



The New Normal

Steven L. Shafer, MD, FASA

My January 2021 editorial in the *ASA Monitor*, “The 2020 Pandemic,” made numerous predictions (*ASA Monitor* January 2021):

- Vaccination would bring the pandemic to an end
- SARS-CoV-2 would surge in winter months, similar to influenza
- SARS-CoV-2 would become endemic
- New variants would emerge
- Immunity would wane, necessitating regular booster shots
- Herd immunity would not be helpful
- People would continue getting sick from SARS-CoV-2, but immunity and improved therapeutics would decrease mortality.

I don’t have a crystal ball; I simply cited the available scientific literature. All but one came to pass. The one failed prediction, “vaccination will bring the pandemic to an end,” never got tested.

A year ago, I did not anticipate that vaccine misinformation would be aggressively promoted and amplified by social media. I also did not anticipate that a year after approval of the first vaccines we would only now be rolling out vaccination

“The New Normal won’t be like the pre-pandemic normal, but the worst is behind us. For that we can be grateful.”

in children and adolescents. As a result of these failures, only 58% of Americans are now fully vaccinated, placing the United States behind 52 other countries, according to the New York Times vaccine tracker ([asamonitor.pub/31QskOV](https://www.nytimes.com/interactive/2021/12/01/us/covid-vaccine-tracker.html)).

I also did not anticipate that a variant would emerge as infectious as smallpox. After I received my second shot last January, I thought COVID-19 was behind me. I stopped wearing masks in the physician break room. I started dining indoors with friends and family. I even traveled a bit. The Delta variant changed all of that. Masks, social distancing, and avoiding indoor crowds became part of my New Normal and will remain so for much of 2022.

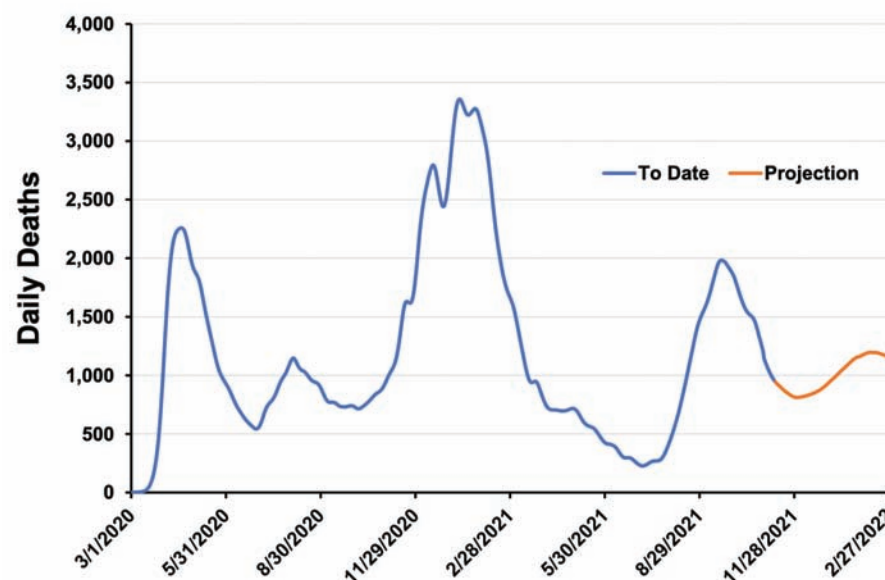


Figure 1: Daily U.S. deaths since the beginning of the pandemic in March 2020 (data and projections from the Institute of Healthcare Metrics and Evaluation at the University of Washington, and available at https://ihmecovid19storage.blob.core.windows.net/latest/data_download_file_reference_2020.csv and https://ihmecovid19storage.blob.core.windows.net/latest/data_download_file_reference_2021.csv). The projection for early 2022 is about 1,000 deaths per day, reflecting the seasonality of COVID-19.

