# **Bioethical principles, COVID-19 pandemic, and Our response**

**Abstract:** The pandemic caused by novel corona virus resulted in 35 million cases and 9 million deaths globally till September 2020. China responded a little bit delayed by sharing information to the World Health Organization (WHO). The WHO responded at its level best by multi-pronged approaches like, rapid diagnostics development; issuing various guidelines on patient monitoring, specimen collection, and treatment; and till date providing up-to-date information by media briefing about the outbreak.  Several countries adopt containment measures like travel restriction, screening of the travellers, contact tracing and many more to break the chain of transmission. During this crisis, there are many ethical issues have emerged across the globe by the public, in this paper we have tried to seek few of the answers.

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**Keywords: bioethics; covid-19; pandemic**

## **Introduction:**

The pandemic caused by novel corona virus resulted in 35 million cases and 9 million deaths globally till September 2020. (1) Despite the increasing number of human cases points towards the human-to-human transmission, still many details about the novel coronavirus remain unknown to scientists and researchers. As for now, this is the third type of novel virus (2019-nCoV) which has paralyzed the whole world, before this it was known as (SARS-CoV) and (MERS-CoV) with the similar genera. (2)

Probably, whole world believes that China responded a little bit delayed by sharing information to the World Health Organization (WHO), which is not true at al. The WHO responded at its level best by multi-pronged approaches like, rapid development of diagnostics; releasing various guidelines on patient like monitoring of the patients, collection of the specimens, and treatment as well as public health management like screening, communicating risks and providing up-to-date information by media briefing about the outbreak situation.  Several countries adopt containment measures like travel restriction, screening of the travellers, contact tracing, and many more to break the chain of transmission. (3–6)

As the pandemic spreads like bushfire across the world, there are many ethical issues that have emerged across the globe by the public. In this paper, we have tried to seek answers to such issues which are described as below.

**Information Sharing:**

Trust building, early announcement, transparency, respecting public concerns and planning is the essential activity for any outbreak communication.

Outbreaks usually elicit great anxiety and fear among the common public. The consequences of outbreaks can display extreme behaviours among people which ranges from protesting for masks, avoidance of travel, stigmatization, increase in vulnerability among minority groups, civil riots, loss of confidence in governments, and a significant reduction in consumer consumption. So it is evident that outbreaks have the potential to cause social disruption and economic losses well beyond health care costs. (7)

The Press reports- pre-empts the official communication which is usually the main cause of panic. This creates distrust among population for Government and increases the suspicion of motives like low credibility, reliability of official information.(7)

For poor countries- consequences are devastating as they have a fragile economy which leads to losses in tourism and trades. Moreover, a weak surveillance system, poor lab diagnostic capacity also delays in reporting. Illiteracy, cultural beliefs, and practices also increase the opportunity of exposure. (7)

At the time of the SARS outbreak also, China delayed in reporting. Had it reported to neighbouring countries timely, prevention strategies to decrease the amplification of disease would have been adopted at the right time. (7)

As an example, public health collaboration and solidarity plays a very substantial role in controlling disease outbreaks. The very example of this is by the response to SARS infection by the Hong Kong Special Administrative Region of China (SAR) and Singapore. To reinstate the confidence among people and tourists and recoup the economic losses, the “outbreak containment” was the only method. With the full participation of the public and frank & open information sharing, the success was finally attained. The Government tactfully dealt with the concerns of the anxious people and was rapidly responsive to the media with the official information as well, even the information was publicized in lay languages, these all measures brought the trust and confidence of the public on the Government as the public also willingly opted the recommended measures. (7)

**Mortality and Morbidity of Healthcare Workers:**

WHO says over 22,000 healthcare workers across 52 countries are infected by COVID-19. (8) A scoping review has found that a total of 152,888 infections and 1413 deaths were reported. Infections were mainly in women (71.6%) and nurses (38.6%), but deaths were mainly in men (70.8%) and doctors (51.4%). Limited data suggested that general practitioners and mental health nurses were the highest risk specialties for deaths. There were 37.17 deaths reported per 100 infections for healthcare workers aged over 70. Europe had the highest absolute numbers of reported infections (119628) and deaths (712), but the Eastern Mediterranean region had the highest number of reported deaths per 100 infections. (9) The non-availability of adequate personal protective gear even for health personnel has given rise to increasing mortality and morbidity among the health caregivers. Residing most of the time in an environment not conducive for proper health escalates the chances of contracting the disease from patients. (6)

Now our moot question is why we are not able to provide the logistics to healthcare workers/front liners to combat COVID-19?

