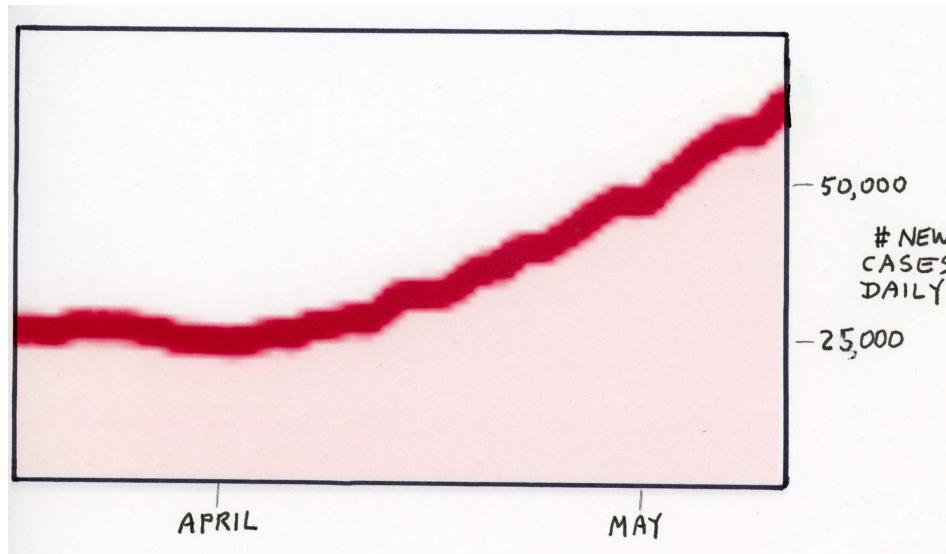


## Letter 41: Not Yet

May 12, 2022

Dear Daughters,

Spring has come to St. Louis, with lots of rain and thunderstorms. I had hoped spring would also bring low COVID-19 numbers, so we could abandon our masks in public places and comfortably go out to dinner again. Unfortunately, despite what you may hear in the news, our pandemic is not over yet. The number of daily new cases started rising again on April 2<sup>nd</sup>, with 27,431 new cases that day. Since then, the daily number of new COVID-19 cases have been rising, slowly but steadily. By today, 40 days later, they have more than doubled, to 77,092:



The clear take-home lesson, as you can see in the graph, is the pandemic ain't over yet.

However, most people seem to think we are finally out of the woods, and can ditch our face masks and distancing. Thus Dr. Fauci was widely quoted as saying on PBS last Tuesday *“If you’re saying, are we out of the pandemic phase in this country? We are.”* Then on Wednesday he clarified on CNN *“My comment had been mischaracterized by some to mean that the pandemic is over, which is not what I said. We’re not over the pandemic... What we are in is a different phase of the pandemic, a phase that’s a transition phase.”*

The question, of course, is: Transition to what?

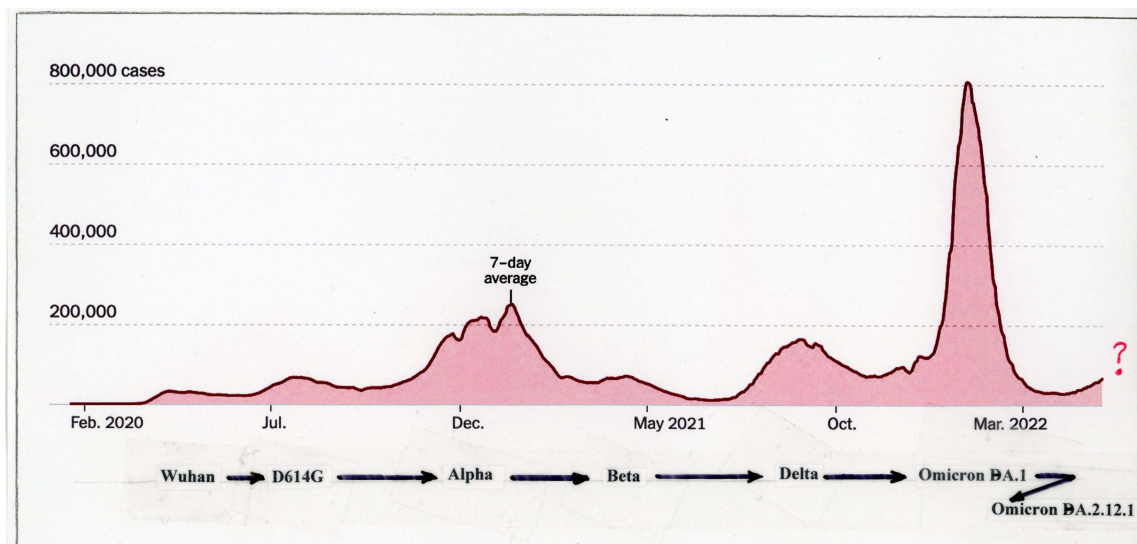
## COVID-19 Has Had Many Transitions

The Omicron variant of COVID-19 has been evolving rapidly. To see where it seems to be going, you should take a quick look at how the virus has changed during the pandemic:

**The Alpha variant.** The first major peak of COVID-19 infection in this country occurred in the winter of 2020, the so-called Alpha variant. At its peak in December of that year, the Alpha variant of COVID-19 was infecting some 250,000 people a day.

