

Corona Control in India – The Facts

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Summary

Covid 19 has devastated the world since it was declared as a pandemic by the WHO in the second week of March 2020. It has already affected some 3 million people of which two hundred thousand are dead. However, the pandemic is uneven in severity. Some 15 Nations, mostly from Western Europe and the US together account for 88% cases and 92% deaths respectively. On the other hand, the total cumulative cases and deaths, so far, in Africa and Oceania are less than their daily number in the US and some European Nations. So mild is the pandemic in some Nations that it should be no health problem for them. In general, Covid 19 is more severe in developed Nations. The exact underlying mechanism for this unevenness is not known. It is believed that this may be due to earlier exposure to cross reacting antigens more prevalent in the challenging environmental hygiene in the third world. There could be other explanations. It is unscientific to categorize every RT-PCR positive person as a case (patient). Wrong media hype, which has terrified people to the extent that everyone thinks that *Yamraj* is standing outside his/her home, should end immediately. It has resulted in stigmatisation of even just the lab positive cases, although 95% of them would completely recover and lead a normal life subsequently. Progressively sharp rising number of cases and deaths, in the face of the 'lock down', suggests that the modality has not been very effective. Nations without the lock down, if at all, have done better. Just like the H1N1, Covid 19, will soon become a part of repository of the human pathogenic viruses producing sporadic cases. It is necessary that we develop, urgently, a strategy to handle these cases. India, where the pandemic is mild, will make a scientific history by developing *patient-oriented, made in India* clinical model that will be used Universally. It is time that we take a positive and realistic view of the Covid 19.

Background:

The storm Covid-19 hit the world on March 11, when the WHO declared it as a pandemic¹. Although devastating, its severity is very uneven. Seven weeks after the declaration, just 15 highly developed Nations, mostly from the Western Europe and the US, together account for 88% and 92% of total cases and deaths due to Covid 19, respectively². These Nations have been hot spots right from the beginning. However, the pandemic is mild in rest of the world, so mild that for some Nations it may not be a health issue at all. Globally, more than fifty percent of the 212 Nations, where the pandemic started, have not even one extra death per day due to Covid 19 and there is no death at all in 40 Nations. The number of the cumulative cases and deaths in the two continents - Africa and Oceania- taken together is far less than their daily new numbers occurring in the US and some Nations of Western Europe².

WHO's definition of a pandemic, evolved around influenza, says "*An influenza pandemic occurs when a new influenza virus appears against which the human population has no immunity, resulting in epidemics worldwide with enormous numbers of deaths and illness*".³

Therefore, the Covid 19 could not have been classified as a pandemic. as there are a large number of Nations where the death toll is miniscule or no deaths at all. However, the definition, which was followed till the 2009 H1N1 pandemic, was modified and the last two requirements (*illness and death*) were dropped. Neither of them is any more a requirement for a pandemic. It is alleged that the modifications were done under pressure from the drug and vaccine lobbies^{4,5} Interestingly, Covid 19 was declared as a pandemic by the WHO in 114 Nations when 19 (17%) had only one RT-PCR positive case, mostly imported, and 90 (80%) had no deaths⁶.

Symptoms of the Covid 19 are very vague and non-specific. The diagnosis is based entirely on a positive RT-PCR, a test for the presence of some viral genes. The test is very expensive and used mostly as a research tool in the developing Nations. It requires skills and special training. In infectious disorders a positive laboratory test does not always mean the disease. For example, a very large majority (even 95%) of healthy Indians are tuberculin positive, an indicator of only the exposure to *M tuberculosis*. But that does not mean that those who are tuberculin positive are all TB patients. Malarial parasite is another good example. In hyperendemic areas, some normal persons may even show parasites in their blood. Even in the case of Covid 19, a large majority with a positive RT-PCR completely recovers. They should not be classified as patients (cases). The test, therefore, has limited public health utility. It should be a good research tool to study biology of the Corona disease.

