# SPECIAL COMMUNICATION **COVID-19 IN PAKISTAN: WHERE DO WE STAND AND WHAT IS THE** WAY FORWARD?

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At the outset of year 2020, COVID-19 emerged as a new public health threat and the world resorted to a diverse range of combating plots including lock down downs, social distancing, advocating precautions like wearing masks, using sanitizers etc. Pakistan followed the same pathway despite the fact that the virus resulted in less severe morbidity and mortality as compared to the rest of the world. Nevertheless, the fear and panic it created due owing to virulence and subsequent outcomes of corona illness was of alarming magnitude. Pakistan went for smarter, conservative and prudent plans and kept the balance between saving lives and livelihoods. Health system showed its inherent weaknesses and it was soon realized that a multi-sectoral response would be needed to address the catastrophe. A large majority is inclined to call it a 'new normal' and is persuading to go on with life; for sure, by adopting a health system thinking. Keywords: COVID-19; Health system; Systems thinking; Pakistan

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## **INTRODUCTION**

It is pertinent to start in unconventional way in times not seen in recent past.

"If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained vou will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

#### - Sun Tzu, The Art of War

The current COVID-19 pandemic is a war against an enemy that seems to know us better than we know it. The SARS CoV-2 virus which causes the disease<sup>1</sup>, mutated to reach humans from bats<sup>2</sup>. The resulting havoc serves as a sullen reminder of Sun Tzu's wise words. This form of corona virus disease has proven to be a difficult one to tackle, because of insufficient knowledge on this type of virus, i.e., its characteristics, virulence, incubation period, mode of transmission, preventive measures etc. Moreover, the range of symptoms and outcomes that vary from simple common cold to the most fatal outcome in a short period of time has made its picture most complex and complicated to understand for the biologists, virologists, epidemiologists, public health professionals and more so for health system and policy makers. Problems are often a matter of perspective. We are constantly being told that things will get worse before they get any better. Since a large proportion of the world population remains asymptomatic, or exhibits very mild symptoms which are often missed, only those with more obvious symptoms, or those who tested positive through screening (wherever applicable) are counted, and

used as the denominator to calculate the case fatality. By excluding the asymptomatic proportion of the population, the calculated case fatality may be grossly overestimated. Around the world, governments are attempting to "flatten the curve" to keep the health systems from being overwhelmed<sup>3</sup>, by ensuring as few as possible people catch the virus at a time. Given the extremely contagious nature of the disease, these attempts are being made by enforcing nationwide lockdowns, and urging people social distancing and frequent practice to handwashing to minimize transmission. Nevertheless, widespread panic has also led to frustration and exhaustion, causing people to disregard these precautions, which has unfortunately resulted in a possible second wave of the pandemic already.<sup>4</sup>

## Where We Stand in Pakistan

COVID-19 is, for now, exhibiting a slightly different and less disastrous behaviour in Pakistan, along with a few other South Asian countries, for which scientists are speculating the role of exposure to Malaria and of the BCG vaccine.<sup>5</sup> Other factors, such as the proportion of youth in our population, may also be contributing. Around 64 percent of the nation is younger than 30, and 29 percent of Pakistanis are between the ages of 15 and 29. Pakistan now has more young people than it ever had.<sup>6</sup> Figure 1 shows the age brackets which are affected by COVID-19 in Pakistan and the majority falls in the relatively younger age groups. As complications related to COVID-19 are age dependent, the higher proportion of the younger population could be playing a role in the less detrimental impact of the disease here. There have been conjectures about the possible protective

effect that the widespread use of herbal and traditional medications for everyday ailments may be exerting.<sup>7</sup> The impact of climate, as well as the living conditions could also be playing a part. Developing countries such as Pakistan which have hotter and more humid climates, and the prevailing hygiene and sanitation conditions that expose the population to a large number of microorganisms on a daily basis, possibility contribute towards a better immunity.<sup>8</sup>



Figure-1: Demographics of COVID-19 affected cases in Pakistan



Figure-2: Outcome of total closed cases (recovery rate vs death rate)