**Public Health Measures:**

The implementation of public health measures for COVID-19 like managing cases, tracing of contact, and their management, public education, restrictions on travel, social distancing and school care measures can only be possible if “info-demics” can be managed successfully through monitoring, analysis, and mitigation with the help of co-ordinating responders. (10,11)

**Collateral damage: Most hospitals being involved with treatment of COVID, how the other illnesses was considered is an issue of justice and nonmaleficence?**

Another interesting fact is that the whole globe is now busy to deal with the deadly coronavirus, we are trying to prevent the infection and treat it by every possible means. But extremely limited information is available about how it is contained/ treated in hospitals. As many countries’ health system is not robust enough to tackle this extra burden. Then how insufficient health systems are tackling the blow of coronavirus epidemic? During this phase, many people who are admitted for chronic disease, disability, or other health conditions (non-COVID) in the hospitals may not be getting adequate treatment/ priority after the corona infection and they have been compromised. (12)

**Economic loss and justice:**

From contributing to 4% of world GDP in 2003 to 16% of global output in recent times. Because of the deadly coronavirus outbreak, China’s economy has been deeply affected, be it travel and hospitality services providers, luxury good makers like Qualcomm (QCOM), commodities like oil, iron ore, and soya beans. (13) China is also Germany’s largest trading partner, due to this disease outbreak there is a rising hit for European trade. (14) The British Brand Burberry has also stopped its many chains in China. (15) Though the exact economic impact cannot be determined at this level, it is the vision that China’s growth rate will dropdown. Well, it cannot be said in the assurance that behind all the economic losses the driving factor is deadly coronavirus as it depends upon how government, public, and businessmen respond to the disease outbreak. As many people will prefer sitting back at home to avoid exposure thus reducing traveling, shopping, and working, which will limit demand for consumer goods and energy. The government and businesspeople might close their companies and shops and idle factories which will further curtail the production.

**Indian scenario:**

The consequential challenges due to COVID-19 has directly hit the Aviation Industry because of flights curtailment, disruption, and cancellation. The Directorate General of Civil Aviation (DGCA) has passed a GOI order soliciting the airlines to waive off the airline tickets cancellation, and rescheduling charges to help and support the passengers in this tough time. All the airlines are reporting a high volume of calls with multiple queries, even on their social media accounts. Some airlines have come up with the norm of multiple rescheduling of the journey if the bookings were done on or before 31st March 2020 with charges of fare difference if any will be applicable. However, Go Air airlines initially offered free cancellation but later switched to rescheduling the norm only. (16)

Not only the aviation sector, all other sectors like transport, food industry and economic slowdown, deaths due to migration took place during this pandemic.

**Panic, stigmatisation, rumours to link with suicide case in India**

In India, where more deaths are due to road traffic accidents than infectious disease,

the panic among citizens is rising because of the lack of awareness.

Recently, Government of India has made caller tunes spreading messages for prevention from coronavirus of all Indian

citizens, which is also taken by the citizens in a benighted way even by the

intellectuals. Living in the ignorance and believing that “consuming onion or cow’s

urine” will give them a 100% cure against COVID-19, the situation is just getting

grievous. The novel coronavirus (2019-nCoV) threat in India has been worrisome, in

Andhra Pradesh a man took his life due to misinformation and panic of COVID-19.(17)

#### **What about the experimental treatments have been offered in COVID-19**

#### **pandemic?**

According to the Changjiang Daily, the research team of Chinese Zhejiang University has established that Abidol and Darunavir drugs might be helpful in treating patients of the novel coronavirus.

