

This is What Israel Should Do to Avoid Fifth COVID Wave Report

Shimon Shatzmiller*, Ludmila Buzhansky, Inbal Lapidot, Galina Zats and Rami Krieger

Department of Biological Chemistry, Ariel University, Ariel, Israel

***Corresponding Author:** Shimon Shatzmiller, Department of Biological Chemistry, Ariel University, Ariel, Israel.

Received: November 08, 2021; **Published:** February 28, 2022

The following COVID version may be 'problematic'

The Israeli professor noted that the state recorded its first case of a sub-variant of the Delta strain last week. Therefore, Cohen said the public should be more careful and take all precautions to avoid another wave. "We need to be prepared," he added.

Moreover, Cohen said he believes the next version of the deadly virus, called omega, could be "problematic." If this is the case, the professor said the Israeli government should control the borders and be more careful with inspections. He also added that the country should be faster in responding to the challenges posed by the virus.

Moreover, the health expert has determined that at the moment, it may look as if the fifth wave of the coronavirus is not tangible, but it is still possible, he warned. Cohen said the way to deal with it is to be "quick" in response and comply with regulations. He added that the government should also make every effort to vaccinate those who have not yet done so and ensure that everyone in Israel receives the jabbing [1].

Everyone agrees that the biggest mistake this summer was believing that Israel had defeated the corona virus, while the vaccine still remained the main tool in the fight. With all the indicators indicating that the fourth corona wave in Israel is receding, Haaretz asked a group of COVID-19 experts what should be done to avoid a fifth wave this winter. Everyone stressed that despite the encouraging trends of recent weeks, it is still too early to celebrate and declare victory. This is one major lesson that Israel has learned the hard way from the fourth wave.

At the beginning of the summer, COVID-19 infections reached a record low and the government lifted most of the restrictions. The Israelis celebrated what they thought was the end of the plague. But the arrival of the Delta version in July and the decline in the effectiveness of the Pfizer vaccine led to a fourth wave - and a return of wearing masks, working remotely and social distancing.

"The main mistake we made between April and July was celebrating the end of the corona because we had high vaccination rates, and now we understand that we are not going to eliminate the corona," Prof. Nadav Davidovich, school principal told COVID. Public Health at Ben-Gurion University in the Desert, Beer Sheva, and Head of the Association of Public Health Physicians in Israel.

Davidovich said that later on, it would be important for the government not to be complete, as it did after the third wave dissipated.

"In order to prepare for the next wave, especially during the winter, we must continue to vaccinate the population, including in hard-to-reach places," he said.

"We need to continue with the implementation of Green Pass. We should strengthen the health care system as much as we can," he added, referring to the vaccine certificate against COVID that gives Israelis access to public spaces.

- COVID in Israel: New serious cases drop by 60% within three weeks

- High schools in Israel take a chance on Corona - and not everyone is happy
- Israel's calm rules regarding outdoor activities come into force because COVID infection remains low.

Rivka Abulafia-Lapid, a virologist at the Hebrew University, believes that Israel made a mistake. After the third wave, by welcoming tourists to visit the country too soon, thus helping to spread the Delta variant. This time, she says, more attention should be paid to the risk of versions coming from abroad, as international travel takes off again around the world and tourists are about to return to Israel.

She also stressed the importance of developing additional vaccines that will focus on future versions of COVID. She noted that the Pfizer vaccine used in Israel targets only one protein in the virus, so stronger vaccines are needed. "I estimate in the future, like the flu, every year we will get a combination of two or three strains and get a shot of the vaccine," she said.

Take out the message

According to Prof. Eyal Leshem the director of the Center for Trip Senior Medical Director at Sheba Hospital: Israel's early and rigorous vaccination campaign was commendable, but further waves are still possible due to the decline in immunity and new versions.

He said that reducing future waves will depend on monitoring both vaccine efficacy and the emergence of new versions. "We need to maximize our use of interventions that are most effective - especially vaccines," he said.

Like Davidovich, Leshem also recommended increasing the capacity of hospitals in Israel and improving the messages in the public health sector. This, they both stressed, is essential to fighting misinformation around vaccines.

In Israel, about 15 percent of the eligible population over the age of 12 are not yet vaccinated, but this group constitutes more than 75 percent of the most serious cases in the country.

Prof. Levin-Zamir, who heads the Department of Health Promotion in Clalit Health Services, also emphasizes communication.

"We all need to be advocates, learn how to get the message across and how to listen to people who are concerned about messages they receive from other sources," Levin-Zamir said. She said essential masks as long as the virus is still spreading around the world: "We need to make certain that we protect ourselves and be vigilant."

According to Prof. Hagai Levin, an epidemiologist at the Hebrew University and until recently head of the Israeli Association of Public Health Physicians, experts in Israel must begin "a complete learning process and investigation to understand how we can improve."

