

## Ari Ciment Q&A

What Happens Next – 01.23.2022

Larry Bernstein:

We welcome back Dr. Ari Ciment. This is our fifth straight week together on What Happens Next. Ari, what is new in the hospital's Covid ward?

Ari Ciment:

The peak probably occurred in hospitals around our area. Overall, if you look up IHNE COVID Projections, you'll see in Florida the hospital resource use starting to come down. We're seeing daily infections clearly locally are lower and lower. You can look up Miami-Dade COVID Tracker the percentage today, it's something like 29% positivity. Yesterday it was 34%. So, we're seeing a down-trend of local infection rates, and the hospital rates use lags two to three weeks behind.

Larry Bernstein:

I never want to get Omicron. The plan is to lay low till herd immunity. But Omicron is so infectious. And if take off the mask in the future I assume that I will get sick. So, am I delaying the inevitable? Will I get infected in 3 or 6 months or a year as soon when I return to normal behavior? Omicron is not going away, someone in my community will have it. What should I do?

Ari Ciment:

Well, if the numbers locally are down, then the numbers around you are going to be obviously lower, so the likelihood of you being infected are not going to be high. If the percentage of positivity rate drops below 10%, there's no reason for you to wear a mask. The better question is whether or not you want to get the Omicron. If you're triple-boosted and not with many risk factors, maybe it's better for you in the long run. It's not such a crazy concept to think that it will afford you better immunity down the road.

Larry Bernstein:

There's been a lot of press that T-cells are better than boosters for long-term defense against COVID and its future variants. Do you think it makes sense to try to get infected with Omicron because the known consequences are not that bad? And if so, when and how should we do it?

Ari Ciment:

I personally don't advise people sniffing positive COVID patients' mucus to try to get it.

Larry Bernstein:

(Laughs)

Ari Ciment:

But I think it makes sense not to be so overly careful that you're inhibiting your lifestyle, assuming you don't have a lot of risk factors. If you're a 65 and older with coronary disease, hypertension, diabetes, you're better off waiting for the therapeutics down the line, which are

going to be really rigorous and good. It makes sense, even against a future variant. But if you're young and healthy, there is perhaps some truth that you could, if you're triple-boosted, meaning you have two vaccines and a booster, if you get Omicron, then you're super immune because you have both T-cells and you have B-cells ramped up for the next variant down the line. I personally don't believe there's going to be another crazy COVID variant because I think the Omicron will really be the bomb that covered everybody across the world. But in case there is another variant down the road, SARS-CoVs-345, you're probably better off if you had this Omicron, which is the lightest one we've seen, assuming you've triple-boosted.

Larry Bernstein:

I'm triple-boosted, and I was infected with COVID Alpha in early December 2020. Would you still advise that I get Omicron as well?

Ari Ciment:

I wouldn't advise that you get it. But I wouldn't inhibit the lifestyle so much that you really feel like, "Oh my gosh, I can't go to that bar mitzvah or wedding." I'm speaking more to the people that have had Omicron and had two vaccines or had the booster. They should really feel like, "Hey, I don't necessarily need to wear my mask around."

The UK announced yesterday, we're no longer doing vaccine passport and we're not mandating indoor masks anymore. That makes sense to me. However, I feel like in America, it's going to be tough because President Biden just sent out 400 million masks, so that's not the time to say, "Oh, you don't have to wear a mask now." It's not going to be politically appropriate. But it's something for us to start getting used to.

Larry Bernstein:

When I was a kid, parents would sometimes host chicken pox parties where kids would be invited over to catch it. Are you recommending Omicron parties?

Ari Ciment:

So, not having Omicron parties, because doing that... is not showing sensitivity to the people with the higher risk factors, the 65 and older you're not going out positively trying to get the disease because you might infect somebody who's immunocompromised. But, you don't have to be so overly protective. I just recently had a bar mitzvah. Many people didn't come because they were scared of Omicron, and I totally understand. But these are healthy people who've already had three vaccines. You could bend a little bit at this point.

Larry Bernstein:

I probably should have attended the bar mitzvah.