The pre-existing deficiencies within the health system have led to very limited, and biased testing in spite of the sincerest efforts by the government. As a result, to this date, the reported number of cases is merely a rough idea of the actual extent of the disease within the population. Other factors aside, the discrepancies in the case fatality observed in different countries can perhaps be partially attributed to the strain reaching a particular region. Considering the contagiousness, and the incubation period, it seems impossible to get a clear and true picture of the spread of the disease in Pakistan. Even with the ensuing risk of an overestimated case fatality rate, the number remains optimistically low here at 2.1% (Figure-2).9 This low case fatality could be because of the strain that has reached us, but there is not enough evidence to support this claim yet. Furthermore, whilst financial markets are plummeting and businesses around the world were going bankrupt<sup>10</sup>; Pakistan imposed a reluctant but effective lockdown in March, 2020. Since the system in the country was never equipped to stay afloat during a complete lockdown, and the economy is too weak to sustain a huge blow, it was impossible to extend the lockdown beyond a point.

Based on the evidence presented earlier, this should not be a cause for panic, but a more responsible and cautious approach would prove beneficial. It is also important to see the otherwise daily mortality trend in Pakistan due to all other causes except COVID-19 (Figure-3). According to the official data of Pakistan Bureau of Statistics, round 4000 deaths are occurring in Pakistan of all other causes including road traffic accidents.<sup>11</sup>

## The grand scheme of things

Perhaps a more holistic perspective would help. If nothing else, it may enlighten us about what we don't know. Let us for a moment consider the phenomenon of this pandemic as part of a bigger picture of life. The virus is mutating, but at a relatively slower pace, which has allowed for the human species to develop a strategy (e.g., vaccines) against it. But, employing the war analogy again, what exactly do we know about the enemy's strategy? Viruses reportedly exist only to multiply and survive, and they require a living host for that.<sup>12</sup>

Viruses by our definition are not alive, which implies that they do not possess intelligence, which would naturally lead to the conclusion that they are incapable of design, and, therefore, incapable of formulating, or being part of a strategy (to restore the balance of nature). This assumption excludes the possibility of the virus's active role in the grand scheme of things. In the last 40,000 years, the human population has grown exponentially, and with consequences.<sup>13</sup> One theory is that if the human population reaches a certain critical point, *homo sapiens* will go extinct.<sup>14</sup> There is no need to back our claim with evidence when we speak of the detrimental impact of the increasing human population on the very environment that sustains us.



Figure-4: Deaths due to COVID per million population in Pakistan, compared to other countries and regions

The problem is not the wet market where the virus originated. Perhaps, the problem is the gross imbalance in nature produced by the increasing human population.<sup>15</sup> The end point for the human population, as predicted by Calhoun, will arrive when the population reaches 9 billion, it stands at 7.8 billion today.<sup>16</sup> Starting 40,000 years ago, the first "doubling" of the human population took 20,000 years, the next one took 10,000 years, the one after that took 5000 years, i.e., each time that the world population doubles, it takes half the time it took for the previous doubling<sup>13</sup>, which indicates the alarmingly high growth rate. It was suggested that unless the population is stabilized at around 7.5 billion, the alternate possibility (besides extinction) would be that the world population will start to decline (for various reasons) as it approaches the critical point. Perhaps that is what we are witnessing. In light of all these points, it appears that there is a certain design to how the world functions. Perhaps we have lesser control than we would like on how things unfold. Perhaps the world is only rearranging itself to accommodate us. Perhaps we can slow things down, but nature will take its course regardless.

Still at the bottom of the table with regards to COVID deaths per millions of populations (Figure-4), Pakistan can take steps to at least ease the blow, and delay the seemingly inevitable. Measures need to be put into place to reduce panic, and to introduce a "new normal" to the nation which includes social distancing, frequent hand washing, and face masks.<sup>17</sup> In spite of all precautions, we must also be realistic about the diversity of human nature, and our varying abilities to adapt to this "new normal" which will continue for the foreseeable future. Until such time that vaccines are made available to the public, widespread fear, panic, and paranoia will only prove to be counterproductive, leading to frustration, depression, and possibly a mass disregard for safety precautions, which we are already witnessing with the rise of a possible second wave of the pandemic.