He believes that the biggest gaps in Israel's ability to deal with common health emergencies that already taken. These steps include insufficient hospital capacity and lackluster data infrastructure [2].

According to him, Israel must establish a permanent epidemiological unit at Ben Gurion Airport and hire public health coordinators in schools, municipalities and other institutions.

Sheba's Deputy CEO calls for preparations for the fifth wave: "Take advantage of the time" [3]

Prof. Arnon Afek said that the declining trend in morbidity is noticeable, but so far not in the critical patients - and attacked the Ministry of Finance: "We are told that we will not receive any more standards because we have not reached 2,400 patients - where did they draw this imaginary number?" "We need to prepare the teams for another wave," he said.

Sheba's deputy CEO, Prof. Arnon Afek, encourages the declining trend in morbidity - which he says, not yet reflected in patients in a severe condition - but already warns of the fifth wave. But you have to take advantage of this time to prepare the system. We are already being told 'you do not need the devices, you do not need anything, because there is no longer a corona'. We were promised 300 doctors' standards and 1,500 nurses. They said we would get the first dose, and now that we wanted the second - they said 'no no no, we did not reach 2,400 patients'."

Who says that? Ministry of Health or Finance? "Finance, unequivocally Finance. The fact that we did not reach these numbers is an achievement for all of us, thanks to government policy and an open economy, and I hope everything stays that way and we do not go back. But let's use the time for another wave, prepare the system".

You say, prepare the system for the fifth wave. "And do not say that they do not bring you standards because you did not reach 2,400 patients, which is an imaginary number that I do not know where it was taken from."

According to Prof. Afek, "The hospitals are crowded. You tell the staff that the Corona has gone down, we have already closed two wards, but there is no time to rest - the other patients are already flocking, who also deserve treatment. I do not know whether to attribute it to flu or other illness. "Every time we get into a situation where we are forced to hospitalize patients [4] in the corridor, I am ashamed and apologize to them that people who established the state cannot receive conditions in hospitals in the State of Israel. Let's overcome this, investing in health produces a backbone for the Israeli economy."

According to him, despite the significant declining trend in morbidity and mortality, at Sheba Hospital it is still not reflected in the number of critical patients, who have not been vaccinated and are connected to an Acme device. "We are also a rehabilitation hospital, and there are Corona patients who are already recovering and then moving to the rehabilitation hospital so that they can try to save them there. Some are left with a very severe disability, and for three we even had to have a lung transplant."

Prof. Afek spoke about the symptoms after the Corona: "The more difficult patients go to a rehabilitation hospital, and for some people it works on its own - such as facial paralysis, loss of sense of taste and smell.

According to him, the unvaccinated are at the highest risk of contracting a serious illness. "Unequivocally," he stated. "That's why it hurts so much. You know you could have prevented it because the best treatment is to prevent it in medicine. That's why children's vaccines are made and a lot of money is invested in vaccines. The main goal is to convince people to get vaccinated. It contributes to you, the family and the population in Israel. "

Afek also warned of a childhood illness - which he says is dangerous even after recovering from Corona: "So far, between 100 and 200 children have had multiple systemic inflammation that can end in severe cases even death. We hope vaccines will enter children to help save future children's lives."

Prof. Zarqa warns: Fear of the new breed, preparing for the fifth wave.

In a special interview, Corona Commissioner Prof. Salman Zarka (Salman Zarka is the Director of Ziv Medical Center in Safed,) spoke about the decline of the fourth wave ("we will pass it successfully"), the lack of coordination with the Ministry of Education - and the preparation for the fifth wave in the shadow of the new strain.

The Ministry of Health is preparing for the fifth wave of the Corona, the corona commissioner Prof. Salman Zarka said today (Tuesday) in an interview with the "News on the Net" program. According to him, Israel is after the peak of the fourth wave - and the Ministry of

Health is already preparing for more. “the fifth wave, which will arrive, probably in the winter.” The deployment includes, among other things, the acceleration of the vaccination campaign, he said.

Among other things, the commissioner spoke of the newly discovered strain, saying, ‘It bothers us. Not too much. He started in Morocco and now he is in Europe - but we do not see that he is stronger than the Delta. “ Against the background of the government’s intention to allow inbound tourism as early as November 1, as part of a special outline that will allow vaccinated tourists from green countries to visit the country.

Then, referring to the Green Class pilot activity, the projector was asked about the lack of coordination with the Ministry of Education - while the Ministry of Health says the continuation of the pilot will be decided only next week, the Ministry of Education released festive data today saying the pilot is not currently expanded. Prof. Zarqa replied, “My coordination with the Ministry of Education and the Director General, Yigal Slovik, is excellent. We work in cooperation, there is no shortage of antigen tests - only 5 million kits landed in the country alone today. “

Finally, he also referred to the government’s actions in encouraging immunization and said, “Today we started a door-to-door vaccination campaign with the Home Front Command. We reached three neighborhoods in Be’er Sheva, and we will later expand to 12 localities in which we identified a large population of people aged 60 and over who were not vaccinated.”

