Curbing the Spread of Covid-19

Bertrand Wong
Eurotech, S'pore Branch
Email: bwong8@singnet.com.sg

Abstract Covid-19 has made its unexpected entrance into the world some time in late 2019 causing much fear, economic disasters, suffering and fatalities throughout the world. This paper suggests a more aggressive intervention and strategy, for humanity should not let themselves be sitting ducks waiting for the virus to attack, and some possible methods for stopping Covid-19 in its path. (A useful summary is included just below.)

Keywords: Virus; pandemic; heating equipment; air-filters; micro-biology; cure; disease prevention.

Summary

What is already known on this subject?

The things already known about Covid-19 are that it is highly contagious and people have to be protected against infection, which could easily turn fatal, by receiving vaccinations, wearing face masks and/or face shields, avoiding close contact, hand washing with soap or rinsing with alcohol to decontaminate the hands, disinfecting places visited by the infected to prevent the spread of the virus, and so on; also, the elderly and the very young, whose immune systems tend to be not so robust, as well as those with underlying illnesses, are particularly vulnerable when infected. The virus also mutates quickly and there are now new variants of the virus which are apparently more contagious. People have also been advised to stay home as much as possible instead of socialising and mingling to avoid being infected and infecting others if the person unknowingly carries the virus, as people could be infected without feeling unwell or showing symptoms, that is, they could be asymptomatic.

What this study adds?

This study explains why more needs to be done, as the virus is apparently not being suppressed and waning with all the measures implemented so far. The measures implemented so far appear to be aimed at developing herd immunity, for example, to let the virus infect people so that their bodies develop anti-bodies to resist the virus whereby herd immunity could be achieved. But this

does not appear to bring the desired result and instead more and more people have become seriously ill through infection and there are more and more deaths through infection, which is all happening quickly showing how contagious and dangerous the virus is. One prominent health scientist has recently stated that developing herd immunity is a myth, while another scientist has also recently remarked that we are more at the head end of the Covid-19 infection than at the tail end of the infection, which implies that we should not behave as though everything is going on well and we are soon going to return to normal, another scientist even said that it might take many years, even decades, to return to normal. This study provides the explanation, the strong reasons, why more preemptive and aggressive measures are needed for containing the virus. It also suggests three possible methods, which should be seriously considered, for containing the virus. To develop the equipment and carry out the micro-biological research suggested in these methods may require a lot of funding, for example, from the government, as well as technical expertise. Of the three possible methods suggested, two of them may be totally new and original. The study suggests a change to a new and better strategy for tackling the virus when the existing one apparently doesn't work well. In summary, this study shows that there is possibly a better strategy or approach, with the involvement of new methods and technologies, for tackling the seemingly insurmountable Covid-19 challenge.

1 Introduction

When Covid-19 first appeared the World Health Organization (WHO) had advised that the virus spread through physical contact and not through the air and thus wearing face masks was not necessary unless one was not well. How wrong could the WHO be when it was later discovered that the virus also spreads contagiously by air, making the wearing of face masks for preventing the contagious spread of the virus more or less a necessity. Sad to say there are many delusory people who prefer to view Covid-19 as similar to the common flu and should be regarded as nothing more serious than the common flu, whereby they end up paying a heavy price by falling seriously ill, or even die, due to the virus.

Many countries have relaxed and let their guard down resulting in second, third or more waves of the infection. As the virus seems adamant to stay and refuses to go away, Covid-19 would become endemic, a new normal, similar to the common flu, dengue, and what have you.

Over-crowding also appears to cause the virus to spread quickly and easily. As we are all social beings, gathering in groups is desirable but this would help to hasten the spread of the virus. In this respect, the virus has put a damper on social interaction and gatherings. People can't go to the office and work because they might catch or spread the virus in groups there, they can't gather in big social groups such as parties and weddings, they can't travel freely for fear of catching or spreading the virus, and so on. Humanity appears to be losing to the virus in many ways.

The elderly, and even the very young, whose immune systems tend to be weak, are particularly vulnerable to infection by the virus, and, if infected it could be fatal for them.

