



San Francisco Village

COVID - 19
Research and Advisory Team:
Report and Recommendations #38
November 29, 2020

SFV Members:
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This report contains a summary of updates on the status of Covid-19 that are more evident since our last report. 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. This report is not intended to provide personal advice – for that please consult with your health care providers.

RECENT FINDINGS

1) What the latest Covid-19 vaccine announcements from AstraZeneca-Oxford, Pfizer-BioNTech, and Moderna can and can't tell us.

The recent results of Covid-19 vaccine clinical trials from teams at the University of Oxford and AstraZeneca, Moderna, and Pfizer and BioNTech have been some of the most exciting and promising developments in the pandemic to date. All three vaccine candidates appear to be highly effective against Covid-19, the research teams say. Pfizer and BioNTech say their vaccine had an efficacy of 95 percent against Covid-19, meaning 95 percent of people who received the vaccine were protected against the disease. Moderna reported that its product was 94.5 percent effective. Oxford and AstraZeneca reported that theirs was 62 percent effective in one dosing regimen and 90 percent effective in another, averaging to 70 percent. Determining efficacy is a crucial step, and these results are far better than many scientists expected. They're also based on what may seem like a small number of cases, ranging from 131 detected Covid-19 cases to 170, out of a pool of tens of thousands of participants in the trials. But researchers say these numbers are enough to establish how well a vaccine prevents the disease.

Clinical trials are designed to answer multiple questions, and efficacy is only one of them. Vaccines also have to meet a high bar for safety, much higher than conventional drugs. Oxford and AstraZeneca, Moderna, and Pfizer and BioNTech reported minimal side effects for their vaccines. Health officials will also need more information about how the vaccines performed in different age brackets and ethnic groups, and among people with preexisting conditions, before they recommend how these vaccines should be administered,

Moderna's interim analysis found that of their 95 events, 90 of them were in the placebo group and five were in the treatment group. Of Pfizer and BioNTech's 170 Covid-19 cases, 162 were in their placebo group and eight in the group that received their vaccine. Oxford and AstraZeneca did not report the exact split between the group that received their vaccine and the comparison group. The reported efficacies here are mainly against *disease* — i.e., people getting sick — and not *infection*, i.e., people carrying the virus.

But experimenters need to collect long-term safety data too. Pfizer-BioNTech and Moderna have committed to watching their pool for at least two years, while Oxford and AstraZeneca committed to at least one year, actively checking volunteers for any potential health concerns that might emerge later. Companies will also have to keep tabs on the broader population that receives their respective vaccines after they're licensed. These trials also need to reveal more information about how well these vaccines protect against both very mild Covid-19 cases and very severe cases.

If people can get a vaccine that is quite effective in preventing Covid-19 symptoms but still carry the virus, they could still potentially spread SARS-CoV-2. This is an important issue because there will only be very limited doses of the vaccine available once it's cleared for emergency use — and it will likely be many months after that before a sizable amount of the US population will be able to be vaccinated. That means people who have received the injections might need to maintain precautions like wearing masks and social distancing to prevent further spread of the virus before the vast majority of people have been vaccinated.

For more information about these 3 vaccines – the timeline to approval, criteria for groups to receive the vaccine, description of how they work, and more, please see this excellent article in the Washington Post - <https://www.washingtonpost.com/health/2020/11/17/covid-vaccines-what-you-need-to-know/?arc404=true>

2) COVID-19 infections in US likely 8 times higher than reported, CDC says.

Between Feb. 27 and Sept. 30, there were 6.8 confirmed COVID-19 infections, but when researchers adjusted for potential false-negative test results, incomplete reporting of cases and asymptomatic or mildly ill individuals who never got tested, they learned there may have actually been about 52.9 million infections. That means only 13% of total infections were identified and reported, the team said in their paper published Nov. 25 in the journal *Clinical Infectious Diseases*. There are more than 12.9 million confirmed U.S. coronavirus cases and more than 263,000 deaths, according to Johns Hopkins. So, if you account for all unreported cases the CDC team estimated, the actual case count as of Nov. 27 would stand at just over 103 million.