Preparedness for making the health systems resilient is the key. This pandemic is an opportunity to retune and reorient the health system in Pakistan by increasing investments and ensuring judicial spending in the health sector.<sup>18</sup>

## CONCLUSION

The health system alone will not be enough to cope with an emergency of this scale and extent. As was evident during the lockdown of March 2020, a multisectoral and collaborative approach is required to support the health system in performing effectively. Budgetary reforms are required to shift the focus from biomedical curative model, to more socioeconomic public health and research model. Safety precautions, responsible behaviour, and reforms within the system may protect some segments or individuals in a population, while others will continue to contribute to the process of evolution differently.

## Declarations

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## REFERENCES

- Pachetti M, Marini B, Benedetti F, Giudici F, Mauro E, Storici P, *et al.* Emerging SARS-CoV-2 mutation hot spots include a novel RNA-dependent-RNA polymerase variant. J Transl Med 2020;18(1):179.
- Tang X, Wu C, Li X, Song Y, Yao X, Wu X, *et al.* On the origin and continuing evolution of SARS-CoV-2. Natl Sci Rev 2020;7(6):1012–23.
- Kenyon C. Flattening-the-curve associated with reduced COVID-19 case fatality rates- an ecological analysis of 65 countries. J Infect 2020;81(1):e98–9.
- 4. Xu S, Li Y. Beware of the second wave of COVID-19. Lancet 2020;395(10233):1321-2.
- Goswami RP, Mittal DK, Goswami RP. Interaction between malarial transmission and BCG vaccination with COVID-19 incidence in the world map: A changing landscape human immune system? medRxiv 2020;4(3):20052563.
- United Nations Development Program. Unleashing the potential of a young Pakistan. Human Development Reports. 2018. [Internet]. [cited 2020 May 15]. Available from: http://hdr.undp.org/en/content/unleashing-potential-youngpakistan
- Shaikh BT, Hatcher J, Qazi S. Complementary and alternative medicine in Pakistan: prospects and limitations. J Evid Based Complement Alternat Med 2005;2(2):139–42.
- Gugler J. World cities in poor countries: Conclusions from case studies of the principal regional and global players. Int J Urban Reg Res 2003;27(3):707–12.
- 9. Government of Pakistan. Outcome of total closed cases (recovery rate vs death rate). [Internet]. [cited 2020 May 17]. Available from: http://www.covid.org.pk.
- Haushofer J, Metcalf CJ. Combining behavioral economics and infectious disease epidemiology to mitigate the COVID-19 outbreak. Working Paper, Princeton University; New Jersey. March 6, 2020.

- Pakistan Bureau of Statistics. Crude Death Rate: Pakistan. 6<sup>th</sup> Population and Household Census. Islamabad: 2017.
- 12. Brown N, Bhella D. Are viruses alive? Microbiol Today 2016;43(2):58–61.
- 13. Weber H, Sciubba JD. The effect of population growth on the environment: Evidence from European regions. Eur J Popul 2019;35(2):379–402.
- What's likely to cause human extinction and how can we avoid it? [Internet]. Stanford Earth. 2019 [cited 2020 May 17]. Available from: https://earth.stanford.edu/news/whatslikely-cause-human-extinction-and-how-can-we-avoid-it
- 15. Jensen JT, Creinin MD. Family planning, population growth, and the environment. Contraception 2020;101(3):145–7.

- Hern WM. How many times has the human population doubled? Comparisons with cancer. Popul Environ 1999;21(1):59–80.
- 17. Hamid S, Mir MY, Rohela GK. Novel coronavirus disease (COVID-19): a pandemic (epidemiology, pathogenesis and potential therapeutics). New Microbes New Infect 2020;35:100679.
- Shaikh BT, Ali N. COVID-19 and fiscal space for health system in Pakistan: It's time for a policy decision! Int J Health Plann Manage 2020;35(4):813–7.

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