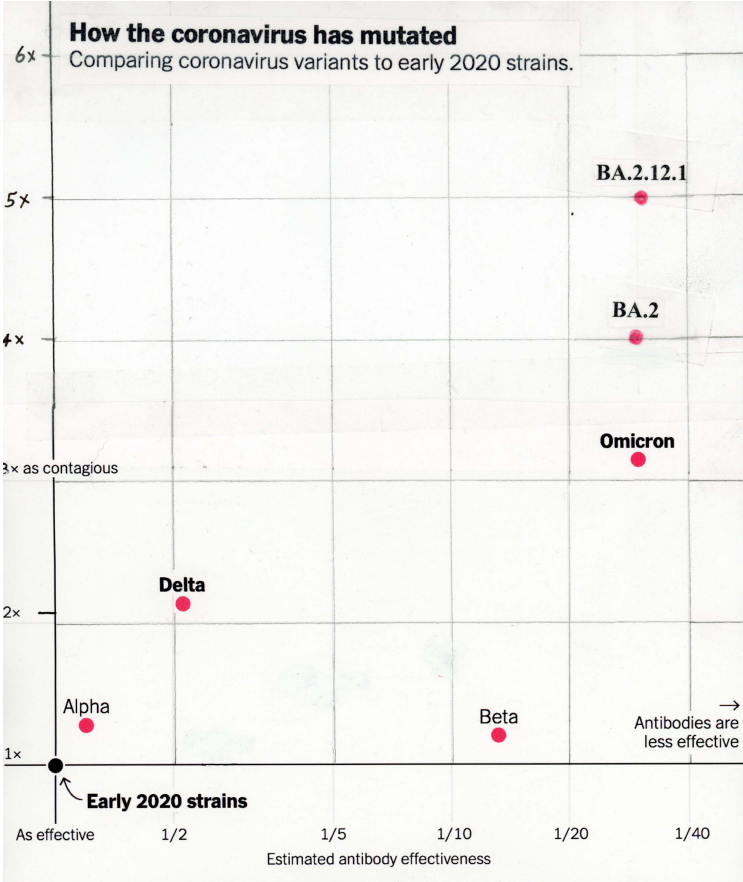
**The Delta variant.** In the fall of 2021 a new variant emerged. Differing in the virus spike protein by only two amino acids, this version of COVID-19 was both more infectious and more deadly.

**The Omicron variant (BA.1).** In the following winter, a very different variant emerged. This variant of COVID-19, called Omicron (or, more formally, BA.1) had 60 unique mutations, 32 of them in the spike protein! While there is no firm consensus on how the Omicron variant came to be so very different, I believe it originated in some other animal that had been infected with Delta, then, after evolving there, reinfected humans. The antibodies that had been protecting us from the other variants did not recognize the new variant — due to those 32 mutations on the spike protein. So the new variant was able to evade the immune protection we get from prior infection or vaccination. It spread rapidly in the winter of 2022, and at its peak was infecting over 800,000 Americans each day.



**Omicron variant BA.2.** In the spring of 2022 a derivative of BA.1 was first reported, with 28 never-before-seen mutations, 4 of them in the spike protein. Called BA.2, this “stealth” version of Omicron was 30% more transmissible than BA.1, and started to spread rapidly – until overtaken by yet another variant.

**Omicron variant BA.2.12.1.** Later in the spring, a single change occurred at position 704 in the BA.2 virus spike protein. The amino acid at that position on the protein changed from serine to leucine. That single change had a whopping effect, destabilizing the spike protein in a way that facilitated infection, increasing transmission a gigantic additional 25%! The result: yet another giant step in the pandemic’s history of increased infectivity. BA.2.12.1 is now fully five times as contagious as early strains of the coronavirus. First reported in early April, this variant of a variant of a variant accounted for fully 36% of new American cases by May 1. Soon I have no doubt BA.2.12.1 will be the dominant form of American COVID-19 infection.



## **Dr. Fauci's Transition**

This final Omicron variant is the transition pointed to by Dr. Fauci, the change from a sometimes-fatal virus that infects Americans in waves every six months or so, to a less dangerous virus that is so easily transmitted that it is around more-or-less all the time. Luckily, the COVID-19 virus, while it has indeed evolved to a far more infectious form, has NOT evolved to become more lethal. If anything, hospitalizations are becoming less frequent. But, while the number of daily new infections are far fewer (so far) than seen with BA.1, the virus is not going away. Infective as it has become, COVID-19 will likely remain amongst us indefinitely.

