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## COVID-19 epidemic forecasting and attitude of Pakistani nation towards the mighty pandemic

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**Abstract**

A highly transmittable and pathogenic viral infection emerged at the end of 2019 in Wuhan, China, and rapidly spread across the World. This infection was named as coronavirus disease 19 (COVID-19) and the causative agent was named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The careless and irresponsible attitude of the affected people of COVID-19 from the affected countries became the reason to import the deadliest COVID-19 to other countries. Unfortunately, Pakistan is also among those countries struck by the imported cases of COVID-19. The majority of the people in Pakistan are uneducated regarding COVID-19 and are unaware of the severity of COVID-19. Therefore, it is suggested that this is the time to take more strict measures to avoid the situation becoming out of control.



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## Outlook

COVID-19 has been declared a pandemic by the WHO [1] and the total number of infectious patients has surpassed 3,442,234 and >239,740 deaths till 4<sup>th</sup> of May 2020 (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>). Coronavirus has been spread to >210 countries till 5<sup>th</sup> of May 2020. This pandemic has emerged from Wuhan, China, and exponentially spread to the whole World and alarmed every human being [2]. It has affected more than 80,000 people only in China and >3,200 deaths. However, the timely measures taken by the Chinese Government and local authorities have put the situation under control as more than 70,000 patients have been recovered and discharged from the hospitals [3]. Numerous countries including Italy, Spain, Germany, France, the Republic of Korea, USA, and Iran are also severely affected by COVID-19 and are struggling to curtail this viral pandemic. The situation is getting worst quickly and currently, there is no FDA approved known drug and vaccination available against COVID-19 [4].

Moreover, the whole world is struggling and putting every possible effort to control the spread of COVID-19. Numerous residents are flying back to their home countries from the severely affected countries including Iran, Italy, Spain, the Kingdom of Saudi Arabia, and China due to the threat of the current pandemic situation. Few countries show careless and irresponsible attitude by either underestimating the risk of transmission and the spread of this viral disease to the whole country. The affected persons of COVID-19 from the affected countries became the reason to import the COVID-19 to other countries.

Few countries such as Pakistan, Bangladesh, India, and Nepal are not considered among the severely affected countries under current figures and calculations. These are developing countries and already have a high mortality rate due to respiratory and CVD compared to other developed countries. Moreover, these countries are also suffering from several issues such as political instability, lack of resources, scarcity of research and diagnostic laboratories, and poverty. Therefore, the pandemic of COVID-19 has the deadliest threat to these countries. Pakistan was considered a safe country for COVID-19 for a few days back however also struck by the imported cases of COVID-19 now. According to the official report, the initial cases of coronavirus were reported in mid-February of 2020

