

'The lockdown has not eradicated COVID-19'

Interview with **Jayaprakash Muliyl**, Member of the National Task Force-constituted research committee on (COVID-19) Epidemiology and Surveillance and Chairman of the Scientific Advisory Committee of the National Institute of Epidemiology. BY **T.K. RAJALAKSHMI**

MANY SCIENTISTS HAVE BEEN SCEPTICAL about the efficacy of a complete lockdown as a method to get rid of the SARS-CoV-2 virus. Among them is Professor Jayaprakash Muliyl, a renowned epidemiologist who retired as Principal, Christian Medical College, Vellore, and is now a member of the National Task Force-constituted research committee on (COVID 19) Epidemiology and Surveillance, as well as Chairman of the Scientific Advisory Committee of the National Institute of Epidemiology.

Professor Muliyl spoke to *Frontline* over phone on the various issues relating to the COVID-19 pandemic. Excerpts from the interview:

One of the empowered committees set up by the government on COVID-19 has estimated that the fresh number of cases will come down to zero on May 16. Do you agree?

Not according to the science I know. Remember we have been trying to do this quite a lot through containment work. Once the presence of the virus has been established within a country and the transmission within the country has started, it is very difficult by lockdown alone to get rid of the virus.

There is an important aspect of this virus that we need to understand, and that is the spread is primarily through sub-clinical cases. A large proportion, maybe 65 per cent, may have caught the disease or not. They are asymptomatic.

Whenever you see new cases being reported, you will notice there are a large number of sub-clinical (where

definite or observable symptoms are not seen) cases spreading the disease. They are infectious for probably around a week, but that is the time when they do the spreading. There is no way this can be done unless it is very localised or, say, we are around three clusters in the country. Probably we could have done a good try, but then it is not very easy. Now that it is everywhere, we are dealing with a human population. We have to talk to each other, go out and buy food from shops. It is not conceivable. We can reduce the transmission but to get rid of it to zero is going to be extremely impossible.

What is your opinion on the testing protocol?

There is the question why do we test. First of all, we want to know what proportion of cases we think could be COVID, representing the symptomatology suggestive of COVID, and what proportion is actually COVID. To ascertain that we need to do this particular Reverse Transcription Polymerase Chain Reaction (RT-PCR) test. If the person tests positive, then we are certain, to a large extent in an epidemic situation, it is possible it could be COVID-19. On the other hand, depending on the tests we are using, we have to be careful of negative results where, in some situations, a sensitivity of 70 per cent was seen. There is a difficulty with such tests.

Modern tests are much more sensitive. The reason why we test is to find out whether a person is symptomatic or has COVID. People have used it also to identify among contacts, but I am not very clear about what the use is. If there is an intra-familial contact, we assume they would all be infected. We



VIDEO GRAB

should assume that everyone in an intra-familial contact may not be infected today but might get it tomorrow. They will never show symptoms.

The other test we have is whether a person has immunity or shows evidence of immunity or immunoglobulins. The one that is most reliable is IgG (Immunoglobulin G, which is the most common type of antibody in the blood and other fluids). It doesn't diagnose disease. It only diagnoses whether the person has been exposed. We can talk about what percentage of the community has already been infected, and, consequently, are immune to the disease.

I know some of the labs are almost ready in India to come out with tests that are superior to the Chinese tests. The thing is, we can't see the infection as most of it is sub-clinical. But when we do the test and find what percentage of persons is positive, we know the extent of the spread. We also recognise that a good proportion of people have become immune, so then the potential of becoming diseased is low.

I would be happy to find that I have already been infected, and get a certificate from my lab that I am IgG positive. This means I can go anywhere, walk into any hospital, its ICU and talk to a COVID patient. Nothing is going to happen to me. I am an optimist. An immunogenic virus will produce good protection. Like measles, if you get it once, you will never get it again. For example, German measles, if you get it once you will never get it again. Immunity is something you can depend on. That is why testing will tell us to what extent immunity exists. I know for certain that the tests being worked on in India are very good.

HERD IMMUNITY

The numbers are going up every day. From around 500 confirmed cases on March 25, we have crossed 40,000 a month and a half later, with more than 1,000 COVID-19 deaths. Can this spread be contained with the kind of lockdown we have had until now?