When asked why there is no orderly and effective campaign to encourage immunization, given the declining booster immunization data, he replied that at the moment the best efforts are being invested in “bringing vaccines to the door to schools”. [5].

The news about COVID-19 seems to be laden with Greek letters. We hear about viral versions like Delta and Lambda, a terminology used when scientists understood the unintentional bias (and sometimes the persecution) associated with the geographical labeling of versions. A century later, considerable frustration remained in some circles given that the “Spanish influence” apparently began in Kansas. However Spain took the blame because it did not participate in the First World War and was not censored. The Spanish press reported infections of their royal family (although the British royalty suffered at the time), thus creating a label that continues to this day. To avoid repeating this mistake, the classification of new versions is similar to the hurricane terminology, with alphabetical names of significant new versions.

This epidemic, like all previous ones and others yet to come, begins when a virus infects a person. This “patient zero” is the first victim of an elaborate series of microscopic kidnapping incidents. SARS-CoV-2, like all viruses, seeks out hosts, which it can subdue and manipulate to promote its spread and thus ensure its survival.

But this kidnapping of the body is pretty imperfect. Rather, the production of new viruses by an infected person tends to be rather sloppy, well below the error rate of those trained in Six Sigma. On average, the mechanism that produces SARS-CoV-2 makes about one error per 300,000 nucleotides. Given that the viral genome (all complementary to its RNA) is made up of 30,000 base pairs, this means that about one in ten virus particles released by an infected cell will be a mutation.

Most mutants have no effect or they may even create a defective virus. Indeed, it is understandable to think that a mutation is a good thing since it necessarily limits the number of infectious viruses. The problem is that each infected cell produces something on the order of a thousand offspring. These viruses in turn infect other cells and result in a dramatic expansion in active viral particles.

A closer look reveals that mutations in SARS-CoV2 tend not to be random but focus on a specific viral protein, known as a “spike”, or “S” protein. If a change in S would allow the virus to become even more skilled at harvesting its prey, then the evolutionary mechanisms of

“strong survival” would allow this mutant to become more common. As this new immigrant expands within the population, he eventually earns the nickname of the “variant”.

You’ve probably heard of S. It’s the viral protein that allows SARS-CoV-2 to bind to, and then hijack, human cells. Most spike mutations can be harmful in the short term. With enough time and food (i.e., you and I), evolution tends to work against us.

More viruses mean more mutations and, therefore necessarily, more variants. Eventually, the most potent versions will dominate. This is exactly what we are seeing with the current Delta blow. Delta is a mutant, whose survival has been facilitated by its ability to more effectively infect its prey. The spread of early viruses may be slowed down by masks and ultraviolet radiation (hence the lack of need for outdoor face masks). However, enough people chose not to wear face masks indoors (or even recognize the severity of the epidemic) until we quickly reached the point where the mutations in the S that gave birth to Delta became less sensitive to these pressures.

Despite this failure, we can be excited that the Delta variant remains quite sensitive to vaccines presented by Moderna, Pfizer, Johnson and Johnson and others. Indeed, the recent recovery in hospitalizations and avoidable deaths occur mainly with people who are not vaccinated.

For now.

But the problem does not end in the Delta.

Many people have rejected the vaccine, which gives the virus more chances to deploy its mutational ability against us, this time in even more dangerous ways and can be catastrophic. By refusing to wear a mask, for example, and by preventing vaccination, anti-Wax drugs have created the perfect conditions for uploading versions that are less sensitive than ever to the safest and most effective vaccines introduced less than a year ago.

For a concise period, we begin to identify versions that can cause problems for those who have refused to be vaccinated and for their vaccinated family and friends. The Lambda version, in particular, produces considerable anxiety among some scientists. Unfortunately, the Lambda will probably not be the last either. The combination of mutation and renewed high-risk behaviors (e.g., banning masks in schools or rejecting a vaccine) will undoubtedly lead to even more dangerous versions.

Despite all this annoying news, there are reasons for hope. First, the current increase in serious infections and death is limited especially to those who have rejected the vaccine [6].

Bibliography

1. COVID-19: Israeli Experts Warn Of 5th Wave, Say Next Virus Variant Could Be ‘problematic’ (2022).
2. Experts: This Is What Israel Must Do to Avoid Fifth COVID Wave (2021).
3. <https://www.ynet.co.il/news/article/s1c7ztcnt>
4. We’ll frustrate your people out of the industry if..., TAMPAN warns Iyabo Ojo, Nkechi Blessing, others (2021).
5. <https://www.ynet.co.il/news/article/s1c7ztcnt>
6. The Alpha and Omega of COVID-19: Yes, the Pandemic Will End (but Not Soon) (2021).

Volume 10 Issue 3 March 2022

© All rights reserved by Shimon Shatzmiller., et al.