



San Francisco Village

COVID - 19
Research and Advisory Team:
Report and Recommendations #34
November 1, 2020

SFV Members:
Barbara Kivowitz, MSW and Dr. Patricia Tsang

This report contains a summary of the key updates on the status of Covid-19 that are more evident since our last report (June 14), along with our current recommendations for actions for SFV to consider taking. Sources include: CDC, WHO, SFDPH, CA DPH, Science Journal, Nature Journal, New England Journal of Medicine, Journal of the American Medical Association, Scripps Research Institute, Johns Hopkins Coronavirus Resource Center, UCSF Medical Grand Rounds, STAT, Institute for Health Metrics & Evaluation, the Covid Tracking Project, other clinical journals, reports from public health professionals, and news media.

RECENT FINDINGS

1) Coronavirus antibodies decline after infection, study finds, raising questions about herd immunity

Antibodies against the coronavirus fell as people recovered from Covid-19, according to the findings of a major U.K. study, potentially dealing a blow to those pushing for so-called herd immunity. Researchers from Imperial College London screened 365,000 people in England over three rounds of testing between June 20 and Sept. 28. Analysis of finger-prick tests carried out at home found that rather than people building immunity over time the number of people with antibodies that can fight Covid declined roughly 26%.

The REACT-2 study, which has not yet been peer reviewed, found that 6% of those tested had antibodies to the virus when the U.K.'s lockdown measures were relaxed over the summer. However, by the start of the second wave of cases last month, this figure had fallen to 4.4%. "This very large study has shown that the proportion of people with detectable antibodies is falling over time," said Dr. Helen Ward, one of the authors of the study and professor at Imperial College London. Age appeared to affect antibody duration. Younger people had higher levels than those over 65, and their antibodies lasted longer. A faster decline in antibodies was observed in asymptomatic or mildly symptomatic cases than in those with full-blown symptoms. "We don't yet know whether this will leave these people at risk of reinfection with the virus that causes Covid-19, but it is essential that everyone continues to follow guidance to reduce the risk to themselves and others."

The findings suggest there may be a decline in the level of population immunity in the months following the first wave of the epidemic, potentially dashing the hopes of those calling for a herd immunity strategy.

Health experts estimate that around 70% of the population would need to be vaccinated or have natural antibodies to achieve herd immunity.

2) New study suggests Covid-19 may age people's brains by 10 years

People recovering from COVID-19 may suffer significant brain function impacts, with the worst cases of the infection linked to mental decline equivalent to the brain aging by 10 years, researchers warned. A non-peer-reviewed study of more than 84,000 people, led by Adam Hampshire, a doctor at Imperial College London, found that in some severe cases, coronavirus infection is linked to substantial cognitive deficits for months. Hampshire's

team analyzed results from 84,285 people who completed a study called the Great British Intelligence Test.

The cognitive deficits were “of substantial effect size,” particularly among people who had been hospitalized with COVID-19, the researchers said, with the worst cases showing impacts “equivalent to the average 10-year decline in global performance between the ages of 20 to 70.” Scientists not directly involved with the study, however, said its results should be viewed with some caution.

3) Falling death rate but the Covid-19 tipping point doctors fear most is getting closer

By several measures, the coronavirus mortality rate has fallen over the course of the pandemic — even for those at the highest risk of death. People who are diagnosed today appear to have better odds of surviving the disease compared to the first wave of patients. However, there’s still a tipping point at which the mortality rate could spike — when there are far more patients than hospital beds, staff, and ventilators.

And hospitals are becoming overwhelmed again, on both sides of the Atlantic. France is reporting the highest number of Covid-19 hospitalizations since April — with more than half of all ICU beds full in the country. The Czech Republic — home to the fastest-growing epidemic in Europe — had to mobilize the army to build a Covid-19 field hospital and call its foreign health workers home to help with the emergency. In Belgium, even doctors diagnosed with the disease have been asked to continue working while non-urgent surgeries have been called off. Covid-19 deaths by day have also recently risen somewhat in the US, although not yet to the height of earlier waves of the pandemic. Hospitalizations have increased by 46% from a month ago. Wisconsin and Texas are building field hospitals, while Idaho is planning to transfer patients out of state, and Utah is ready to ration care.