Lastly, in January 2021 I did not anticipate that a year later I would still be writing about COVID-19. Depending on the week, COVID-19 remains the leading or second leading cause of death in the U.S. The data are the data.

Figure 1 shows the daily deaths in the U.S. since March 2020. As of today (November 9, 2021), more than 750,000 Americans have died from COVID-19 (blue line). The Institute for Healthcare Metrics and Evaluation (IHME) at the University of Washington estimates another 100,000 will die by the end of February (orange line).

Another way to understand pandemic mortality is to compare weekly deaths in 2020 and 2021 with the deaths from 2015 through 2019, shown in Figure 2. Weekly death rates are seasonal, with winter peaks and summer nadirs. By the eighth week of the pandemic, weekly deaths rose substantially higher than at any time during the previous five years. Death rates have not returned to baseline. The immediate effect of vaccination in early January 2021 is obvious, likely helped by the end of winter. The arrival of Delta in the summer reversed much of that progress.

Fortunately, deaths have dropped considerably since week 37, the last week

shown in the figure. Integrating the curves provides an estimate of excess mortality in the U.S. through week 37 of 2021: nearly 1 million people. Not all of these individuals died of SARS-CoV-2 infection. Excess deaths include those from suicide, domestic violence, postponed health care, and similar sequelae of the pandemic. In 2020, excess mortality worldwide resulted in a loss of 28 million years of life (*BMJ* 2021;375:e066768).

Since fewer than 60% of Americans are fully vaccinated, it is possible that the New Normal will be roughly 1,000 deaths per day, which is how next year will start. As seen in Figure 3, data from the United Kingdom show that even a modest fraction of unvaccinated elderly can result in sustained ongoing morbidity and mortality ([asamonitor.pub/3Cfoc7v](https://www.asamonitor.pub/3Cfoc7v)). Deaths in the U.K. are primarily driven by elderly unvaccinated patients dying from COVID-19 circulating in unvaccinated children and adolescents (*Vaccines* 2021;9:1180). That may be our New Normal.

The prominent scientist William Haseltine published a roadmap for eliminating SARS-CoV-2 in the years ahead ([asamonitor.pub/2Z45MsR](https://www.asamonitor.pub/2Z45MsR)). His four recommendations confirm what we already know:



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- Vaccination (the cornerstone of any effort to control SARS-CoV-2)
- Antiviral treatment (still lagging, but advances such as Mpro protease inhibitors are on the horizon)
- Public health containment (e.g., masks, social distancing, avoiding indoor crowds)
- Global containment.

A welcome part of the New Normal will be the introduction of effective oral SARS-CoV-2 medications: molnupiravir and paxlovid (*Nature* 2021;591:451-7; *Nature* October 2021; *Science* 2021;eab14784). Both can be started in outpatients at the onset of symptoms and may be game changers in reducing mortality. They are currently under review with the FDA.

This issue of the *ASA Monitor* considers additional aspects of the New Normal (*ASA Monitor* January 2022). Drs. Goldberger, Yong, and Sundararaman discuss managing patients after a diagnosis of COVID-19. For patients recovering from COVID-19, current guidelines call for waiting 10 days until after symptom onset for mild cases and 15 days for severe cases before lifting isolation precautions.

I expect this to change in the New Normal. Scientists at Stanford developed strand-specific rt-PCR, which we use to screen surgical patients for active infection. SARS-CoV-2 is a “positive strand” RNA, meaning that the RNA functions as messenger RNA that is directly translated into the protein (*Emerg Infect Dis* 2021;27:632-5). To replicate the RNA, the cell must first copy the positive strand into a “negative strand,” which then serves as a template for positive strand RNA replication. Conventional rt-PCR does not distinguish strand sense. As a result, conventional testing cannot distinguish non-infectious RNA fragments persisting weeks after infection from active infection. Since negative strands only appear when the virus is actively replicating, it’s very specific for ongoing infection. Part of the New Normal for elective surgery will