You have answered the question before you have asked it. The lockdown only flattens the curve. If one doesn't do anything, the whole curve will rise steeply. It will go up and come down within three months. With a lockdown, one spreads the curve for a longer duration. Six months, nine months, depends on how long the lockdown is continued. But the total proportion of people

who will get infected will not change. It will continue till the particular proportion that it is expected to infect is covered. That is what we call herd immunity. Until that point, it will continue. Instead of everyone falling sick simultaneously, we can spread it around; that can mean that the proportion suffering from serious illness will come down. The same percentage will be seriously ill and need hospitalisation. But since everyone is not falling sick, the hospitals will not be overcrowded. Instead of having the epidemic for a short duration, say three months, the epidemic will go on for more months depending on how long is the lockdown. But the final outcome will be the same number of people who will be infected. Most will be asymptomatic, some will be mildly ill, and a certain percentage will be seriously ill with pneumonia and breathlessness.

Is it possible to get herd immunity without high mortality?

I am talking of only one method that I know. Other countries are also trying to follow. Of all the deaths that occur, 80 per cent or more are in the age group 60-plus. The population that will need help is the proportion that is over 60 years. If they willingly lock themselves down instead of the whole country being locked down, and also within their families, then they won't get infected. So they won't fill hospitals. Many among them who are fairly ill may still fall ill and will need hospitalisation. But we will avoid that rush to hospitals. Younger people are stronger and take part in economic and agricultural activities. They will get infected once they go out and start working. But most of it will be mild. Some may fall ill seriously and some will die. But then they will have a better chance of surviving as the hospitals won't be that overcrowded as the elders won't enter the scene.

That is the sacrifice we expect senior citizens to do, stay at home and keep a distance from their children and grandchildren. I understand I am asking a lot.

We are going through a crisis, the worst crisis since Independence. Somehow, we need to tide it over. The question you asked is very relevant. We can reach herd immunity without too many deaths. The expected number of deaths will be slightly high, but we can reduce it substantially, in which case we have succeeded.

The virus is for real. Every country is suffering. The only strength India has is its young population. Ninety two per cent are below the age of 60. And they can protect

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M. SRINATH

PEOPLE thronging the Big Bazaar street in Tiruchi on May 6.

the elderly. Once we reach herd immunity, we can let the elderly out without the threat of getting infected. Everybody does not believe that this is that simple, and I respect their opinion. I am an optimist and I am using my science.

Herd immunity gives protection to the whole community. I have observed it in many other viruses. It is a little difficult for people to understand. The characteristic feature of this virus is that it travels from person to person.

What percentage of our population needs to get infected to get herd immunity?

It's a little difficult to answer that as India is almost ten times the size of many European countries like Germany for instance. The proportion needed will be higher in the urban areas and less in the rural areas. In the urban areas, we are hoping it will be around 60 per cent.

Kerala did a lot of aggressive contact tracing and is an example of successful containment. Even without a total lockdown, they managed to contain the spread with a system of outreach management of health and other services.

Kerala is one of the best performers in containment. Methodologically, they were thorough. They sought the cooperation of the people. There was a good dialogue between the government and the people. They evolved a programme based on ground realities. Many a time, when there is a disease like this, there is a lot of stigmatising. That is not a good situation. Kerala created an environment of caring and concern. But the question now is, as they have opened up, will the virus return? It will be very disappointing if that happens. I wish them luck and I hope they have been able to get rid of the virus. But they have to remain isolated from the rest of India to

keep their virus-free status. They can't allow people coming in.

The lockdown has affected people disproportionately. You have spoken about this as well.

It has been very hard. Even now migrants are trapped in some parts, unable to get out. The lockdown without much of a notice caused a lot of hardship. In New Zealand, where the government decided to go in for a complete lockdown around the same time as India (New Zealand went in for a lockdown on March 25 after the Prime Minister Jacinda Ardern announced it on March 23), it gave three days of notice to people. We are not a small population as New Zealand. We needed some time. Very often, when a 24-hour notice is given, there is a tendency to rush for buying. If one opens a shop for three hours, there will be crowding. Strangely, it is like facilitating the transmission of the virus. Then questions are asked, why are cases increasing even during the lockdown? We [the government] are not consistent in our approach. The whole frame of mind should not be to increase the suffering of the people.

