

Editorial

# Living with CoronaVirus: 2021 & Beyond

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COVID-19 cases have increased to 95.5 million with 2.04 million deaths worldwide. In India alone has 10.57 million cases and 0.102 million deaths. The whole human world is facing crisis in all fronts beside mortality and morbidity, a lot of psychological and socio-economic distress was observed. Burden of other diseases has increased manifold due to focusing of health resources to COVID-19 pandemic. Domestic violence, rape, interpersonal conflicts and gender-based violence were increased due to interaction in stressed out environment. In fear of losing life in distance place from home, migrant labourers and employees started going back within few days of lockdown had created panic and serious threat to transmission of nSARS-CoV-2. Unemployment raised to all time high and those working from home their pay was cut to one third or half of usually regular amount.

It is also true that certain improvements were observed. Due to intense implementation of lockdown and media coverage people started realizing the importance to hygiene, sanitation, hand washing and threat of infectious diseases. Public is now more aware of the importance of total health including environment, animals and humans. Air and water pollution decreased significantly even in areas where people have never seen such scenario. Road traffic injuries went down. There are new lifestyle norms for work from homes and online classes workshop and conferences. Technology potential for interconnection was fully explored. Various Make in India products are made available in market and two indigenous vaccines are also experimented and approved by the Central Drug Controller of India. By some people the interpersonal relationships between spouse and between parents and children improved due to living together for longer hours which was never observed in their lifetime.

Emergence of new pathogens due to mutation and otherwise in last many decades demands urgent action from the world community to plan and implement program for one health and sustainable development. Indiscriminate use of natural resources particularly those which required thousands of years to replenish should be curtailed and replaced by better alternatives.

### **Mutation and New strain of COVID-19**

Emergence of new strains of COVID-19 is a natural process and can not be avoided. More spread of virus in the world there is more chances

of mutation therefore it is estimated that every month we have roughly two mutations in COVID-19.

Most branches in the global phylogenetic tree of SARS-CoV-2 show no more than a few mutations and mutations accumulate at a relatively consistent rate over time. Estimates suggest that circulating SARS-CoV-2 lineages accumulate nucleotide mutations at a rate of about 1-2 mutations per month.<sup>1</sup> A new strain of COVID-19 was first detected in U.K due to mutation to the genes that code for COVID-19's spike protein, the part of the virus that clings to human cells allowing for infection, likely causes its increased transmissibility.<sup>2</sup> The UK, South Africa and Brazil variants could be much more contagious or easy to catch than earlier versions. Some mutation could be fatal and others can be making the virus resistant to such mutation is part of its evolution process and going to have impact on vaccine efficacy. However, Covaxin has shown neutralizing effect on UK strains.<sup>3</sup> Continuous surveillance on mutation and emergence of new strains is required to strengthen vaccine production. Knee jerk reactions such a lockdown to curb emergent mutant strain may be detrimental to economic and social health. We should continue to observed social distancing and hygiene practices to decrease the spread of virus. Frequent vaccination could be required to generate sufficient herd immunity.

### Vaccines

A variety of COVID-19 vaccines are being developed around the world by the research laboratories and institutions. Now we have capacity to use advance technology to develop the vaccine molecules much faster than ever. There are roughly 48 vaccines in clinical trials and 164 candidate vaccines in pre-clinical trials. Each vaccine has distinct advantages and disadvantages but all produce immune response by memory B and T cell against SARS-CoV-2. We have DNA, RNA, Vector Vaccine, Live attenuated vaccines, inactivated vaccines, subunit vaccine, viral like particles vaccines, split virus vaccines and mRNA induced antibody vaccines. Various stages of trial of these vaccines are undergoing and having promising results.

Major concerns of the people are side effects of vaccination resulting high degree of vaccine hesitancy.<sup>4</sup> Most of them are due to misinformation which creates fear of confusion and unknown.

### Lost Opportunity

Due to the lockdown and respiratory symptomatology most of the people stopped or decreased the use of tobacco and alcohol. They have periods of fifteen days to one month of abstinence which is sufficient to settle withdrawal symptoms of tobacco and alcohol addiction. Proper counselling of such people during this period would have been motivated to continue drug free.

Pandemic provided opportunity to develop health infrastructure and streamlining integrated disease surveillance program at national level. However, many alternative and temporary systems were created to gather the data with limited capacity of analysis. Similarly, capacity building of the health professional in epidemiology and pandemic management could have been systematically planned and executed.<sup>5</sup> Whole pandemic compels the people to think about future course of development and also what type of relationship we should have with animal and plants on this planet Earth. We need to change our behaviour for better tomorrow through sustainable development.

### References

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