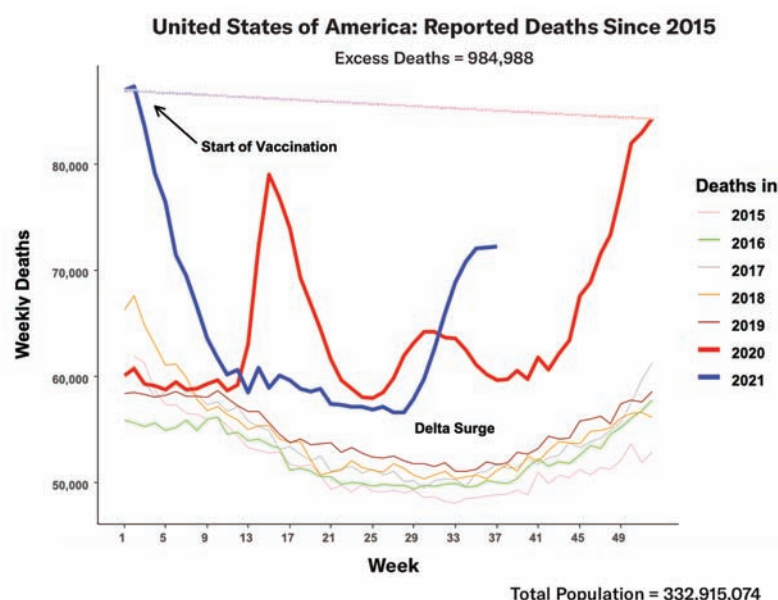


Figure 2: Total weekly deaths since 2015. The red line shows weekly deaths in 2020. The blue line shows weekly deaths in 2021. The figure ends at week 37, reflecting the time lag for the CDC to compile all-cause deaths. (data from Oxford/Our World in Data, available at asamonitor.pub/3c6V4VB).

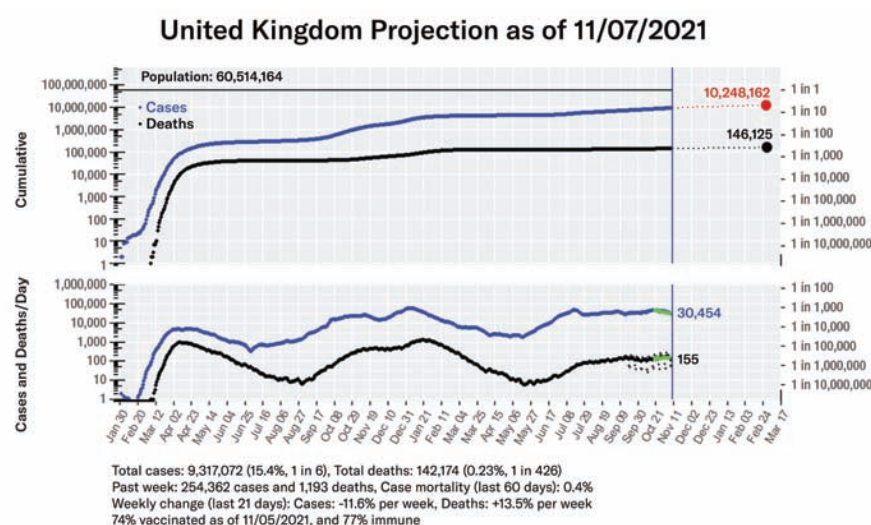


Figure 3: Total and daily cases in the U.K. during the pandemic. Ninety-eight percent of the U.K. adult population is seropositive for the spike protein (asamonitor.pub/3n94XZ2). Since the figure below is on a log Y axis, the effect of immunity on mortality is visible as the increasing separation of the daily and cumulative cases (blue line) and deaths (black line). Mortality has steadily decreased since vaccination was launched in January, 2021.

be negative strand RNA testing for patients with a history of infection to determine whether patients remain infectious.