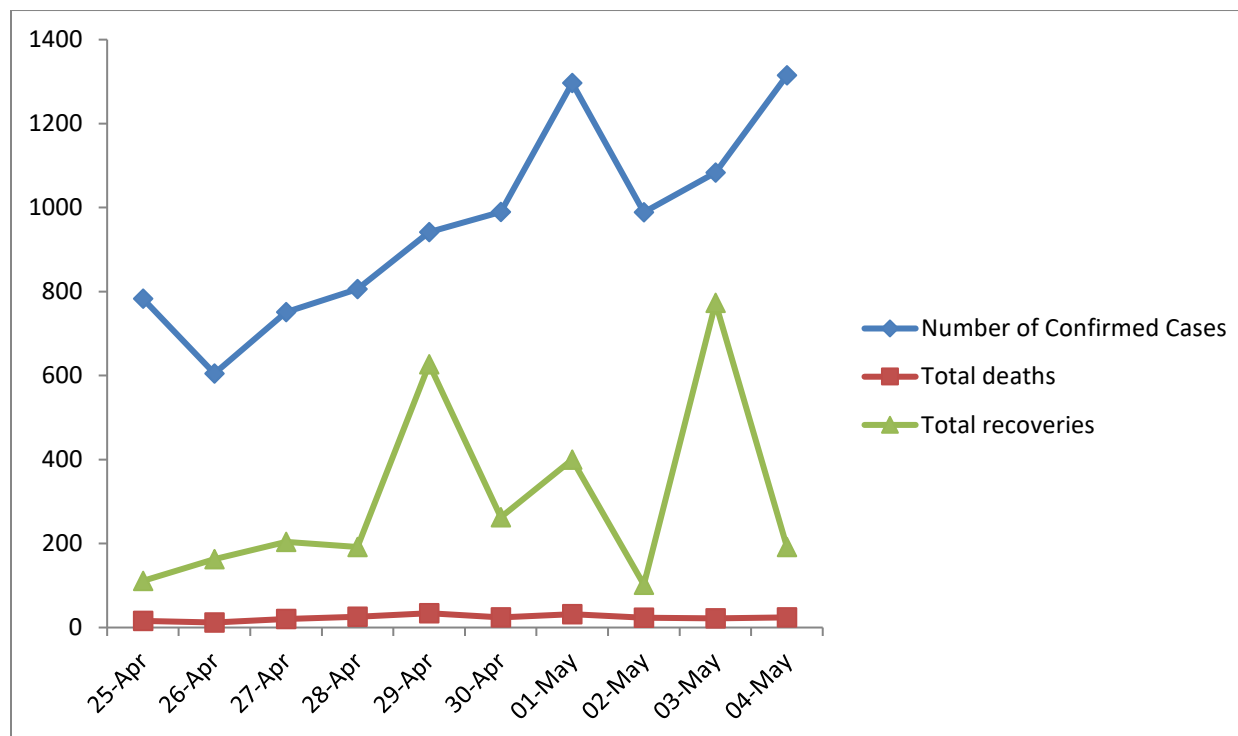
([www.covid.gov.pk](http://www.covid.gov.pk)). Though, Pakistan was not severely affected country at that time and has <22,000 confirmed cases till 5<sup>th</sup> of May 2020 (Table 1) and just 486 reported deaths ([http://covid.gov.pk/](http://covid.gov.pk) accessed 5<sup>th</sup> of May, 2020). The number of confirmed positives cases is increasing rapidly (Figure 1). The government of Pakistan was quite slow in taking the initiative to respond to the current pandemic and unable to screen all the Pakistani immigrants back to Pakistan from other countries. This situation damages the country and the immigrants are taking the COVID-19 to the country leads to an increase in the number of patients exponentially. The government of Pakistan is trying to control the situation through strict measures and positive steps to curtail this viral disease. The establishment of quarantine centers near the border regions and international airports is effective to measure and also the affective persons have to be in quarantine for 14 continuous days [5]. Moreover, all the academic institutions were immediately closed until further notifications, all the exams have been rescheduled and section 144 of Criminal Procedural Code of Pakistan (an order to prohibit the assembly of four or more people in an area) has been imposed immediately and strictly. The Government of Pakistan has also imposed a complete lockdown to control the current situation. These are very positive and appreciable steps to contain the further spread of this disease.

Despite these strict measures, numerous problems persist. A large number of populations are not taking this pandemic seriously as students are considering this time as vacations. The majority of the people are not taking the precautionary measures except few. Although, the government of Pakistan did strict measures, still the bus stations, railway stations, shopping malls, restaurants, tobacco points, and markets are overcrowded. Moreover, hospitals and private clinics are also crowded with people suffering from common diseases of least pathology. People still visit each other by shaking hands and are not following the concept of social distancing. The majority of the people in Pakistan are not educated regarding the severity of COVID-19. Unfortunately, the government of Pakistan has to ease the lockdown after the implementation of a complete lockdown for about a month.

The current circumstances in Pakistan suggest the increase of the COVID-19 cases in few coming days. Therefore, it has been suggesting that this is the time to take more strict measures to avoid the situation becoming out of control and sever for the country.

**Table 1:** Current situation of COVID-19 in Pakistan

Country/ Province/ Capital	Confirmed Cases	Active Cases	Deaths	Recoveries
Pakistan	21501	15233	486	5782
Punjab	8103	5251	136	2716
Sindh	7882	6116	137	1629
KPK	3288	2247	185	856
Balochistan	1321	1103	21	197
Islamabad	464	404	4	56
GB	372	90	3	279
AJK	71	22	0	49

**Fig. 1:** The total number of confirmed COVID-19 cases, the total number of deaths and recoveries in the last 10 days in Pakistan.