However, the death rate is falling.

- In a study recently published in the journal *Critical Care*, researchers in England looked at the 30-day mortality rate for 21,000 severely sick Covid-19 patients who were admitted to critical care units across England between March and June 2020. They found the odds of survival improved across the country — and the trend held even after adjusting for a patient’s underlying risks (such as age or other illnesses). In late

March, 72 percent of patients who had been admitted to the HDU — a type of critical care ward where patients can be looked after more intensively — were still alive at 30 days. By the end of June, that number climbed to 93 percent. For ICU patients, the number also shot up from 58 percent to 80 percent over that period.

- A second paper, published in the *Journal of Hospital Medicine*, focused on data from a 3-hospital health system: New York University Langone in New York. This time, they looked at the March to August period and all Covid-19 hospital patients (so not just the sickest patients who wind up in critical care). They also adjusted the data to account for changes in demographics and severity of illness over time. Here, too, they found the mortality rate among patients declined — 26 percent in March to 8 percent in August.
- In a third paper, just published in *The Lancet*, researchers took a slightly different approach: They used modeling to gauge the infection-fatality risk — or risk of death among all infected people, not just those hospitalized — in New York City between March and June. The overall risk of death decreased over time, especially for people in older age groups. For those ages 65 to 74, the estimated infection-fatality risk was 7 percent in April, and 4 percent by the end of May. For people 75 years and older, the infection-fatality risk nearly halved — from 19 percent to 11 percent.

The size of the change we're seeing in mortality can't be explained by any one thing. So what else could account for the falling death rate? Perhaps the studies can't fully control for the shift in the demographics of the disease. Maybe those who are at greatest risk early in the course of the virus succumbed at a very high rate and now those same patients are not as widespread and represented in all our communities. Another hypothesis is that, as masks became more common, people are exposed to less virus when they get sick. Perhaps you get infected with fewer virus particles and maybe having a lower dose of the virus causes less severe disease. Because of more widespread testing — people are being diagnosed sooner than they were at the start of the pandemic, when there was essentially no testing — doctors can intervene earlier in the course of the disease.

But the most important factor driving the falling mortality rate is likely one that has nothing to do with medicines, viral exposure, or improved diagnosis, the critical care doctors told me: Hospitals have simply become less stressed

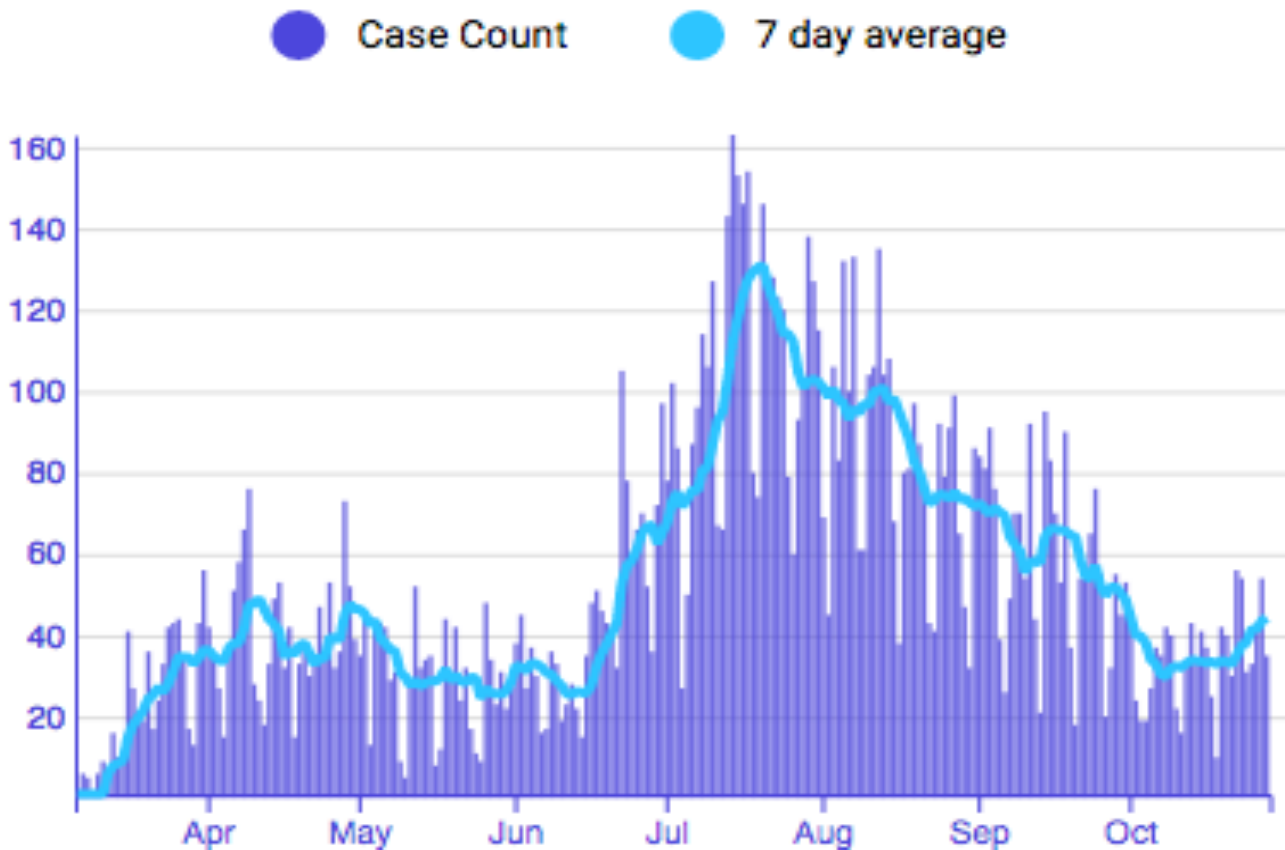
over time. The ominous implication of the winter spike in cases and hospitalizations is that we risk seeing what we saw at the beginning of the first wave, with a creeping up mortality rate.