Ari Ciment:

(laughs)

Larry Bernstein:

Next topic: brain fog. After I was discharged from the hospital, my brain was clearly compromised. I could not remember names. I left the hospital on Christmas Day 2020 and the NFL football season had just ended. I'm a big Chicago Bears fan, and I follow the team very closely. And I quizzed myself to name as many Chicago Bears players on the roster as I could, and I could only name one, where previously I could have named 20.

And then over the following six months, I noticed substantial improvement, not only with names, but with word retrieval as needed in conversations. I had brain fog. What is the medical condition that causes this problem, and why does it go away, and why should patients feel confident that it will?

Ari Ciment:

If you're triple-vaccinated, you're less likely to have brain fog if you were infected. This was studied in Israel in Bar-Ilan University. You could look it up. They looked at previously infected people who were vaccinated versus unvaccinated, and the numbers were pretty striking, the incidence of brain fog in post-COVID syndrome were much less in the vaccinated. So, it has more than just infection prevention utility but against brain fog.

Larry Bernstein:

Do you think that the reason why the vaccinated are having less brain fog is because the disease is less harmful to them?

Ari Ciment:

As you see the pathophysiology behind it, it's real and it has to do with cytokine storms and it's going to be lower in those patients that are vaccinated. The question is, what is brain fog? Like, you mentioned that you lost memory. Is it dizziness? Is it headaches? Fatigue? It's a very vague, they call it post-COVID syndrome.

Larry Bernstein:

For me, my brain was working at 2/3rds the usual speed. I couldn't make witty remarks on time. I couldn't get word retrieval or name recognition. So, it wasn't like I had headaches... I was just dumb.

Ari Ciment:

You looked like you were a little akinetic, like a slow speed. Google, Professor Akiko Iwasaki, she published a very interesting article on the pathophysiology behind COVID, looking at mice studies showing cytokine elevation in the CSF even after a mild infection in the mice. So certain cytokines are increased. The one that they were talking about is CCL-11, but there's a whole list of cytokines that are increased seven days, and then even weeks after a mild infection. It gives some solace to some of the patients knowing that they're not making up their symptoms. But the good news is usually it does subside over months in some cases. But usually it does go away. I've seen some really terrible cases of post-COVID syndrome fog, and they have by and large gone away over time.

That study that she looked at also looked at a thing called microglial activity in the white matter of the brains, which they found in autopsy studies as well in humans showing that there's certain areas in the brain that are affected by the virus not directly, but by distill inflammation and cytokine release, including what you described, in the hippocampal areas, which is important for memory. So, it does affect different parts of the brain.

Larry Bernstein:

My understanding is that the brain's natural defenses protect it against most viral attacks, but that was clearly not true for COVID. Do you think that patients' loss of taste or smell is indicative of a viral attack to the brain or something else? And why do the conditions improve over time, with most problems resolving in three to six months?

Ari Ciment:

The loss of taste and smell, which we found out early here in our experience in Miami. But, it's not seen in the Omicron variant for whatever reason. I can't tell you the pathophysiology behind it. It's not clear if it's direct to the smell cell to olfactory cells, because it's right near the nasal pharynx, or if it's a cytokine-induced interference.

My opinion with Omicron, where we are seeing some people that lose their taste and smell, that's related to the sinusitis, to the stuffiness occurring there.

Larry Bernstein:

Right.

Ari Ciment:

But to the actual COVID, my gestalt was that it was actually nerve damage, nerve infiltration of the olfactory cells. In some people, it took six months. That's more nerve damage. And then it would slowly recover.

Larry Bernstein:

So why is there brain fog? What causes it and why do patients recover?

Ari Ciment:

I think that the cytokines eventually go down. First of all, the majority of people don't have the brain fog but a large portion of people do. I think it's related to exactly what Professor Iwasaki was showing, that there is a cytokine inflammation that's causing the brain to be a little messed up.

And then boom, you're back to normal.

Larry Bernstein:

New topic. How did the medical community determine best practices for COVID treatments in real time? Hospitals faced a novel disease simultaneously worldwide. There was

experimentation. Doctors started with treatments that worked for other viruses; some worked and some didn't. How did that discovery process work? How did the medical community work with each other, and how were the best ideas implemented and the worst rejected?

