

## Recent Updates and Evidence on COVID-19: A Public Health Emergency

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Coronavirus disease-2019 (COVID-19) is humanity's biggest challenge these days. This highly contagious virus started from Huanan Seafood Market in the city of Wuhan (China). Owing to its rapid spread, it was declared a Public Health Emergency of International Concern on 30<sup>th</sup> January and then a pandemic on 11<sup>th</sup> February 2020. Presently, it has spread to over 200 countries of the world and has overwhelmed their primary healthcare systems.<sup>1</sup> This virus infects the respiratory tract and causes atypical pneumonia among other symptoms. Research is underway to develop vaccine. Until the vaccine is developed and administered on massive scale, the only feasible way to deal with it is to slow its spread.

Majority of the people who contract this virus develop mild or moderate symptoms and are able to recover themselves without any clinical intervention. However, other factors like comorbidities, old age group, decreased lymphocyte count and higher level of lactate

dehydrogenase tend to decrease the survival rate.<sup>2</sup> Children and infants are also vulnerable to the virus but their symptoms are milder than the adults.<sup>3</sup>

Respiratory failure caused by hyperinflammation of lungs due to cytokine response is the major cause of mortality in COVID-19. The patient experiences acute cough, fever and bilateral ground glass appearance on radiological findings.<sup>4</sup> In less frequent cases, gastrointestinal illnesses like nausea, vomiting, diarrhea and abdominal pain are developed which is confirmed by virus infected stool of patients.<sup>5</sup> Eight percent patients develop acute cardiac injury due to the process of systemic inflammation and detected by raised troponins.<sup>6</sup> Severely ill patients may also experience neurological complications. Almost all patients also experience a loss of taste and smell.<sup>7</sup> Normally symptomatic treatment is given to the patient and oxygen is given to maintain oxygen saturation. An antiviral agent known as Remdesivir has shown promising results in treatment of COVID-19 and further research is underway to evaluate its effectiveness. Furthermore, plasma therapy or immunoglobulins are used in patients whose condition continues to deteriorate in spite of the treatment. Studies have shown that the patients who receive plasma therapy have a higher survival rate.<sup>8</sup>

Nevertheless, the economic impacts of the COVID-19 are far-reaching. With the world practically on a standstill because of lockdowns and curfews, the global economy is set to face a

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recession like never before. Many businesses like airlines, event management, banquet halls etc. are facing an existential crisis and resorting to massive layoffs causing the already rampant poverty in the country to rise even further. Considering the reduced tax collection, increase in exports and rise in unemployment, the situation due to COVID-19 may soon become a large-scale humanitarian crisis of enormous proportions.

The most frequently asked question these days is that when the world will get out of this crisis. Nobody can offer a response to this question as of now since the situation is changing rapidly. However, judging by the patterns of previous pandemics, it can be predicted that there are two possible outcomes – either we develop a vaccine and administer it on a massive scale or we get to a stage of herd immunity. Research on development of a vaccine is already ongoing but according to realistic estimates, a vaccine will take several more months before being clinically tested and approved for use on human population. The other possibility of herd immunity is achieved when a significantly large proportion of the population gets affected by the virus and their bodies develop antibodies which makes them immune to more infection.<sup>9</sup> The major challenge now for all countries and governments is to slow down the spread of virus unless a vaccine is developed. Telemedicine and Corona helpdesk will be the essential services to follow resurgence and reactivation of this virus. We have to live with this virus for quite some time (till January 2021, as projected for Pakistan in disease modeling and forecasting mathematical models) and life style modifications with mitigation strategies is the practical solution to decrease sufferings because of COVID-19.

### CONFLICT OF INTEREST

None to declare.

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### FINANCIAL DISCLOSURE

None to disclose.

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