2 Curbing Covid-19

In this section, some possible measures for curbing Covid-19 are suggested. *Humanity should not allow themselves to be sitting ducks waiting for the virus to attack, seeing how aggressively the virus has been contagiously attacking them*; they should find ways to counter-attack the virus, and stop it from infecting them. In fact, to admit that Covid-19 would be endemic and would be the new normal is to admit defeat by the virus.

Many countries are getting their people, especially the elderly and vulnerable, vaccinated against infection, if possible the whole population, so that there would be herd immunity, so that the various restrictions imposed to stop the spread of the virus could be eased and life could return to normal. But there are many problems in this move, for example, not enough doses of the vaccine to go round, people who refuse to be vaccinated due to lack of confidence in the vaccines, fear of side effects, infection even after partial or full vaccination, re-infection, etc.

For hotter climates, for example, in countries such as Thailand, Vietnam, Africa, etc., which have tropical or sub-tropical climates, Covid-19 infections and casualties are relatively much lower than those in the colder countries, for example, US, UK, Canada, France, Italy, Iran, Sweden, etc. It has been found that the hotness of the tropical and sub-tropical countries puts a damper on or kill the viruses while the cold of the colder countries encourages their survival and proliferation.

The following measures, *on top of the other measures in use*, are suggested for curbing Covid-19:-

(1) "Heating" equipment for reducing or eliminating infection by inactivating or killing the virus might be more practical for colder countries, especially in winters, besides keeping people warm. As the viruses could not survive at high temperatures, "high temperature generating" equipment, for example, hot-air blowers for both indoor and outdoor, might be viable for use against the virus. Evidently, the viruses could not withstand heat. A recent experiment in a French lab found that the viruses became inactive when the temperature was high; but the viruses died only when the temperature was near boiling point. This might explain why tropical or sub-tropical countries such as Vietnam, Thailand, Burma and Africa have relatively much less Covid-19 infections and casualties than colder countries such as US, UK, Canada and France.

(2) Covid-19 is now confirmed also an air-borne disease. This means staying indoors may not be safe. For example, a gust of wind carrying the viruses blowing into the house or anywhere in the environment may infect people with the viruses. Vaccines provide the cure. Prevention is evidently better than cure. For prevention, there are disinfectants and UV lights which kill the virus, detergents, face-masks, face-shields, etc. However, it would probably be better to have air-filtering equipment, for both indoor and outdoor, which suck in air, filter away the

viruses and other harmful substances from the air and release virus-free, clean air into the environment. Someone, who is probably an inventor, has been heard saying that he is attempting to make such an equipment, and, this is certainly a good preventive method. This would possibly be the most effective way of fighting Covid-19 if the equipment were available. Such air-filtering equipment might also be suitable for simultaneously filtering away other types of air-borne viruses and bacteria, for example, those that cause influenza, pneumonia and tuberculosis, which would be "killing more than one bird with one stone".

(3) The idea here might seem far-fetched but it might work. It is said that there are plenty of "good" and "bad" bacteria in the human body, for example, in the guts; the "good" bacteria in the body fight the "bad" bacteria and prevent the latter from causing harm to the body. Likewise, it might be possible to have "good" viruses or bacteria to fight and neutralize Covid-19, inside and outside the human body.

3 Conclusion

Vaccines might not be effective especially if the virus could mutate or change very quickly and become resistant to them quickly, now that they are available, which probably explains why there are fully vaccinated people who still get infected by the virus. Though vaccines are important for the cure and vaccinated people would not fall so ill if infected by the virus, prevention from infection should take precedence as infection might cause serious problems such as multiple organs failure if not death and a weakened body even if the person recovers.

The three suggested, possible ways of curbing the spread of the virus presented above should be seriously considered. While the important measures such as vaccination are defensive, these three suggested, possible methods are aggressive, offensive and preventive. Prevention is evidently better than cure.

