infection

## Abstract

A novel coronavirus emerged in Wuhan, Hubei Province, China, termed coronavirus disease 2019 (COVID-19) leading to a global pandemic in December 2019. The rapid spread of this reported infections was to declared COVID-19 infection a global pandemic within three months of its emergence. The majority of patients diagnosed with COVID-19 viral infection experienced a mild illness that can usually be managed to control community transmission. COVID-19 patients require regular monitoring and timely referred for hospitalization if any signs of clinical deterioration occur including pneumonia like symptoms including difficulty in breathing. Reported and recommended treatment for COVID-19 infection is predominantly supportive care along with suitable management of respiratory dysfunction having good and responsible routine hygiene practices to reduce fatal attack of this infection to decrease its mortality rate in affected population till then its appropriate vaccination may not develop with successful trials.

**Keywords:** COVID-19, coronavirus, SARS-COV-2, pandemic, respiratory dysfunction

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## Reported clinical data

COVID-19 pandemic wave was first reported in China in December 2019 with highest mortality rate in old aged affected population aged more than 70 years diagnosed with other previous clinical morbidities like cardiovascular disease, diabetes, chronic lung disease, kidney disease, obesity, sickle cell disease, transplant recipients, and other immunocompromising conditions. The reported estimated incubation period for COVID-19 is up to 14 days from the time of exposure with median incubation period of 4 to 5 days. Transmission of COVID-19 infection occurs primarily through respiratory secretions/droplets, sneezing, and contact with contaminated surfaces. Maintaining of social distance of six feet from each other can be helpful in reducing the risk of transmission.<sup>1,2</sup> Neurological and psychotic distress symptoms have also been observed among younger patients who have recovered from acute COVID-19 infection than old aged patients more than 60 years.<sup>3,4</sup> Panel is recommended the use of N95 respirator rather than surgical masks especially for health care workers including personal protective equipment/PPE kit (gloves, gown, and eye protection such as a face shield or safety goggles). The COVID-19 Treatment Guidelines Panel is recommended low-dose corticosteroid therapy over no corticosteroid therapy for adult population diagnosed with COVID-19 infection. Remdesivir is proposed the only Food and Drug Administration-approved drug for the treatment of COVID-19 infection. Use of high-dose chloroquine (600 mg twice daily for 10 days), lopinavir/ritonavir (AI) or other HIV protease inhibitors (AIII) and ivermectin is found to observed effective against for the treatment of COVID-19 infection in some of patients in some of reported clinical trial. These drugs are found to inhibit viral entry via the angiotensin-converting enzyme 2 [ACE2] receptor and transmembrane serine protease 2 [TMPRSS2], viral membrane fusion and endocytosis, reducing activity of the SARS-CoV-2 3-chymotrypsin-like protease (3CLpro) and the RNA-dependent RNA polymerase.<sup>5,6</sup> Human blood-derived products recovered from COVID-19 infected patients e.g. convalescent plasma and immunoglobulin products are proposed to have direct antiviral properties including neutralizing monoclonal antibodies against COVID-19 infection in clinical trials considering as

adjunctive therapies.<sup>6,7</sup> COVID-19 infection has been found associated with inflammation and observed prothrombotic state with increases in fibrin, fibrin degradation products, fibrinogen, and D-dimers. These hematologic and coagulation parameters are commonly observed in hospitalized patients with COVID-19 infection when their respective diagnostic /lab testing results were interpreted in some of reported data.<sup>8,9</sup> Hence, holistic care must require to lay out effective clinical/medical management of this ongoing global pandemic to low down understandable fear and anxiety in affected or more prone population in the various communities all around the globe. Along with this, the health care workforce is under substantial stress and still facing a potentially swampy challenge to deliver best holistic care to hospitalized patients diagnosed with COVID-19 infection along with accurate lab testing with appropriate emotional care which will be considered a good fundamental determinant of the resilience of our society during global clinical challenge facing COVID-19 pandemic wave health emergency.<sup>10</sup>

## Conclusion

COVID-19 is global pandemic threat caused profound public health impact which have been changed the routine lives of billions of people worldwide including affecting staggered economic impact. A strong and honest commitment is required to develop and implanting social and public health strategies to control this fatal infection including sufficient hospital and intensive care resources to care severe ill patients. Various biomedical innovations must be highly prioritized with substantial governmental attention and funding to develop more potent and cost-effective novel diagnostics approaches, potent safe clinical treatments and effective vaccines. In meanwhile, scale up of high quality and evidence-based clinical patients care must be attracted and channelized to face this ongoing pandemic challenge along with robust public health interventions. These chosen clinical strategies will be proved further to carry out suitable clinical management of COVID-19 infection all around globe to decrease its mortality rate in affected populations of worst affected countries and low-income countries.

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## Conflicts of interest

The author declares that there is no conflict of interest.

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