Will the number of new COVID-19 infections stay low? Is this COVID-19's final transition? It's anybody's guess. Four factors to consider:

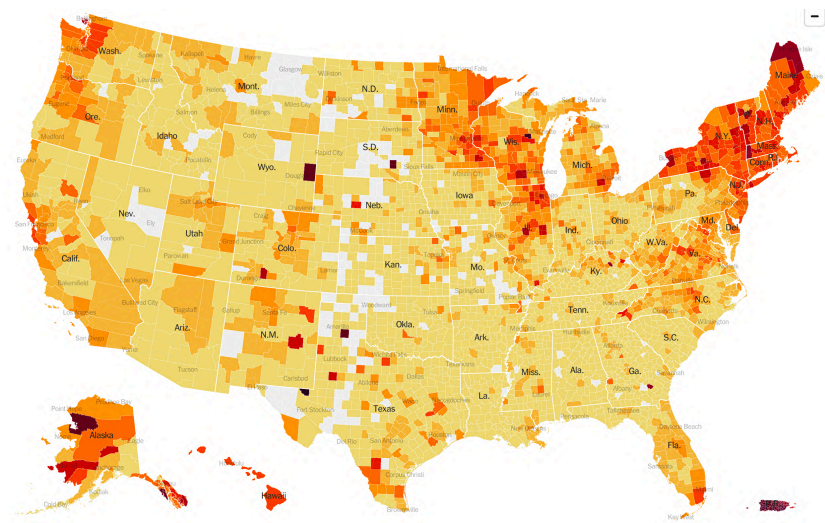
1. The upswing in daily new cases of COVID-19 caseloads have more than doubled last month. Who is to say whether or not the rate of daily new infections will continue to increase, or how high the upswing may go?
2. Every six months, like clockwork, we have had a new COVID-19 outbreak. Seen from this perspective, we are due this summer for another.
3. This summer will see the first near-universal relaxation of COVID-19 restrictions in the United States.
4. With the recent more widespread use of home testing for COVID-19, it is likely that many daily new infections are not being reported to health authorities, so CDC statistics may be under-reporting the actual number of infections that are occurring.

It would be nice if I could be optimistic and predict that we are reaching some sort of steady state, one that you would find inconvenient (still no restaurants, and masks when around others indoors) but tolerable. Dr. Fauci is suggesting just this -- but I can't. I simply don't see any way of knowing for sure. With the new Omicron variant so contagious and apparently at the beginning of an upsurge in daily new infections, I can't just close my eyes and cross my fingers. So. My advice to you is to continue to be careful.

## The Differential Risk Factor

While the situation is uncertain, I understand that you do have to make decisions about how to go on with your lives, as do your mother and I. While asking you girls to continue to be careful, I do want to point out that you are not at the same risk as your mother and I. At least three factors are very different for us:

1. *Location.* Where we live has a lot to do with risk of infection, for the simple reason that the new highly-contagious Omicron variants are more likely to be encountered in parts of the country where there are more infected people. Right now, that's in New England and New York state (that's you, Nikki!).



2. *Age.* While age has little to do with risk of infection, it has a lot to do with risk of serious illness. Most people who get seriously ill from COVID-19 infection are either very young or very old. Your mother and I, over seventy years old, fall into this high-risk category, as does our two year old granddaughter Jed. You three girls, however, do not. So there are many things that we cannot safely do that you can. Thus as a general rule, for anyone high-risk like your mother and I, restaurants are out. But it is different for low-risk younger folks like you girls: Nikki, when you and Matt are not going to be seeing family for a while, you can eat indoors at a restaurant on occasion; Caitlin, you can fly on an airplane, something your mother and I dare not do; Susie, in constant contact with a young child, you must act as if at high risk (life is not fair!).
3. *Contacts.* People at low risk of illness can still become infected and, unaware that they carry the virus, pass it to others at higher risk. For this reason, testing is very important.

Nikki and Caitlin, when you visit home next month for my birthday, you are going to have to travel fully masked, and get COVID-tested before entering the house. As your mother and I and little Jed are all at very high risk, I would like to have you get a PCR test, just to be very sure. When Aunt Linda visits weekly for Pizza Tuesday, we ask her to stay out on the porch rather than coming in the house, as she has not been recently tested.

## **The Home Front**

I really look forward to all of my three daughters coming home on my birthday in June. I am happy to report that all is well here in Saint Louis. I am home from the hospital after a brief visit last week. The docs drained 1.3 liters of liquid from my right lung! I had been having a bit of trouble breathing, but that took care of it. I am now breathing far more normally.

Sue, Ben and granddaughter Cynthia have moved to Saint Louis and are living here at home until they can find a house, no easy job in this housing-bubble market. As you can well imagine, the house is in constant uproar – quite wonderful, actually. Cindy (known by her grandpa as Jed) is a delight, dashing around, bubbling with questions and curiosity. Sue has taken it all in stride, and is busy making me another grandchild. Paddington, as you can see, LOVES Cindy!



Stay safe.

Dad