SAN FRANCISCO

Total Positive Cases: 12,399

Total Tested: 681,211

Deaths: 148



For the week ending October 23, the Citywide seven-day average number of daily cases rose to 36 or 4.2 cases per 100,000 residents, entering the DPH “moderate alert” zone for the first time since October 4. Between September 28 and October 27, the Mission reported 153 positive cases. No other neighborhood in the City had over 100, and only two others had over 50.

SF Hospitalizations

COVID IN ICU - SAN FRANCISCO

7

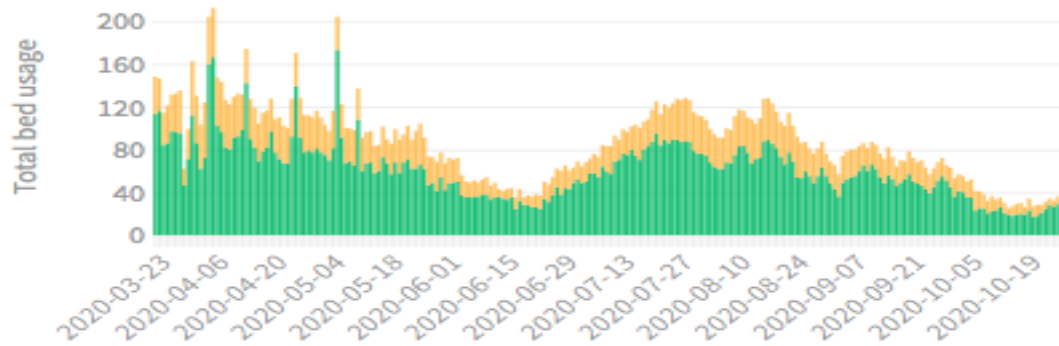
As of 10/29

COVID IN ACUTE CARE - SAN FRANCISCO

32

As of 10/29

Acute care COVID patients ICU COVID patients

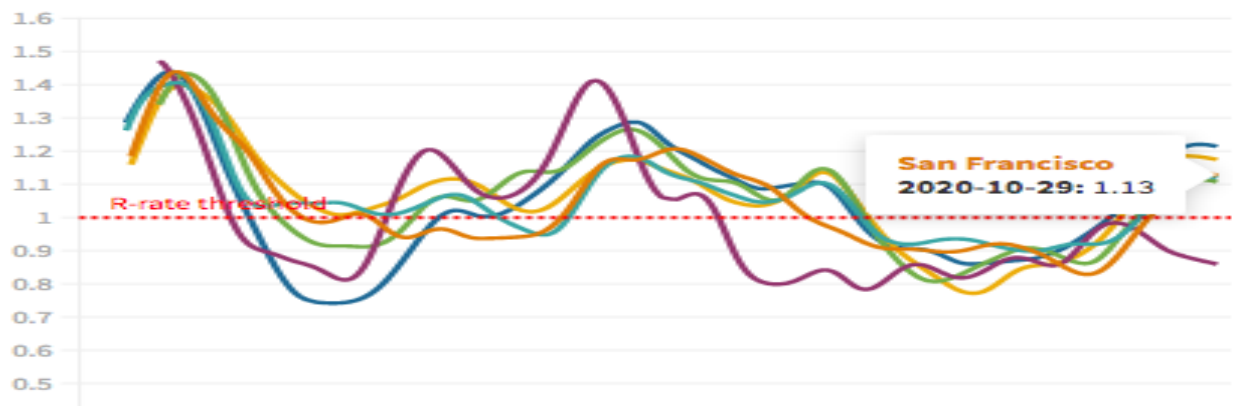


Although the absolute number of confirmed and suspected Covid patients remains below 40, the weekly rate of change for confirmed Covid patients was 49 percent. For the week ending October 29, the seven-day average availability of ICU beds was 39 percent and for Acute Care beds 24 percent.

Bay Area R Number

R Number for the 6 Bay Area Counties: the R Number refers to the reproductive rate of a disease. To control and eliminate the spread of disease, an R Number of <1 is required.

Santa Clara Alameda Contra Costa Marin San Mateo San Francisco



1) Noting very small growth in Covid cases, San Francisco hits pause on further reopenings.

San Francisco has the highest rate of testing in the country, with over 5,000 tests being administered per day. And we still have the lowest mortality rate of any major city in the country, and a very low test-positivity rate — 0.82% as of earlier this week. In total, 147 San Franciscans have died from the virus to date, and 12,320 have had confirmed infections.