Goldberger and colleagues also discuss the implications of “long COVID” on anesthesia and surgery. They note that roughly a third of all patients discharged from the hospital following admission for COVID-19 develop long-term symptoms. These patients may present with reports of palpitations, chronic rhinitis, dysgeusia, chills, insomnia, hyperhidrosis, anxiety, sore throat, and headache (*medRxiv* March 2021). Our preoperative evaluation in the New Normal will look for these symptoms in our patients with a history of COVID-19. We will likely seek further evaluation if there is evidence of either pulmonary or cardiac impairment.

Drs. Jain and Cole remind us that influenza is likely to return this year, having

been mostly absent last year as a result of the non-pharmaceutical interventions to mitigate the spread of SARS-CoV-2 (*ASA Monitor* January 2022). Current projections from the IHME suggest we may again see a shortage of inpatient and ICU beds at the peak of the influenza season, which coincides (due to low absolute humidity) with the peak of the SARS-CoV-2 season (asamonitor.pub/3CfW3o). Jain and Cole note that concurrent infection with both influenza and SARS-CoV-2 has a 10% mortality rate. Patients with concurrent influenza and SARS-CoV-2 infection will be part of our New Normal.

Dr. Deutch describes his experience at the University of Florida Health-Jacksonville last summer (*ASA Monitor* January 2022). In 2020 and early 2021, the pandemic tested Florida hospitals.

They handled the crisis effectively. When the Delta variant hit last summer, hospitals reached full capacity. His first-hand account brings home the experience of U.S. physicians when acute hospital demand substantially outstripped both bed and provider capacity.

Drs. Sundararaman, Chow, Elakkumanan, Rajagopalan, and Verma describe the “pandemic within the pandemic” – physician burnout (*ASA Monitor* January 2022). Over the last year, health care workers experienced exceptional stress, as every reader can likely affirm. We went from being heroes applauded in the streets of Italy to being villains afraid to wear our uniforms or scrubs in public lest we be accosted or even attacked (*Lancet* 2020;396:658; *Nature* 2021;598:250-3). Record numbers of health care providers at all levels are now leaving the profession. Staffing shortages will be part of the New Normal.

Lastly, Drs. Dasmunshi and Miles share their account of how anesthesiologists at Loyola University Medical Center managed to get through the pandemic (*ASA Monitor* January 2022). A survey of their faculty demonstrated that few intended to retire, despite nearly 100% reporting high levels of stress. Interestingly, the stress was mostly unrelated to clinical work, but instead caused by balancing work with childcare and family obligations, and lack of interaction with family, friends, and colleagues. Thankfully, in the New Normal these stressors are slowly resolving.

The purpose of this introduction to the New Normal is not to leave readers depressed. We have an alternative. My New Normal will be one of *gratitude*. I’m grateful that my family survived. I’m grateful to my medical colleagues for their tireless efforts managing an unprecedented global health emergency. I’m grateful to the scientists who quickly zeroed in on the most minute details of this deadly machine and developed vaccines and treatments at “warp speed.” I’m particularly grateful to the dedicated public servants who resolutely provided guidance and recommendations based on the *available* evidence, even as our understanding of SARS-CoV-2 rapidly evolved. I will say that again for emphasis: public health officials are the unsung heroes of the pandemic. Thank you!

Quoting Yogi Berra, as I have done before in this column, “It ain’t over ‘til it’s over.” The New Normal won’t be like the pre-pandemic normal, but the worst is behind us. For that we can be grateful. ■

Editor’s Note: I know some of our readers follow ASA’s “Anesthesiology Today” eNews, which is sent to your inbox Tuesday through Friday. Beginning this month, the eNews has been renamed to “ASA Monitor Today,” thus aligning this informative news source with the monthly *ASA Monitor*. We feel this transition will benefit ASA members, as we continue to enhance and deliver information you’ve come to expect of the monthly *Monitor* on a more frequent basis.

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