The in-vitro tests showed good efficacy of the drugs in blocking the virus. Professor Li Lanjuan of Zhejiang University, who is the leading researcher of the team stated that the anti-HIV drug Kelizhi has side effects and it is not adequately effective against COVID-19. There has been a call from researchers to add these two new drugs in China National Health Commission’s programme for tackling infection with the novel coronavirus. As these are experimental drugs, the exact prediction of their role and adverse effects on sick humans cannot be made, so all pros and cons should be considered beforehand. All over the world, especially in America, the FDA approved drugs are passed through the first stage to check their harmful effects before subjecting them to further phases to check for their efficacy and other additional side effects.

Lessons must be learned from the past; the research done for similar outbreak of Ebola infection was not just research but a scary experimental treatment. But if we are keep going it in this unprecedent manner without knowing the harm of this medications then we can face catastrophic consequences. The whole world wants to know about “is there any effective treatment or vaccine against novel coronavirus infection?”. In the past, the people have faced repercussions of the undertrials and untested therapies which were introduced hurriedly and provided no fruitful results. The example is of pervasive distrust on the western drug companies who mostly use Africans as their “guinea pigs’ for experimentation.

In 2014, the WHO organized a panel discussion on these ethical issues and their response was widely reported: “It is ethical to offer unproven interventions with as yet unknown efficacy and adverse effects, as potential treatment or prevention” and highlighted the “ethical criteria including transparency, informed consent, freedom of choice, confidentiality, respect for autonomy and involvement of the community” which gave the provision of such experimental interventions. Moreover, “if and when they are used to treat patients, there is a moral obligation to collect and share all data generated” and “there was unanimous agreement that there is a moral duty to also evaluate these interventions in the best possible clinical trials under the circumstances in order to definitively prove their safety and efficacy or provide evidence to stop their utilization”.

A vaccine known as mRNA-1273 is under phase-1 trial, designed in such a way to produce antibodies against the virus. Pharmaceutical Companies like Sanofi, Johnson & Johnson, Glaxo smith line, and Cure vac are also working in preparing vaccines that are in pre-clinical stages. A drug like “Remdesivir” was used I/V to treat one infected patient in the US and experiment on whether multiple doses of Remdesivir will reverse the infection is being done by Gilead company. This drug can combat HIV or Hepatitis C and might be able to check Coronavirus too. A faculty of North-western University Feinberg School of Medicine stated that “Repurposing drugs is absolutely the best thing that could happen right now,” as they target M protease, if protease can be stopped from cutting the virus won’t be able to reproduce and replicate. The clinical trial for the efficacy of such drugs is undergoing. A pharmaceutical company named AbbVie has manufactured a drug “Kaletra” having a combination of two protease inhibitors lopinavir and ritonavir and is donating the drug to be tested on COVID-19 patients in China. (18)

**During the allocation of resources, the most pressing issue is: who should be treated first?**

Recently the leading newspaper “The Telegraph” reported that Italians who are over 80 years and people with poor health will be denied for having intensive care as this will just increase the bed load and intensive care capacity is already running short. The hospitals are following the criteria of age and Charlson comorbidity index for providing intensive medical treatment to the patients. Nevertheless, the patients will still receive the basic treatment facility.(19) Ethically, it becomes more important to answer whether who will receive the therapy when we do not have an effective and confirmed vaccine and medicine for this disease up till now. The stock of antiviral drugs that are being used currently are also getting exhausted. So now the question is “to “who can be treated, and how?” In our opinion our best therapy should be earmarked for the front liners who are battling in this deadly pandemic. In order to control the epidemic, the limited resources should be issued instantly, and the provision of constant supply should be maintained, as it will take at least one more year for experimental therapies and vaccine trials to come in use if they will found to be successful.