"San Francisco is fortunate that our numbers are low, but we can't wait until our numbers are so high that we can't slow the spread," said SF Public Health Director Dr. Grant Colfax. San Francisco has seen an increase of 3 new daily cases per 100,000 residents to 4 new cases per 100,000 this week, Colfax said. And the number of COVID patients hospitalized went from a low of 21 on October 15 to 37 as of Wednesday. "That may not sound like a lot," Colfax said. "But when this virus starts taking off, it takes off quickly, unless, again, we take efforts to slow its spread."

Mayor London Breed on Friday said San Francisco will have to pause some reopening plans after seeing an uptick in coronavirus hospitalizations. The majority of activities and businesses that were scheduled to reopen or expand their capacity on Tuesday, November 3 will be paused, the mayor's office said.

What will remain closed: Indoor pools, bowling alleys, locker rooms/showers at fitness centers, indoor entertainment like bowling alleys. What will remain paused: Restaurants, places of worship, museums, zoos, movie theatres will remain at 25% capacity indoors rather than increasing indoor capacity.

CALIFORNIA

California COVID-19 By The Numbers

October 31, 2020

Numbers as of October 30, 2020

CALIFORNIA COVID-19 SPREAD

922,005 (+5,087)
CASES

Ages of Confirmed Cases

- 0-17: 98,615
- 18-49: 550,862
- 50-64: 173,917
- 65+: 97,764
- Unknown/Missing: 847

Gender of Confirmed Cases

- Female: 466,008
- Male: 448,772
- Unknown/Missing: 7,225

17,626 (+55)

Fatalities

Hospitalizations

Confirmed COVID-19
2,525/681
Hospitalized/in ICU

Suspected COVID-19
687/90
Hospitalized/in ICU

Your actions **save lives.**

covid19.ca.gov



1) Governor Gavin Newsom Unveils State's New \$120M COVID-19 Testing Facility With Winter, Second Wave Of Pandemic Set To Hit

Governor Newsom on Friday unveiled a new \$120 million, 134,000 sq. foot coronavirus testing facility in Valencia, north of L.A. Newsom announced the plan to increase capacity with a corporate partner — PerkinElmer, which is a leader in testing — in late August. The facility was supposed to open by November 1. With the ribbon cutting on Friday, it opened ahead of schedule and, according to the governor, “\$25 million under budget.”

