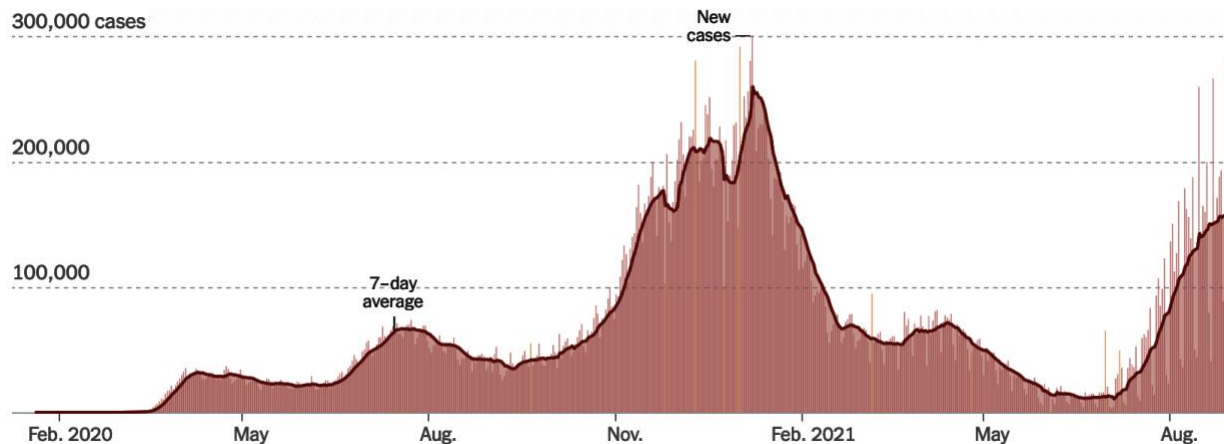


Letter 34: Are We There Yet?

September 1, 2021

Dear Daughters,

Today the number of U.S. COVID-19 cases reported since the beginning of the pandemic passed 39 million people, with over 640,000 deaths. In the dog days of summer, the Delta variant has been spreading explosively, a fourth wave of COVID-19 infection:



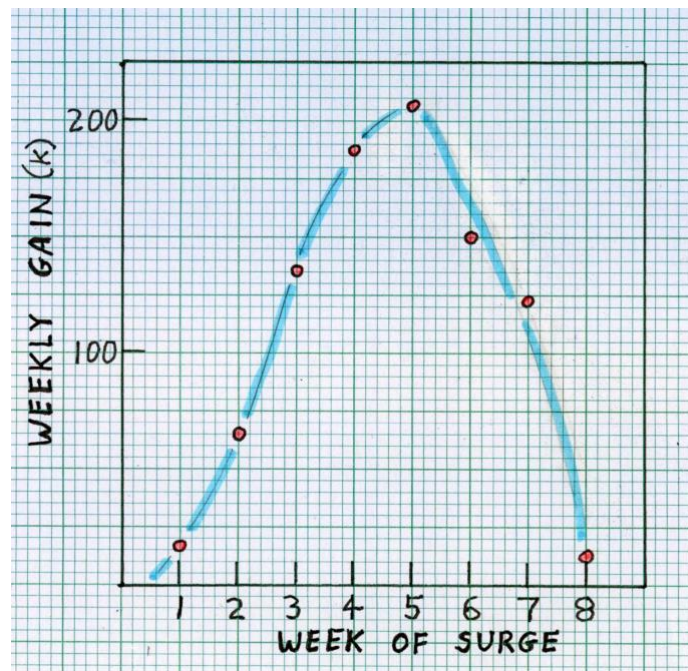
In recent weeks, three days have seen reports of more than 250,000 new cases, almost all of them the Delta variant. More than 100,600 coronavirus patients are in hospitals on the day I write this. Sadly, more children are getting sick as the Delta variant surges: In one week in early August, 121,427 child cases were reported.

Tracking the data daily, I saw a hint of good news among the bleak numbers: The rate of increase seemed to me to be slowing a bit. Might we be approaching the peak of this Delta variant surge? That's what happened in India. India's Delta variant surge hit its peak at 8 weeks, precisely where we are now, then declined rapidly. Could that be what's happening here?

Climbing the Peak

We live in a sea of information about the pandemic. To get a more precise idea of what's going on, I simply added up the reports of new COVID-19 cases each day of a week, and compared that to the sum of new cases for the week that followed. The difference tells me how much the pandemic surge has grown over the course of that week. I then did that for the following week, and the following week... for all eight weeks of this Delta-driven COVID-19 surge. What this gives us is a picture of how the surge is growing. When the surge reaches its peak, you see, the weekly gain in new cases will slow to zero. Growth will stop.

So has the growth stopped?



In a word, yes. You can see in the graph that early in the surge infections soared, each week reporting many more cases than the week before. However, after week 5 of the surge, infections began to slow. Each following week still showed new infections, but the gain was less and less. By week 8 (this last week) the gains had practically ceased – we are at or very near the peak of the surge.

What's Next?