**Whom we must bring back home from abroad during the corona crisis?**

Many Indians, Americans, and other students of different countries were being evacuated from the Wuhan University, but hundreds of Pakistani students were left behind, as the Pakistani Government asked around 800 of their students in Wuhan to stay put, because of the strict government rules. Pakistan is one of the [last places in the world still battling polio](https://www.nytimes.com/2019/07/15/health/polio-pakistan-afghanistan.html), and incidents of dengue fever and H.I.V. are on the rise. This clearly depicts the disorganized health care system of Pakistan. Moreover, due to the weary condition of the doctors and health care staff in hospitals, if some infected nationals will return home, the likelihood of disease transmission will be on the rise across the country. The upsurging issue is whether Pakistani’s are being used as puppets in the larger geopolitical game, as Pakistan being weak and China is one of Pakistan’s most important confidante it might be possible that they are under pressure so as not to faze Beijing. (20)

**Inadequate assurance to the uninfected individuals?**

The debatable issue regarding the CORONA virus is the rising “panic” among the public and how this disease can be tackled. It is so woeful that despite having an appropriate contingency plan, health authorities are not coming to the forefront for assuring people about tackling the situation and spreading the message of “do not panic”. Until now, only Singapore’s Prime Minister has addressed the nation on Coronavirus with his 10 minutes wonderful speech on preventive measures against coronavirus and avoid panicking. Assurance is the main key strategy for such outbreak situations. But many people have different schools of thought and they completely disagree with this. According to their ideology, panic is defined as an emotion driving an irrational action and argued that even during very severe outbreaks, public panic is rare.

Earlier literature depicts that with good managerial strategies during an outbreak a society does develop a considerable amount of coping skills. While, in contrast to messages which focus on preventing public panic, this over-reassurance becomes misleading as it increases the probability that legitimate reasons for public anxiety will not be addressed. This public assurance in turn is increasing the level of fear among the public as false impression comes of a reason for panic, though not yet here, is nonetheless looming on the horizon. (WHO). The confusion of whether it is our moral duty to reassure the public or not, and if any negative consequences occur (suicide due to corona panic), then who will be responsible for it comes into picture. (7)

**Why the vaccine for Corona has not been developed since 2007 we knew about the infection?**

Even after nearly two outbreaks of the CORONA virus disease, yet we are not prepared to battle this current tragedy with effective vaccine and treatment. The treatment which could have been lifted in four decades is just in the amateur stages because of the formidable situation. Due to this, the pharmaceutical companies are taking the advantage of extracting their cost of vaccine/medicine research through people who will pay for it. Though the CORONA virus is highly infective, the mortality as compared to malaria, tuberculosis or even diarrhoeal diseases is less which represents a small and unrewarding market. It is the major role of the Government who help and protect their citizens. The developing countries are facing the brunt as without appropriate funds, the Government cannot provide a decent healthcare system with basic therapies. Although the developed countries have been facing the similar problem. The magnitude of this pandemic assisted in publicizing the conscience of people living in the developed/developing countries if not to help our brothers, then at least to protect ourselves.

To conclude the virus outplayed us in every aspects of our life, we were completely clueless, it is now the high time for us to revisit the bioethical principles for containment of present and future outbreaks effectively and efficiently.

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**References-**

1. Coronavirus Update (Live): 27,314,629 Cases and 893,475 Deaths from COVID-19 Virus Pandemic - Worldometer [Internet]. [cited 2020 Sep 7]. Available from: https://www.worldometers.info/coronavirus/

2. Middle East respiratory syndrome coronavirus (MERS-CoV) [Internet]. [cited 2020 Sep 7]. Available from: https://www.who.int/news-room/fact-sheets/detail/middle-east-respiratory-syndrome-coronavirus-(mers-cov)

3. Coronavirus disease 2019 [Internet]. [cited 2020 Jun 7]. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019

4. Coronavirus disease (COVID-19) [Internet]. [cited 2020 Sep 7]. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019

5. Modi announces ‘Janata Curfew’ on 22 March, urges for resolve, restraint to fight coronavirus [Internet]. [cited 2020 May 21]. Available from: https://theprint.in/india/modi-announces-janata-curfew-on-22-march-urges-for-resolve-restraint-to-fight-coronavirus/384138/

6. Bhattacharya S, Hossain MM, Singh A. Addressing the shortage of personal protective equipment during the COVID-19 pandemic in India-A public health perspective. AIMS Public Health. 2020;7(2):223.