According to the governor's office, the lab will enable the state to process an additional 150,000 tests per day, increasing testing capacity and reducing turnaround times for results. Those will be polymerase chain reaction — or PCR — tests. They are generally considered “the gold standard” for coronavirus detection.

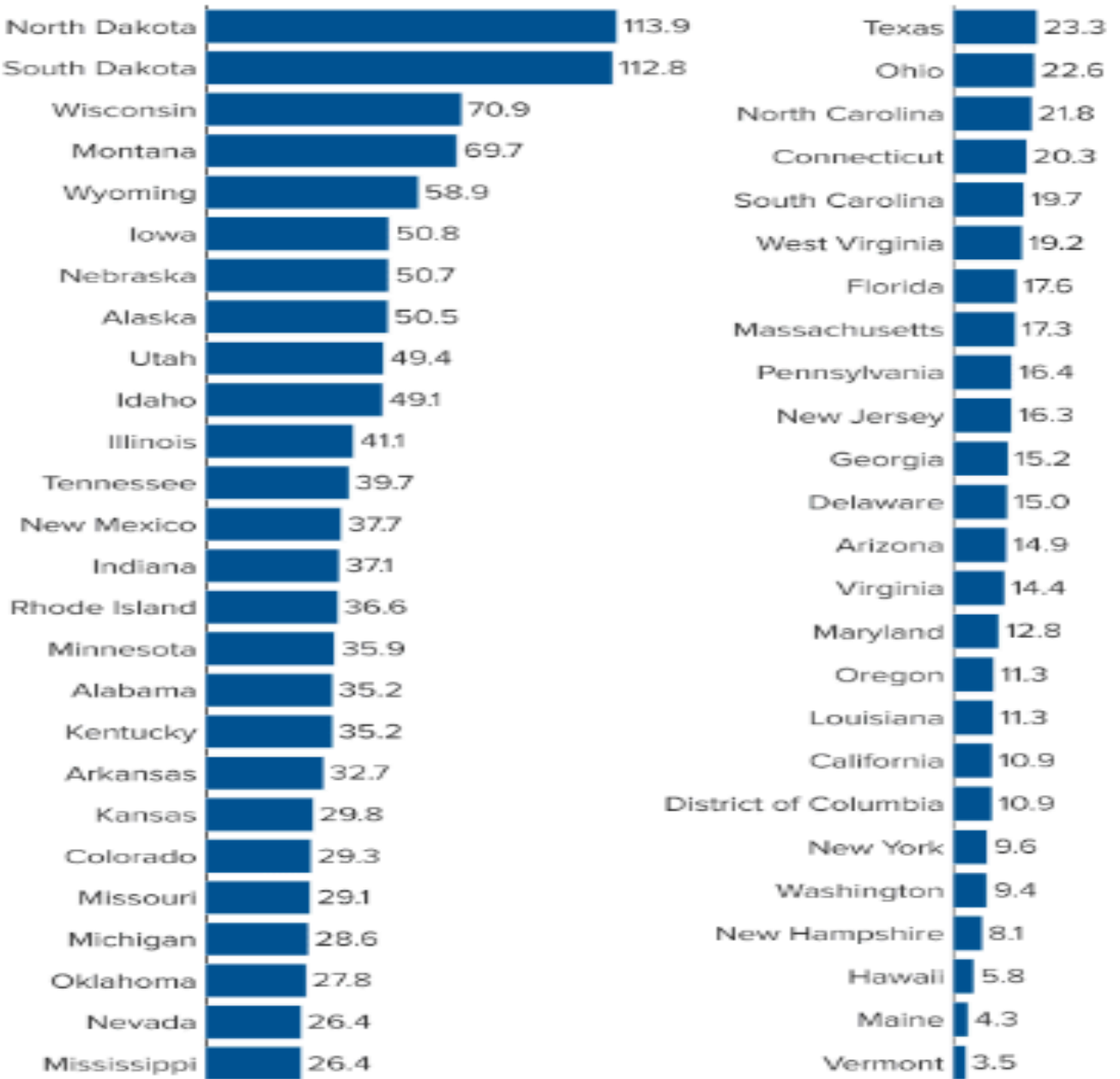
UNITED STATES

Total Cases: 9,098,300

Deaths: 230,194

Daily new coronavirus cases per capita

Seven-day average of daily new reported cases per 100K residents



1) U.S. reports record 99,321 new Covid cases as scientists warn of 'exponential growth'

The United States reported a record 99,321 new coronavirus cases as the pandemic seeps into every area of the country and scientists warn of exponential growth ahead of the holidays.