When the lockdown is opened, I am sure there will be a larger number of cases. It will take some days to come out. I am hoping that planners will not panic. They should expect it. The lockdown has not eradicated the disease. We have to understand that it will come down. We have to educate our people about no crowding, about keeping a distance. This will go on. That is important. There will be some infection and some deaths. But each time there are two or three deaths, the demand to have the lockdown is back.

The bed strength has to be increased and watched carefully. We have to make sure that the hospitals do not get overwhelmed. This has to be done with a lot of thought and not as a reflex action. It is like seeing a report

in the evening that the cases have gone up and then extending the lockdown because of that.

The participation of the people in the whole process is also vital. Once we open up, infections will start spreading. Our messages should go to the elderly to stay at home and keep away from others in the family as far as possible.

The government is projecting that things are getting better and that by May 16, the number of fresh cases will be zero.

Coming down to zero cases is not going to happen. In Kerala, one district was declared as having zero number of cases. But again some fresh cases appeared. The point to note is that as the majority are sub-clinical, one will not see any case after lockdown for some time. Nothing strange about this.

The disease has an agenda and it will complete it. It will infect 60 per cent of the people. That is one part of the agenda. Of the infected people, maybe two and a half per cent will need hospitalisation. A certain percentage will die. This is a process that will have to be gone through. You can have a lockdown and slow it down. But it will complete its agenda and we will have to helplessly watch since there is no chance of a vaccine at least for one and a half years. We are all praying for a vaccine. I also have a family.

In the meantime, we have to be sensible and protect the interest of the nation. A certain percentage of the people, less than 0.5 per cent, will lose their loved ones. That percentage looks small but in terms of our population it might be large. Almost ten million die due to natural cases. There are other causes also. We have gone through a disciplined life in the lockdown period. But it is not easy to stay in a small hut with husband, wife, children, old parents and not being able to go out. Now we should exit [from the lockdown] and carefully open up with the cooperation of senior citizens to reduce mortality.

What do you make of the efficacy of plasma therapy which has been used by some private hospitals and which the government later clarified was not among the officially approved therapies.

In many viral diseases for which there is no specific treatment available, a good number of antibodies are produced. Viruses are good at producing a good amount of antibodies in the blood. Once people recover from it, by and large the blood is free from the antibodies. Plasma containing all the antibodies can be taken and injected into someone else to reduce the viral load. It may reduce the viral load. But I am yet to see a paper which says this works.

What is your opinion about this blame game involving the World Health Organisation and China?

I am an expert in epidemiology not international relations or social psychology. But looking at the biology of it, my feeling is there was a mishap in the laboratory. The only facility that worked with the virus was in the laboratory in Wuhan. It could have been a coincidence to say that it originated from the wet market. The fact that this was a nasty virus didn't become apparent immediately. After it became apparent, an average person sitting in a lab would have liked to hush it up after realising it. It could have been contained early, but no point in attributing malice to something that can be explained by stupidity. I would be interested in knowing what really happened.

But they ensured that it didn't spread beyond Hubei province.

Yes, they contained it. They did it well.

What should have been done in the lockdown period in terms of strengthening public health systems and epidemiological surveillance?

We are always conscious of the safety of our people and that is why we spend a lot of money on our defence budget. However, we now realise that death can come in this manner, too. I hope this will be a strong lesson to say that public health should see high priority with good training and investment. This includes the ability to respond to threats and the resources to take care of casualties. All these are important in a public health scenario. This should warn us that often the battle is not with any larger enemy but with biological hazards like this.

What lessons for epidemiological surveillance does COVID-19 give us?

It is more important to have international collaborative surveillance programmes. There is realisation that threats can come from any part of the world. At least on moral principles in future, we should be open and facilitate surveillance, share information, not just within the host country where a disease may have originated. It is a sad commentary that we have developed scientifically so much but we are facing a threat from a small little virus.□