So, to answer the question posed by the title of this letter: Maybe. Certainly the surge seems to have stopped surging so fiercely. We shall see more clearly in the coming days if this last week proves to be the top of the infection peak in the United States, as it now seems to be.

Will infections then fall? It remains to be seen whether our nation, like India, has only so many people subject to Delta variant infection. With 74% of those in the United States over 18 having had at least one dose of anti-COVID-19 vaccine, I suspect we may have indeed reached something like COVID-19 saturation in our country. If so, the numbers will fall in coming weeks.

Of course, our family doesn't live in "our country" but in four different states, each with very different COVID-19 environments. For one thing, anti-COVID-19 vaccination is by no means uniform around the country, southern states being far less vaccinated than the rest of the country – rural Missouri was one of the least vaccinated, with some counties under 20% vaccinated (although I understand these numbers have been picking up in recent days). For this and a lot of other reasons, it makes a big difference where each of you live: Decatur, Georgia (13.8 daily new cases per million) is a far more infectious environment than Santa Fe (2.3 per million), NYC (2.5 per million), or Saint Louis (2.8 per million).

Still, that said, the United States overall numbers do give a glimpse of what lies ahead for all of us. And what will that be? We must look to see next week if the sum of the reported number of new infections for the nation as a whole is LESS than this week's. If so, then it is my hope and best judgement that similar good news will continue to follow going forward, each week's reported number of new COVID-19 cases less than the week before. In about eight weeks, in the best of outcomes, reported new infections should drop back to where they were in June, some 15,000 a day. That is not nothing, of course, but far less than the 280,403 new cases reported yesterday.

Boosters?

There has been a lot of talk in recent weeks about whether or not we should get vaccine “boosters.” How long are fully vaccinated people fully protected? Perhaps not very long. Alarming studies in Israel report a high number of “breakthrough” infections. Protection from infection among the fully vaccinated dropped in proportion to the length of time since an individual was vaccinated! Thus people vaccinated in Israel in January had more than twice the risk of a breakthrough infection as those vaccinated in April.

Public health officials in Israel responded by administering a third “booster” shot to all citizens, jacking up the amount of anti-COVID-19 antibodies in their bodies to as much as a hundred times higher. This, they hoped, would greatly reduce the chance of breakthrough infection.



Should we do the same thing? It seems to me we are seeing not one problem, but two:

1. The Delta variant is more than three times as infective as the original strain for which the mRNA Pfizer and Moderna vaccines were developed, and can to a degree evade these vaccine's antibody defenses (although not their heightened T-cell immune defense). Hence the rise in Delta breakthrough infections, but not hospitalizations.
2. The mRNA vaccines seem to be losing effectiveness over time. Data from this country as well as Israel suggest this. In NYC, where the Pfizer vaccine was initially 91.7% effective at keeping people from developing a high viral load, the effectiveness fell to 79.8% after three months.

In light of all this, our federal government is suggesting that we, like Israel, begin to vaccinate our citizens with a third "booster" shot. For Pfizer and Moderna vaccines, they are recommending a booster 6-8 months after the date each person received their second shot.

But Is It Right?

Not all agree. Some protest that the Israeli data are misleading, as their January and April estimates were of two groups that may have had different exposure to the Delta variant. Besides, they point out, hospitalizations in this country are not rising, so where's the need? Instead of being used for booster shoots, they urge that any available vaccine be directed to low-and-lower-middle-income countries in desperate need, where many people have yet to receive one shot.

Those urging that vaccines be routed to countries most in need include big-time MAJOR heavy hitters in global health and at the WHO. They understand the science. They aren't ignorant or unaware of the need to block transmission in the U.S. Their concern is American lives being put first before other lives. The head of the WHO asked rich nations to wait at least until end of September for boosters – and they aren't.

To me, hard as this judgement is to make, our first priority must be to stem the pandemic here where we live. If Americans are ever to be free of this virus, we must find a way to block community transmission here in the United States. The biggest threat we face are the many fully vaccinated people among us who unknowingly carry the virus while showing no visible sign of illness. It is not the few who are so ill as to be hospitalized that are the danger, but rather the great number among us who, although fully vaccinated, carry and transmit the virus unknowingly. Protecting us from them is what the booster will help do.

And the low and low-middle income countries still in great need of vaccine? This need not be a zero sum game. I would strongly support our country and Europe funding the construction and operation of new pharmaceutical plants to manufacture free vaccine specifically for WHO-designated countries. Surely the companies making the Pfizer and Moderna vaccines (and a great deal of money) would be willing to waive their patent rights for this use. Indeed, Moderna's vaccine was funded by Operation Warp Speed, which is to say by U.S. taxpayers. That's you and me. I say don't reallocate. Manufacture more.



As for what we should do in the United States, I personally am all for widespread administering of the booster, first to the immune-compromised and elderly, then to every fully-vaccinated individual. As soon as I can, I shall boost. You of course must make up your own minds.

A Final Smile

A very dear friend recently sent me a photo she took while driving across North Dakota last month. We live in a pretty great country when someone can go to such trouble to build a marvelous Triceratopian cowboy entirely out of scrap metal, just for the enjoyment of those travelling by.



Dad