U.S. coronavirus cases, deaths, and current hospitalizations

Seven-day average lines



The U.S. is continuing its upward climb on what's now the pandemic's third peak, with cases growing by 5% or more in 45 states as of Thursday, according to a CNBC analysis of data compiled by Johns Hopkins University. Over the last week, the U.S. reported an average of roughly 76,590 new cases every day, the highest seven-day average recorded yet and up more than 25% compared with a week ago, according to Johns Hopkins data.

The U.S. is conducting record amounts of testing, according to data compiled by the Covid Tracking Project. However, more testing cannot account for the rise in cases, health officials say, because the percentage of tests coming back positive has increased as well.

Hospitalizations for Covid-19 are also on the rise — a sign that the pandemic has taken a turn for the worse in some parts of the country, particularly in the Midwest. As of Thursday, 17 states reached record-high hospitalizations based on a seven-day average, including Iowa, Indiana, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin, according to the Covid Tracking Project. "We cannot afford to overwhelm our hospitals, especially those in rural areas where the infrastructure is absent as well as the medical staff needed to operate the surge of ICU," Ali Mokdad, professor of health metrics sciences at the Institute for Health Metrics and Evaluation at the University of Washington, said.

The U.S. is now facing daily case counts that are “extremely high and quite unacceptable,” Fauci said. He previously said in early August that the goal was to suppress the daily total to below 10,000 before September. Now, experts like Gottlieb predict the U.S. will report 100,000 new cases within the coming days. “We’re in a precarious position over the next several weeks to months,” Fauci said, urging people to continue wearing face masks, practice social distancing, wash their hands, avoid crowds and spend time outdoors over indoors as much as possible.

2) Scientists debate how much to lower the bar on Covid-19 vaccine potential.

Vaccines capable of preventing any coronavirus symptoms should qualify for widespread use, some experts say. Others want larger trials. Ongoing clinical trials are primarily designed to show whether Covid-19 vaccine candidates prevent any symptoms of the disease — which could be as minor as a sore throat or a cough. But the trials, which will study 30,000 to 60,000 volunteers, will be too brief and too small to prove that the vaccines will prevent what people fear most — being hospitalized or dying — by the time the first vaccine makers file for emergency use authorization, which is expected to occur later this year.

The United States should hold out for an optimal vaccine, with more proven capabilities, some say. Others say the crushing toll of the pandemic — which has killed at least 225,000 people in the U.S. — demands that the country accept the best vaccine it can achieve within the next few months, even if significant questions remain after its release.

Researchers debated how rigorously to test Covid-19 vaccine candidates at a public meeting Thursday of the FDA's advisory committee on vaccines. Some said that simply preventing mild cases is not enough and may not justify the risks associated with vaccination. But vaccine experts say there are good reasons to focus on milder cases of Covid-19. Vaccines that prevent mild disease typically prevent severe disease, as well.

3) It may be time to reset expectations on when we’ll get a Covid-19 vaccine

Pauses in clinical trials to investigate potential safety issues, a slower-than-expected rate of infections among participants in at least one of the trials, and signals that an expert panel advising the Food and Drug Administration may

not be comfortable recommending use of vaccines on very limited safety and efficacy data appear to be adding up to a slippage in the estimates of when vaccine will be ready to be deployed. Asked Wednesday about when he expects the FDA will greenlight use of the first vaccines, Anthony Fauci moved the administration's stated goalpost. "Could be January, could be later. We don't know," Fauci, director of the National Institute of Allergy and Infectious Diseases said.

On Tuesday, front-runner Pfizer revealed that the first interim analysis in its Phase 3 clinical trial has not yet occurred. That means there hadn't yet been enough Covid infections among the trial participants to take a first stab at analyzing whether the people randomly assigned to receive vaccine were infected at a lower rate than people who were assigned to get a placebo injection. The company now projects that it could apply to the FDA for an emergency use authorization for the vaccine in mid-November.

