



# Pandemic of COVID 19: Resurgence of the Era of Infectious Disease, the Forgotten Monster?

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## Editorial

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**Abbreviations:** WHO: World Health Organization; DALYs: Disability Adjusted Life Years; SARS: Severe Acute Respiratory Syndrome.

## Introduction

The year 2019-2020 is the landmark year for the mankind as well as epidemiology. In November - December 2019, cases with severe respiratory symptoms of unknown etiology were reported from Wuhan province of China. Subsequently it was confirmed that it is a newer mutated strain of Corona virus (Novel Corona virus or SARS- COV-2) with high infectivity [1].

It was initially thought to be zoonotic and the people consumed the flesh of wild animal were suspected to be attacked by the virus. World Health Organization (WHO) assured that no human to human transmission was reported. But after few days it spread among large population of Wuhan and human to human transmission was suspected. Restriction of mobility, home quarantine, hospitalization of the cases in the isolation ward and supportive treatment were the mode of intervention. But the disease crossed the border and rapidly spread in Europe. Russia, Spain, Italy, France, Germany and United Kingdom were worst affected. It also crossed the oceans and reached America on the path of international trade and travel. The index case of India, originated from China, was detected in Kerala on 30th January 2020 [2]. Subsequently almost all the countries of the world were affected and global public health crisis alert was given by WHO [3].

Earlier experts have assumed that most of the infectious diseases have been controlled either by the use of vaccines or antibiotics. Although there are sporadic cases of newer

infections like Ebola in Africa [4] and Nipah in Kerala [5] in recent past and some of the age old infectious diseases like Dengue [6] has reappeared worldwide as a result of unplanned urbanization and has created alarm to public health, emphasis was given on non-communicable diseases emerged from direct or indirect effect of rapid industrialization or altered life style. Moreover, WHO has predicted that the mental and neurological disorders will grow with the burden rising to 15% of disability adjusted life years (DALYs) lost by the year 2020-a new challenge [7].

But, fatal mutation of the age-old corona virus made an unprecedented twist in the scenario. We had faced the challenge of corona virus as severe acute respiratory syndrome (SARS) in 2003 and it had potential to spread as pandemic [8]. It was highly fatal (case fatality rate - 10%), but could be managed. It subsided abruptly as it aroused. After nine years, Middle East respiratory syndrome (MERS) occurred in comparatively larger area of Middle East in 2012. This mutated strain of corona virus was fatal (CFR- 35%) [9] but it could not spread worldwide.

## Now, what is the Present Situation?

Globally, since 31 December 2019 and as of 21 July 2020, there were 1,46,84,832 cases of COVID-19 (in accordance with the applied case definitions and testing strategies in the affected countries) have been reported, including 6,10,110 deaths [10]. The rising trend of incidence graph and infection of a huge number of populations including earning middle age group not only made the situation worse for health aspect, but also has grave impact on national economy and annual growth. Many areas went back to complete lockdown in between the phase of Unlock - 2 in India and the numbers of such zones are increasing day by day. Many states are

facings crisis in hospital bed as the bed occupancy rate due to COVID-19 is very high and duration of hospital stay is prolonged as majority of the cases deteriorate after first week of appearance of symptoms. Maximum viral load is found to be in 2nd and 3rd week of illness [11].

Apart from the inconveniences faced by everybody in daily life, our concern is the impact on newborn, children of under five years of age, women of reproductive age group, adolescent girls, geriatrics population etc. Every routine public health activities like antenatal and postnatal care, routine immunization, execution of national health programmes, care of non- covid patients etc. are all being compromised. It will have a grave effect on health as a whole for next few years. The impact on the other important determinants of health like education, socio-economic condition etc. is also very catastrophic. There is uncertainty in both education and occupation. A huge number of students of rural areas all over the world where electric supply and internet access is intermittent and limited are suffering. The poor children may not afford television or smart phone for e-learning. Even those who have the opportunity of e-schooling will suffer from various problems such as headache, ophthalmological morbidities like dry eye, optometric problems etc. In addition to those problems cardiovascular morbidity, sleep disorder, low cognitive and socio emotional development leading to poor educational performance etc. have been identified as morbidities due to excessive screen time [12]. Mandatory stay at home may take toll from the youngsters in the form of obesity, musculo-skeletal problems due to lack of outdoor activities, lack of concentration, behavioral problems, depression and anxiety [13]. If the condition continues for long time, their learning of social behavior will severely hampered. Large numbers of adolescent and young adults will have serious impact in their future life.

How are we fighting against this invisible new enemy of mankind? The weapons of nineteenth century are still effective to fight against an enemy of 21<sup>st</sup> century. Containment was started in the form of lockdown for various durations and the graveness of the situation is known to all of us. All the level of prevention was applied. Complete lockdown in the maiden areas is the example of primordial prevention. Early detection was initiated by thermal screening, swab examination of suspected cases and contact tracing. Specific protection was started by taking hydroxy chloroquine and antiviral drugs by high risk groups like health care providers, police etc. Emphasis is given on each field of health promotion, health education and life style modification e.g. hand washing, physical distancing of 2 meters, using face mask properly etc. Nutritional advices are given for boosting up body immunity against any type of infection as there is no vaccine till now and no specific treatment. Vaccines are under trial in different stages in many countries [14-16].

## Conclusion

History of mankind witnessed many epidemics. Many civilizations were lost due to infectious diseases. History repeats. Due to its high infectivity and rapid spread, people are getting panicked; the victims and their families are being stigmatized hugely. Rehabilitation, especially social and psychological rehabilitation has a special role in long run. Is battle against infectious diseases another world war of 21<sup>st</sup> century? In the era of advanced science and technology, we must defeat the tiny virus. Time will tell how the so called most powerful and intelligent species on earth conquered the battle against their invisible enemy.

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