Pneumonia, a serious clinical manifestation, occurs only in a very small proportion of Covid 19 cases; mostly in senior citizens. Otherwise, as stated above, 95% of cases completely recover needing no medical attention. Currently, there are no clinical or laboratory predictive markers that could identify those who will develop clinically significant disease. Therefore, to assess the health burden of Covid 19 just on the basis of a positive lab test has many problems. (a) As only a small proportion develops clinically significant symptoms, the disease burden will be unnecessarily increased many folds. Since there are no predictive markers, the lab positive person will have to be regularly monitored that will unnecessarily raise the cost of health care and (b) Covid 19 will soon become another environmental human pathogen, just like the H1N1, and continue to infect fresh people with the result that there will be always a lab test positive person in the community. Therefore, the number of positives will never reach zero. Even one RT-PCR positive case appears to be enough to declare a disorder as a pandemic. When Covid 19 was declared as a pandemic by the WHO, 16% affected Nations had only one positive case that too mostly imported⁶. Thus, the pandemic will never end and the lock down will be indefinite, which is just humanly impossible. There is a need for a pragmatic approach. Focus only on clinically sick Covid 19 patients requiring hospitalization.

Comparative international Picture:

In the first two weeks (up to March 24), hardly any preventive measures were taken and the virus had virtually a 'free run'. It was assumed that all Nations will be equally and badly affected. However, this was not so. As mentioned earlier, ferocity of the pandemic grossly differed from Nation to Nation. The US had 42164 cases and 471 deaths⁷. On the other hand, the Indian figures were extremely low, just two per cent of the US. The picture viewed per million population, which makes comparison more meaningful, is no different. As the disease progressed, the differences became more glaring. So vast are the differences that it looks as if the two pandemics are caused by two different strains of Covid-19. The huge geographic distance between India and the US would favour the idea. However, the theory cannot explain the differences between the US and Mexico, which share a large porous border. Like

in India, the Covid 19 is mild in the latter. The most likely explanation is that both the Indians and Mexicans have a much better host defense than the Americans against Covid-19.

The US is a 'Highly Developed' Nations, whereas India and Mexico are both developing Nations which have huge population of slum dwellers. In some major cities, like Mumbai (India), as much as 50% of its population lives in slums, which are often next door to sophisticated high-rise buildings⁸. Sanitation is a major challenge in slums. The unhygienic environmental conditions would favor growth of numerous organisms which in turn could offer cross protection against novel infections. There could be other explanations too. It is well known that people in the developing world are more resistant to common infections as compared to the developed world. If this were true, the slum dwellers should have better defense than the better off people.

The data from the 2009 H1N1 flu pandemic, in India, support this view. The pandemic affected 10193 people resulting in 1035 deaths. However, the flu was very mild in slum dwellers. Of the 40 swine flu deaths, only two (5%) were in the slum dwellers in Pune where 40% people live in slums^{9,10}. This would also explain why the Covid-19 is milder in the developing Nations where environmental hygiene is poor. There appears to be some sort of common defense mechanism against the two viruses, as the Covid 19 and H1N1 maps can be superimposed, epidemiologically.

New Zealand, although classified as a highly developed Nation, has low incidence of Covid 19. It was, also, the Nation where H1N1 epidemic was very mild¹¹. Population based seroprevalence studies showed that substantial proportion of its society had pre-existing protective antibodies against H1N1 across age groups, an indication that the population was exposed to H1N1 or related antigens¹². It is well established that antigenic stimulation simultaneously generates immunological memory. It is tempting to suggest that stimulation of the memory cells by the cross reacting Covid 19 antigens have provided protection against the virus in the New Zealanders

Control Approaches

There is no doubt that Covid 19 has been devastating in some major highly developed Nations. By now about two hundred thousand people are dead. What is equally disturbing is that it has caused unnecessary Social havoc in many other Nations, where the epidemic is even mild. A positive RT-PCR test is wrongly dubbed as the disease, which, according to media, has caused deluge. The hype has been supported by the questionable preventive measures such as lock down, various color zones and even the worst, the complete sealing of the area with a positive case. These are, if at all, solutions for the law and order problems and not for infectious diseases. The fact that a large majority of the positive cases and a large proportion of the affected patients completely recover is mentioned in the media, if at all, in a very low tone. The main message, which is repeated *ad nauseum*, is loud and clear that is a lab test positive person is a dangerous case of the Covid 19. The wrong hype has resulted in stigmatization of a person even with just a positive test. Even a completely recovered patient may face social ostracization at home. If not properly handled, on time, it will result in social unrest, which all Nations would like to avoid.