It is important to note that, to date, none of the vaccines being developed for the U.S. market has been proven to be effective in preventing Covid-19 disease. Early stage clinical trials have shown what appear to be promising signals; multiple vaccines have triggered production of important antibodies in people who have been immunized. But data generated in a few hundred people aren't enough to determine whether a vaccine will actually fend off illness. That answer comes from large, Phase 3 trials, five of which are now underway in the United States. Their findings will ultimately tell us how soon vaccines may start to be rolled out to the masses.

Two of the vaccines being supported by Operation Warp Speed have seen their Phase 3 trials paused to investigate unexpected illnesses among a small number of trial participants. Johnson & Johnson, the only manufacturer among the major vaccine makers testing a one-dose Covid vaccine, also saw its Phase 3 trial paused for two weeks after a male volunteer in his 20s suffered what the Washington Post reported to be a stroke. After an investigation, the FDA allowed J&J to resume the trial. Another manufacturer, Novavax, has pushed back the start date for its U.S. Phase 3 trial to the end of November; it had earlier said the trial would start this month.

Anna Durbin, a vaccine researcher at Johns Hopkins Bloomberg School of Public Health, said the public needs to understand that Covid vaccines may be a bit further off than people have been led to believe. "We may see efficacy in

one or more trials by the end of 2020, but that doesn't mean we're going to have a vaccine available at the end of 2020," she said.

4) Early COVID-19 vaccines will only prevent symptoms, not block the virus

At least four candidates are near the finish line in the U.S. coronavirus vaccine race, but how well they will work remains a question. A key point to note, however, is that the vaccine isn't an end-all solution to the pandemic. That's in large part because any inoculations developed now are focused on simply preventing symptoms from arising, rather than blocking out the virus altogether.

The latter goal is a secondary endpoint, according to Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases. "The primary thing you want to do is that if people get infected, prevent them from getting sick, and if you prevent them from getting sick, you will ultimately prevent them from getting seriously ill," Fauci said at Yahoo Finance's All Markets Summit Monday. "What I would settle for, and all of my colleagues would settle for, is the primary endpoint to prevent clinically recognizable disease," he said. That level of protection would be the ultimate goal to diffusing the crisis, but is hard to do with companies facing an immediate demand for some sort of solution.

5) Trump campaign rallies led to more than 30,000 coronavirus cases, Stanford researchers say

Researchers looked at 18 Trump rallies held between June 20 and Sept. 22 and analyzed Covid-19 data the weeks following each event. They compared the counties where the events were held to other counties that had a similar trajectory of confirmed Covid-19 cases prior to the rally date. Out of the 18 rallies analyzed, only three were indoors, according to the research.

The researchers found that the rallies ultimately resulted in more than 30,000 confirmed cases of Covid-19. They also concluded that the rallies likely led to more than 700 deaths, though not necessarily among attendees. The researchers said the findings support the warnings and recommendations of public health officials concerning the risk of Covid-19 transmission at large group gatherings, "particularly when the degree of compliance with guidelines concerning the use of masks and social distancing is low." The paper, which

has not undergone a peer review yet, was published on open access preprint platform SSRN.

6) About 20% of grocery store workers had Covid-19, and most didn't have symptoms, study found

Grocery store work puts employees at serious risk for infection, a new study found, particularly those who have to interact with customers. These workers likely became a "significant transmission source" for Covid-19 without even knowing it because most in the study were asymptomatic.

The analysis, published Thursday in the journal Occupational and Environmental Medicine, is the first to demonstrate the significant asymptomatic infection rate, exposure risks and psychological distress grocery workers have felt during the pandemic. Workers in the study had tried to take precautions. Nearly all, 91%, said they wore a face mask at work and 77% said they also wore masks outside of work. Yet only about 66% said they were able to practice social distancing consistently on the job. This inability to social distance had an emotional, as well as a physical impact. Nearly a quarter of the people in customer service jobs said they had problems with anxiety and depression compared to 8% of workers who did not have to interact with customers.

RECOMMENDATIONS

We have no new recommendations at this time.