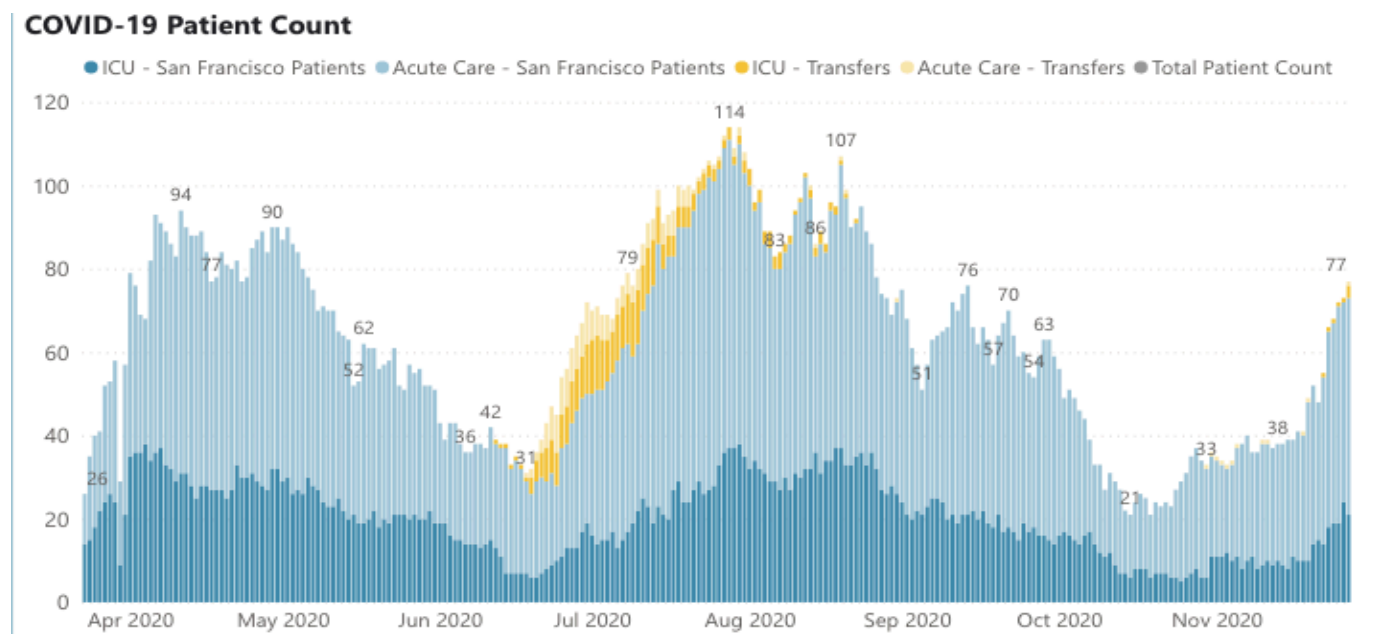
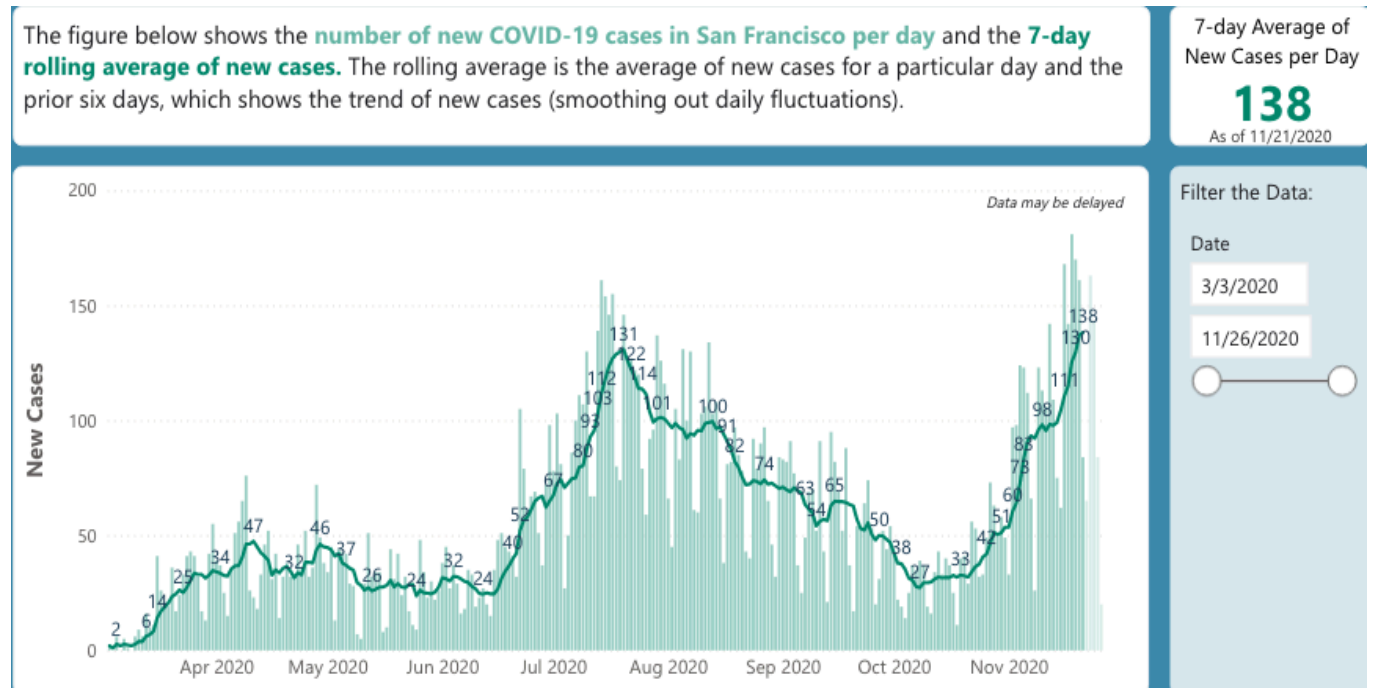
SAN FRANCISCO