The preventive strategy, obviously, has to be proportional to the ferocity of the disease. The doctrine 'one size fits all' is not applicable to the Corona pandemic. Two popular approaches are the National lock down, which, in essence, keep every person house-bound and closes almost all shops to prevent intermingling of the people. This is the virus (Covid 19) centric

approach, focused on prevention of its spread. The other approach is host centric. It allows free mixing of people and promotes herd immunity. All activities are normal. The sick's are treated as usual in hospitals.

In the third week of March, many countries, mostly in Europe and a few outside, went for the lock down, which, on paper, is very appealing as a preventive measure to stop the spread of the pandemic¹³. The nature of the lock down differed from Nation to Nation. However, there has been no stopping; the number of patients is progressively increasing everywhere. For example, even 5 weeks (April 27) after the lock down was enforced, the cases increased 22-fold (800926) and deaths 100-fold (40073) in the US^{7,14}. This pattern is seen everywhere without exception and raises serious doubts about the practical utility of this extreme step. India has yet another problem; every 5th person is a slum dweller¹⁵. Slums are very crowded so much so that a 10ft x10ft room is shared by 8-10 people. Execution of the lockdown is simply impossible in democracy. The argument that the purpose of the lock down is just to prolong the event to enable the health authorities to reorganise the control measures, like making more beds available for hospitalisation etc, does not hold water especially in Nations, like India, where the pandemic is mild.

Of the well-developed Nation Sweden is an exception¹⁶. Its strategy is based on development of a robust herd immunity that will be a permanent solution both for the present and future pandemics. Unlike other European Nations, it has not imposed lock down and allowed free mixing of the people many of them could be infected. It has in fact done much better than the US which has imposed lock down right in the beginning. Five weeks later, the number of cases increased 22-fold and only 9-fold in the US and Sweden respectively, a clear indication that the lock down has not been effective.

In India, the Covid 19 death toll cumulatively is very low, only about 900. Yet, the News media has given a wrong publicity creating a very gloomy picture. People are terrified and feel that *Yamraj (Death God)* is waiting outside every house. There are other problems created by the lock down. Because of the pandemic, patients of other disorders are ignored. For example, during seven weeks of the pandemic, normally there would have been some 10,000 cardiac by-pass surgeries, many of them are now categorized as elective surgeries, and therefore postponed¹⁷.

Patient-Oriented Clinical Model

Covid 19 has come to stay with humans. It will soon become a part of the repositories of the human pathogenic viruses, just like what happened to H1N1, and produce only a sporadic disease (viral pneumonia) especially in senior citizens. The patient-oriented strategies are best suited to deal with Sporadic cases. Therefore, as a part of the Corona control measures, India should also develop, simultaneously, a patient- oriented module that involves several issues. Some are given below.

1. The first and foremost is where should the corona patient be admitted - in a general or infectious disease hospital.
2. Should there be special hospitals established for Corona disease.
3. Corona infection causes death due to viral pneumonia especially in the senior citizens in whom pneumonia is a common cause of death. Does it mean that all patients of pneumonia should be first treated only in the infectious disease hospital till the lab test (RT-PCR) is found negative.
4. Social distancing and other precautions should be followed while the patient is in the hospital.
5. There is a need to develop a good standard treatment protocol

6. Mandatory lab investigations for the disease should be defined.
7. Which patient needs ventilator or every Covid 19 patient should be immediately put on the ventilator. The criteria for taking them off the ventilators need to be defined. This is very important, as there are mixed reports on their use¹⁸.
8. Specific instruction for disposal of dead patient should be defined.
9. Should there be separate medical and paramedical staff for these patients
10. The meaning of a positive RT-PCR test should to be highlighted for the benefit of patient's close contacts.
11. Although not directly connected with patient care, the media hype has created unwittingly a monster called the Coronavirus disease. Patients are so castigated that others shun hospitals that are admitting them. There is a misconception that if you are just lab test positive it is an end of the world for you. People are afraid of even touching a dead corona patient. This needs to be immediately corrected, lest designated colonies may be created for them, that needs to be avoided at all cost.

Given the challenge, India's globally recognised medical expertise could develop a suitable patient-oriented model. This is a golden opportunity for India to create scientific history by creating an *Indian patient-oriented clinical model* (made in India) that will be used by other nations where the disease is either mild or sporadic.

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