

EDITORIAL

Responding to Coronavirus (COVID-19) Disease

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In early December 2019, few pneumonia cases were identified caused by some unknown agent in the Wuhan, capital city of Province Hubei of China.¹ The agent was later on identified as an enveloped RNA beta Coronavirus² which was subsequently named by WHO as COVID-19 and the coronavirus disease 2019.^{3,4} Till March 12, 2020, the worldwide 125048 cases and 4613 (3.69%) deaths in 117 countries have been reported⁵ However, Guan et al.⁶ reported 1099 patients with confirmed Covid-19 with death rate of 1.4%. It is pertinent to note that during 1918-19 flu (H1N1) pandemic about 500 million people or one-third of the world's population became infected with flu virus with about 50 million deaths worldwide. In February 1957, H2N2 virus triggered a pandemic ("Asian Flu") which result 1.1 million deaths worldwide. Then in 1968 new flu (H3N2) pandemic cause about 1 million deaths worldwide.⁷⁻¹⁰ Although death rate of COVID-19 disease appears to be less as compared to similar corona virus diseases like SARS (9.6%), MERS (36%) and flu,^{10,11} the rapidity of the virus to spread within community make it alarming challenge and the Covid-19 epidemic has created serious issues for the general and medical communities as regard to health & research.

Coronavirus has gripped the nations globally which resulted into the development of a lot of anxiety and panic. The people across the globe are infected through respiratory droplets. In response to the outbreak, various countries issued temporary travel restrictions, which may have slowed the spread of COVID-19 somewhat. The efficiency of transmission of a respiratory virus depends on basic reproduction number which has been estimated as 2.2 for this virus by recent studies which result in extreme capability of virus transmission and thus there is dire

need to be prepared against this virus to establish worldwide until at least reproduction number has reduced to less than one.^{12,13} In Pakistan till March 12, there were 20 confirmed cases of COVID-19 infections and all of them came from Iran. Two of them has already been cured of the disease and sent home.¹⁴ However, because of high transmission capability; we must be ready to prevent this virus to establish in Pakistan.

Community spread in Pakistan could require adopting certain policies such as avoidance of gatherings to minimize spread. These include isolating diseased individuals (even at home), closing schools, and working from home when possible.¹⁵ Centre for Disease control and Prevention (CDC), Atlanta has advised to avoid visiting areas like China, Korea, Iran and Italy where there are increased number of infected persons. These travel restrictions by various countries have definitely helped to reduce the spread of this virus. Public awareness is essential in controlling of any outbreak, however, these awareness campaigns lead to the development of panic among public. Panic has already been spread worldwide and World Health Organization (WHO) warned that increasing demand, buying due to fear and irrational use of personal protective equipment (PPE) has compromised supply globally and resulted in rising risk from COVID-19 and other infective agents.¹⁶ Although we are still in the process of learning the actual pathogenesis, epidemiology and clinical presentation of this disease, Li and colleagues¹⁷ have shown a comprehensive description of the patients with the disease who reported sick infected with this virus in Hubei province (Wuhan city), China. They demonstrated that the old age and patients with some coexisting other diseases were predisposing factors for high mortality and morbidity. Younger children were minimally affected. This type of information is essential to provide appropriate response to this outbreak.

Research has already been started to develop a vaccine against this virus¹⁸ but this would require certain essential time period before launching for

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public use. Moreover, vaccine may not be useful to contain the current outbreak. Enrolling of participants on February 21, 2020 has already been started for the trial of the experimental antiviral drug remdesivir. Preventive measure and certain therapeutic agents including antiviral drugs lopinavir-ritonavir, RNA polymerase inhibitor remdesivir, interferon-1 β and Chloroquine¹⁹ are being used in getting this goal. One more option for trial could be use of hyperimmune globulin from recovered individuals and monoclonal antibodies.²⁰ The incubation period as determined by Li et al.¹⁷ are important in that it provide some opportunity for intervention to attack the virus by some measures to reduce the spread of the virus. Genomic studies would be useful to determine host factors that predispose individuals to acquire infection of this virus.

In Pakistan this disease was already anticipated however, we should still expect a number of outcomes. First, domestic population and community take the epidemic seriously; therefore the situation demands public should be ensured confidence in dealing with the virus. Second, there is a need to declare warfare on the disease. The Government has to make it clear to the public whether our country is fully or partially prepared or just unprepared. The positive result of tests for COVID-19 in 20 people has raised anxiety of public tremendously and they are worried about the capabilities of the Government in dealing with the virus. Third, infected people in the country there is always a possibility of spreading the disease from man to man, it is time for us to focus on curing those infected and minimizing the spread of the virus. So now we should keep emphasis on the treatment of them and thus decreasing the spread of COVID-19. The Government has to take measures nationally to win the war against this disease. Health measures should include allocation of more funds and all resources to the disposal for Government to fight against the coronavirus. COVID-19 has crushed the economy worldwide, but it will be more damaging as it will shake global trust if we show poor response against this virus. There is always a chance of collaboration between various authorities and other countries, if we want to win the war.

WHO initially tried to hold back the description of

outbreak as pandemic because in China, for example the spread of disease seems to be slowing and it could yet be contained worldwide if the correct measures are adopted. Moreover, countries are already on high alert. However, when there is endless spread of the disease worldwide, WHO on March 11, 2020 declared the outbreak as Pandemic. Researchers are collaborating across the borders to communicate virus genome sequences and vaccine development is under way. There is need for continuous reconnaissance, rapid diagnosis and vigorous research to understand the actual characteristics of this organisms and human vulnerabilities to them and to develop operative measures to protect ourselves.

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