Total Cases: 15,417

Deaths: 160

Total Tested: 877,602

R Number: 1.4 (the reproductive rate; an R number <1 is required to control the spread of a disease)



1) San Francisco sees 265% increase in COVID test positivity – purple tier restrictions activated

On Saturday, San Francisco was placed in California's most restrictive purple tier, yet another alarming sign that the city's battle with COVID-19 has taken a turn for the worse. "We're currently averaging 118 new cases per day compared to 73 per day in the first week of November," Mayor London Breed wrote in a series of tweets. "For the week of November 16th, we had 768 diagnosed cases compared to 217 diagnosed cases the week of October 12th." Dr. Grant Colfax, the city's health director, said last week that the number of San Franciscans who received positive tests for COVID has increased 265% in the last four weeks. Hospitalization rates have doubled since the end of October.

At 10 p.m. Monday, San Francisco will join most of the rest of the state in a "limited stay at home order." That means interacting with different households (either indoors or outside) is banned from 10 p.m. to 5 a.m. each day. Non-essential businesses must also close during those hours. Breed said the curfew will last until Dec. 21, although it could be extended if conditions do not improve.

What's closed? Movie theaters; Indoor gyms and fitness centers; Indoor museums, aquariums and zoos; Stand-alone outdoor amusement, like carousels, Ferris wheels and train rides; Indoor worship services

What's open?

Non-essential retail stores, which must reduce indoor capacity to 25%
Grocery stores, which continue to operate at 50% capacity
Outdoor playgrounds, mini-golf, skate parks and batting cages
Schools that are already open. No additional schools can reopen during this time.

2) UCSF will be among first to get COVID-19 vaccine

UC San Francisco is one of seven California hospitals chosen by the state's Public Health Department to be among the first in the world for early distribution of Pfizer's COVID-19 vaccine. Health care workers and first responders will be first in line for inoculations. The exact timeline for the first allocation is unknown but UCSF said it expects to begin administering the Pfizer vaccine as early as December.