There is a need for immediate enforcement of section 144 Criminal Procedural Code of Pakistan. The law enforcement agencies should be more vigilant and active to avoid public gathering. The theologians should also guide the followers to strictly follow the preventive measures. The lockdown in virus affected areas should be strictly monitored and local government agencies should provide daily life necessities. More and more public awareness messages and campaigns should be initiated to aware of the people to realize the sensitivity of COVID-19. Digital media, social media, and print media can play a key role in conveying the important information regarding the preventive measures to avoid the spread of COVID-19.

Luckily, the immediate need for rapid development of the SARS-CoV-2 vaccine appeared in a time when the human race is experiencing the golden age of progress in the field of medical sciences especially genomics, bioinformatics and structural biology. Both of these areas are considered as the pillars of a new era in vaccine development. In advance era of research, bioinformatics and computational biology help to solve numerous biological problems through mathematical, computational and statistical approaches [6-9]. In the past few years, the medical community has faced the challenges of H1N1 influenza, Dengue, Ebola, Zika, and now SARS-CoV-2. Immunoinformatics analyses revealed potential epitope-based peptide vaccine against dengue [10] and other viral diseases. These

emergencies have forced the vaccine industry to develop relatively rapid and large-scale vaccine development to cope with such kind of natural disasters. We feel pleasure in writing that more than 90 vaccines are in progress (<https://www.nature.com/articles/d41586-020-01221-y>) against newly identified SARS-CoV-2 by different scientists across the globe [11, 12]. So, let's play our part and hope for the best. Collectively, every citizen should realize his responsibility and helps the government to save the country and globe from the threat of this viral pandemic.

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## Conflict of Interest

The authors declare no conflict of interest.

## References

- [1] Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*. 2020.
- [2] Hui DS, I Azhar E, Madani TA, Ntoumi F, Kock R, Dar O, et al. The continuing 2019-nCoV epidemic threat of novel

- coronaviruses to global health-The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*. 2020;91:264-6.
- [3] Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *Jama*. 2020.
- [4] Chen Y, Liu Q, Guo D. Emerging coronaviruses: genome structure, replication, and pathogenesis. *Journal of medical virology*. 2020.
- [5] Khan S, Siddique R, Ali A, Xue M, Nabi G. Novel coronavirus, poor quarantine, and the risk of pandemic. *Journal of Hospital Infection*. 2020.
- [6] Sehgal SA. Pharmacoinformatics, adaptive evolution, and elucidation of six novel compounds for schizophrenia treatment by targeting DAOA (G72) isoforms. *BioMed research international*. 2017;2017.
- [7] Sehgal SA. Pharmacoinformatics and molecular docking studies reveal potential novel Proline Dehydrogenase (PRODH) compounds for Schizophrenia inhibition. *Medicinal Chemistry Research*. 2017;26:314-26.
- [8] Tahir RA, Bashir A, Yousaf MN, Ahmed A, Dali Y, Khan S, et al. In Silico identification of angiotensin-converting enzyme inhibitory peptides from MRJP1. *PloS one*. 2020;15:e0228265.
- [9] Tahir RA, Hassan F, Kareem A, Iftikhar U, Sehgal SA. Ligand-Based Pharmacophore Modeling and Virtual Screening to Discover Novel CYP1A1 Inhibitors. *Current topics in medicinal chemistry*. 2019;19:2782-94.
- [10] Tahir RA, Wu H, Rizwan MA, Jafar TH, Saleem S, Sehgal SA. Immunoinformatics and molecular docking studies reveal potential epitope-based peptide vaccine against DENV-NS3 protein. *Journal of theoretical biology*. 2018;459:162-70.
- [11] Chen W-H, Strych U, Hotez PJ, Bottazzi ME. The SARS-CoV-2 vaccine pipeline: an overview. *Current tropical medicine reports*. 2020:1-4.
- [12] Liu C, Zhou Q, Li Y, Garner LV, Watkins SP, Carter LJ, et al. Research and development on therapeutic agents and vaccines for COVID-19 and related human coronavirus diseases. *ACS Publications*; 2020.