7. WHO | Outbreak Communication [Internet]. WHO. World Health Organization; [cited 2020 Sep 7]. Available from: https://www.who.int/csr/resources/publications/WHO\_CDS\_2005\_32/en/

8. www.ETHealthworld.com. WHO says over 22,000 healthcare workers across 52 countries infected by COVID-19 - ET HealthWorld [Internet]. ETHealthworld.com. [cited 2020 Sep 7]. Available from: https://health.economictimes.indiatimes.com/news/industry/who-says-over-22000-healthcare-workers-across-52-countries-infected-by-covid-19/75107238

9. Bandyopadhyay S, Baticulon RE, Kadhum M, Alser M, Ojuka DK, Badereddin Y, et al. Infection and mortality of healthcare workers worldwide from COVID-19: a scoping review [Internet]. Public and Global Health; 2020 Jun [cited 2020 Sep 7]. Available from: http://medrxiv.org/lookup/doi/10.1101/2020.06.04.20119594

10. Harnessing the potential of uploading health educational materials on medical institutions’ social media for controlling emerging and re-emerging disease outbreaks Bhattacharya S, Sharma N, Hoedebecke K, Hossain MM, Gökdemir &, Singh A - J Edu Health Promot [Internet]. [cited 2020 Sep 7]. Available from: http://www.jehp.net/article.asp?issn=2277-9531;year=2020;volume=9;issue=1;spage=213;epage=213;aulast=Bhattacharya;type=0

11. Condon DBJ. The Effectiveness of Pandemic Preparations: Legal Lessons from the 2009 Influenza Epidemic. :21.

12. Chiriboga D, Garay J, Buss P, Madrigal RS, Rispel LC. Health inequity during the COVID-19 pandemic: a cry for ethical global leadership. The Lancet. 2020 May 30;395(10238):1690–1.

13. The Coronavirus Will Send Political and Economic Shockwaves Far Beyond China [Internet]. [cited 2020 Sep 7]. Available from: https://www.worldpoliticsreview.com/articles/28519/the-coronavirus-will-send-political-and-economic-shockwaves-far-beyond-china

14. Grüll P. Coronavirus could hurt German economy due to its reliance on China [Internet]. www.euractiv.com. 2020 [cited 2020 Sep 7]. Available from: https://www.euractiv.com/section/economy-jobs/news/coronavirus-could-hurt-german-economy-because-of-its-reliance-on-china/

15. The Second 50 days: A Detailed Chronological Timeline and Extensive Review of Literature Documenting the COVID-19 Pandemic From Day 50 to Day 100 [Internet]. [cited 2020 Sep 7]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7378498/

16. Home | Directorate General of Civil Aviation | GoI [Internet]. [cited 2020 Sep 7]. Available from: https://dgca.gov.in/digigov-portal/

17. Andhra Pradesh: Fearing to have contracted Coronavirus, 50-year-old commits suicide in Chittoor district | Vijayawada News - Times of India [Internet]. [cited 2020 Sep 7]. Available from: https://timesofindia.indiatimes.com/city/vijayawada/andhra-pradesh-fearing-he-had-contracted-coronavirus-50-year-old-commits-suicide-in-chittoor-district/articleshow/74085748.cms

18. An updated guide to the coronavirus drugs and vaccines in development [Internet]. [cited 2020 Sep 7]. Available from: https://www.statnews.com/2020/03/19/an-updated-guide-to-the-coronavirus-drugs-and-vaccines-in-development/

19. Rosenbaum L. Facing Covid-19 in Italy — Ethics, Logistics, and Therapeutics on the Epidemic’s Front Line. N Engl J Med. 2020 May 14;382(20):1873–5.

20. As Foreigners Flee China, Pakistan Tells Its Citizens to Stay - The New York Times [Internet]. [cited 2020 Sep 7]. Available from: https://www.nytimes.com/2020/02/11/world/asia/china-coronavirus-pakistan.html