Another concern is that face masks are not fool-proof against the virus. When a person breathes through the mask, unfiltered air also gets breathed in from the sides of the face mask. Air is fluid and it travels in all directions. The virus through transmission by air could land on any part of the person's body, in fact anywhere.

Many people are infected by Covid-19 and dying every day. Vaccinations and masks, though important, are only defensive weapons against the virus. They do not attack and eradicate the enemy, which is the virus, *allowing it to continue causing trouble*. More aggressive and offensive methods should be used, such as the three methods suggested in the paper, in order to eradicate or get rid of the virus which is causing much harm and deaths every day, *in order to stop the virus from contagiously infecting more people*, before it is too late. This may be easier said than done but this, if carried out, could effectively put a damper on Covid-19 infections. However, vaccinations are evidently for strengthening the body against/curing the body from Covid-19 infection only, while the methods suggested in the paper are for preventing Covid-19 infection - there is a world of difference between the two. A more preemptive and preventive measure against the virus should be adopted to stop it from causing further harm and deaths. The best defence against the virus now wherein virus infections are getting more serious in many

countries appears to be more aggressive intervention or more offensive action against the virus. The reason also, besides stopping the virus from contagiously infecting more people, is that if the virus is not eradicated and allowed to survive and thrive *it could mutate into a stronger, more dangerous, more contagious virus (as has already happened, with there being several new, more contagious strains of the virus), whereby it would become harder, possibly impossible even, to eradicate*, with the Covid-19 situation becoming more intractable as a result. In the past, when the bird flu outbreaks occurred, hordes of fowls infected by the bird flu were quickly rounded up and culled, thereby eradicating the bird flu virus and ending the outbreaks. Humanity could not do the same to its own kind. The above-mentioned suggested, possible methods of eradicating the Covid-19 virus possibly represent the next best alternative.

At the moment, the virus appears to be having the upper hand in the "game of chess" with humanity. Whatever steps have been taken to counter the viral infection so far, the virus has apparently been able to counter-block, mutate and become more contagious, causing consternation and fear. Evidently a better strategy is required for containing the virus, as in a game of chess against a chess opponent, or, in a war against the enemy.

In the news, more infections and more deaths are heard every day, which is worrying. Should this state of affairs be allowed to continue and should the situation be simply treated as endemic and the new normal, that is, should the infections and deaths be treated as normal and be allowed to continue? Should people continue to live in abject fear of the virus? What about counter-measures which could rectify all this? Positive thinkers would say the fight has to continue and the battle has to be won; otherwise it would be doom. Soldiers win battles by advancing and killing their enemies and not by staying put and allowing their enemies to attack; team sports players win matches by charging forward and scoring goals at their opponents' goal-mouth and not by staying put and allowing their opponents to charge at them and score goals at their own goal-mouth. In the battle against the virus the same principle should apply.

References

[1] COVID-19, MERS and SARS: Global Status, Stephen Berger, 2020, GIDEON Informatics, Inc

[2] COVID-19: The Pandemic that Never Should Have Happened and How To Stop the Next One, Debora Mackenzie, 2020, Hachette Books

[3] Predictive Models for Decision Support in the COVID-19 Crisis, Joao Alexandre Lobo Marques, 2021, Springer

[4] Framework for Equitable Allocation of COVID-19 Vaccine, National Academies of Sciences, Engineering, and Medicine, 2020, National Academies Press

[5] Clinical Synopsis of COVID-19: Evolving and Challenging, Hemanshu Prabhakar, Indu Kapoor, Charu Mahaja, 2020, Springer

[6] Understanding Coronavirus, Raul Rabadan, 2020, Cambridge University Press

[7] 100 Questions and Answers About Coronaviruses, Delthia Ricks, 2020, Jones & Bartlett Learning
[8] Covid: Why Most of What You Know is Wrong, Sebastian Rushworth, 2021, Karneval forlag
[9] Covid-19 Airway Management and Ventilation Strategy for Critically Ill Older Patients, Nicola Vargas, 2020, Springer
[10] COVID-19 in New York City: An Ecology of Race and Class Oppression, Deborah Wallace, 2021, Springer

l