Ari Ciment:

I think a lot of the information spread by social media initially, and it was actually a detriment to us all that the virus started in China for many reasons, but one is because they're really closed. I was able to go online initially and look up at the Chinese health official recommendations for COVID, and that's where I personally had ideas about convalescent plasma, interferon treatment, because we were learning you could actually translate their journals, their recommendations their CDC. In America, let's say Harvard, Yale, big institutions, they were keeping their protocols initially to themselves because nothing was evidence-based.

If you look at the first NIH guidelines on COVID treatment, it goes over all these things like Plaquenil, Ivermectin, plasma. And it says, "Nothing is evidence-based. Nothing is proven. So, we can't recommend anything." So, you read this document, which is like 130 pages, and it's telling you, you can't do anything. So thankfully, I think at that time, believe it or not, the government did the right thing. They were not stopping local hospitals from treating the way you felt best. So initially, we were treating the regular therapies. You couldn't use nebulize therapies, but you had to use inhalers. But quickly we adapted when we saw things were not working the way they work with other diseases.

Larry Bernstein:

Let's pick one treatment in particular, plasma. In 1918, plasma was used successfully with the Spanish Flu. I received plasma when I was hospitalized with COVID in December 2020, but I received it late, 10 days after testing positive with COVID. Do you think that the use of plasma was successful in treating COVID patients?

Ari Ciment:

We started plasma pretty early here, and there were so many problems. First of all, you weren't sure if the patient had a robust immune response, so the plasma might not have had an adequate antibody towards the disease. So, there's a high amount of antibody in the plasma depending on your response to the disease. We were injecting people's plasma just because they had a positive test 14 days prior. So part of it was perhaps ineffectiveness because of that high-titer plasma. But part of it was because the timing was off. A lot of these patients initially were treated with COVID pneumonia, but they were treated four weeks into the disease, so we know that if you treat things earlier, you were more likely to be successful.

David Sullivan, he's an infectious disease doctor at Johns Hopkins. It's not published yet in a peer-reviewed journal, but his study on early treatment with plasma was a positive trial. It really does work if you start early. In South America too, they showed that if you treat it early, you're going to have a benefit, because it has the anti-spike antibodies within the plasma. His

study, even though it's late and now we have better therapies, I think that's a monumental study because many years from now, God forbid, when we have another pandemic, people are going to look at his article and they're going to say, "We've got to get high-titer plasma. We got to inject it earlier."

A lot of the places, like one drive here locally, they did a great job. They're heroes because they tried. They were still a little late. Like, we could have had an established plasma program earlier on. The other interesting aspect to this is that there is an active ACTIV arm of the NIH, which looks at funky therapies like plasma. And there are companies that are looking at polyclonal antibodies, which is plasma from, like, cows. Look at this company SAB Therapeutics. I can't fully understand it, but it's a cow that is genetically altered to have the immune system of a human, and then they inject the organism into the cow and they develop polyclonal antibodies. It's plasma. So they inject that into the patient. They're going to have a positive trial soon. We won't need that because we're going to have Paxlovid, Molnupiravir and monoclonal antibodies here. We won't need it for this pandemic. But it will be useful for the next, God forbid, pandemic.

Larry Bernstein:

Ari, every episode we end with a note of optimism. What are you optimistic about this week?

Ari Ciment:

I'm optimistic I think masks are going to start coming off and people are going to celebrate for the holidays coming up.

The infections are exponentially declining. The actual number locally is that it dropped by 3,000 cases a day. Last week was like 65,000. The week before it was 87,000. So we're coming down pretty fast.

Larry Bernstein:

That's good news. Ari, thank you.

Ari Ciment:

Thank you.

Larry Bernstein:

Thanks to Jim and Ari for joining us today.

That ends today's session. I want to make a plug for next week's show.

I am very excited to be joined by one of my best friends, Chris Riback who is a former 60 Minutes Producer who now creates his own morning curated newsletter as well as a podcaster. His podcast is called Chris Riback Conversations. I hope to learn from Chris about the changing world of media, and the future of podcasting. It is going to be really fun.

If you are interested in listening to a replay of today's What Happens Next program or any of our previous episodes or if you wish to read a transcript, you can find them on our website [Whathappensnextin6minutes.com](http://Whathappensnextin6minutes.com). Replays are also available on Apple Podcasts, Podbean and Spotify.

Good bye.