California Gov. Gavin Newsom said at a Monday press conference the state is preparing for delivery and distribution, but widespread availability to the public is still months away. "Mass vaccination is unlikely to occur any time soon," Newsom said. "March, April, June, July, that's where we start to scale."

CALIFORNIA

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California COVID-19 By the Numbers

November 29, 2020 *Numbers as of November 28, 2020*

COVID-19 Cases		Fatalities		
1,198,934 (+15,614)		19,121 (+32)		

Ages of Confirmed Cases				
133,586	714,382	225,207	124,744	1,015
0-17	18-49	50-64	65+	Unknown/Missing

Gender of Confirmed Cases		
607,559	581,955	9,420
Female	Male	Unknown/Missing

Hospitalizations	Confirmed COVID-19		Suspected COVID-19	
	7,415	1,711	783	112
	Hospitalized	in ICU	Hospitalized	in ICU

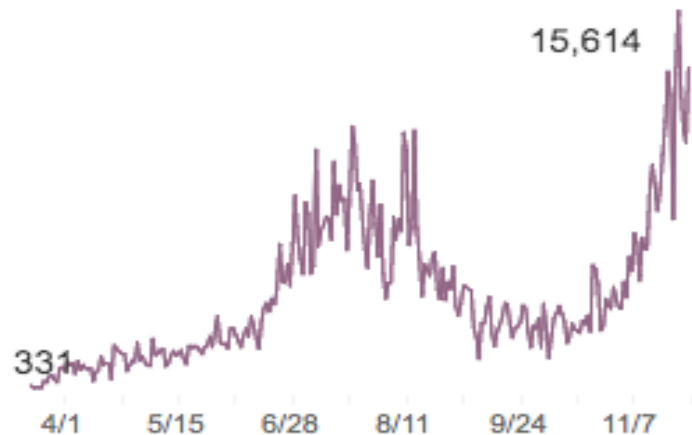
Your actions save lives.
covid19.ca.gov

CALIFORNIA CASES

1,198,934

Day-Over-Day New Cases

1 Day Δ	7 Day Δ	14 Day Δ
+15,614	+96,901	+179,589
+1.3%	+8.8%	+17.6%
7 Day Avg.	14 Day Avg.	Weekly % Change
13,843	12,828	17.2%



US Total Cases: 12,999,664

1) New COVID-19 surge spreading beyond urban areas to all corners of California

A Times data analysis found that most California counties are now suffering their worst daily coronavirus case rates of the COVID-19 pandemic, surpassing even the summer surge that had forced officials to roll back the state's first reopening in the late spring. The data suggest California will face new problems in December if the unprecedented rise in cases continues. In earlier phases of the pandemic, different parts of California could help harder-hit areas — San Diego County and San Francisco, for example, took in patients from Imperial County. But that could be difficult in this wave, with the pandemic worsening in most places across California simultaneously.

The Times' analysis also demonstrates how the coronavirus has managed to break free from densely packed neighborhoods in urban areas and farming communities in agricultural valleys, where the virus infected essential workers — many of them Latino — who had no choice but to leave home to work. Now, infections are spreading faster in other communities. In Marin County, health officer Dr. Matt Willis said the pandemic has moved from hitting predominantly Latino communities. Now, in just the last month, "the majority of cases are among our white residents," Willis said.

Across California, the seven-day average of daily coronavirus cases has more than quadrupled since mid-October, from fewer than 3,000 a day to nearly 14,000 a day as of Wednesday. In just two weeks, average daily deaths have doubled: In the seven-day period that ended Wednesday, the state had an average of 74 COVID-19 deaths a day, up from 38. Officials sounded alarm bells all over the state, from the Mexican border, where officials in Imperial County established an overflow medical tent with 50 beds to handle a surge in patients, to Shasta County in the far north, which reported hundreds of people in isolation and thousands in quarantine. The rate of coronavirus transmission in Los Angeles County is now at the highest since the first few weeks of the pandemic. Officials now estimate that every infected person, on average, transmits the virus to 1.27 other people.

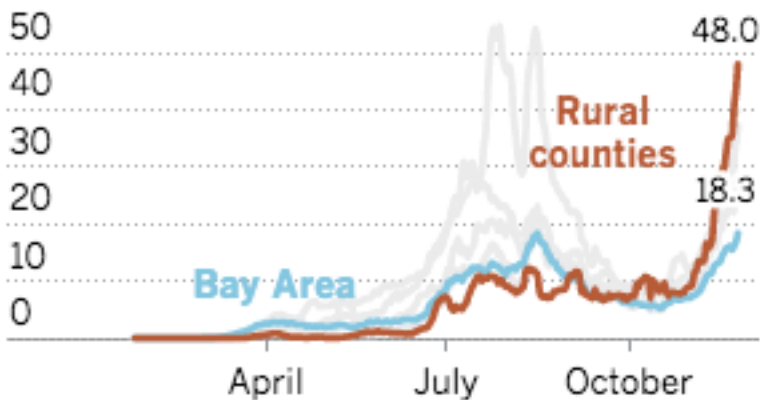
Over the last seven days, Southern California counties reported an average of 40 daily coronavirus cases per 100,000 residents. That's almost 50% higher than the summer peak, which was 28 daily coronavirus cases per 100,000 residents in July. The rate is even worse in the rural northern third of the

state, where it has skyrocketed to an average of 48 daily cases per 100,000 residents, up from an average of 12 daily cases in August. Cases in the Sacramento region and on the Central Coast have risen 57% and 22%, respectively, above the highest levels seen in mid-August. The nine-county San Francisco Bay Area is reporting 18 average daily cases per 100,000 residents, matching its summer peak. A region that includes the San Joaquin Valley, the Eastern Sierra and Yosemite is the only one in California with case rates lower than its summer wave, which was extraordinarily bad. Those counties reported an average of 37 daily coronavirus cases per 100,000 residents, well below the previous peak of 55. The case rates in this section of inland Central California, however, are still increasing at a dramatic pace, on par with most other regions of the state.

Coronavirus cases in Northern California

Daily reported cases have skyrocketed in rural counties

7-day average per 100,000 residents



Bay Area counties include Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma. Rural Northern California counties include Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama and Trinity. Data as of Nov. 25.

2) Los Angeles County under lockdown order

Los Angeles County, which announced Friday a new stay-at-home order that prohibits all public and private gatherings with people outside a single household. "Residents are advised to stay home as much as possible and always wear a face covering over their nose and mouth when they are outside their household and around others," the county's public health department said in a news release. The order will take effect Monday and last through December 20, the release said. The prohibition does not apply to "faith based services and protests, which are constitutionally protected rights," the department said.

Essential retail businesses will be limited to 35% occupancy, while the occupancy limit for nonessential retail operations, personal care services and libraries will be 20%, the county said.

UNITED STATES

Total Cases: 13,340,663

Deaths: 266,594

1) CDC: US COVID-19 death toll could reach 321,000 by mid-December

According to the CDC's "COVID-19 Forecasts: Deaths," models are predicting the number of coronavirus deaths will likely increase over the next four weeks, with between 10,600 and 21,400 new fatalities likely to be reported in the week ending Dec. 19, 2020. The model predicts between 294,000 and 321,000 total coronavirus deaths will have been reported by that time. As of Friday afternoon, Johns Hopkins University of Medicine had recorded more than 263,000 coronavirus deaths in the U.S., and more than 12.9 million confirmed cases, both figures far more than any other nation in the world.

The US has now reported more than 100,000 infections every day for 26 consecutive days. The daily average in the week to Friday was more than 166,000 -- almost 2.5 times higher than the summer's peak counts in July.

The number of Covid-19 patients in US hospitals reached record levels on Saturday evening, with 91,635 Americans hospitalized with Covid19, according to the COVID Tracking Project. And daily Covid-19 deaths in the US

have been increasing. The daily average across seven days was 1,477 on Friday. But more than 2,100 deaths were reported on each of the two days before Thanksgiving, the first time that level was crossed on consecutive days since late April. Dr. Jonathan Reiner, a professor of medicine at George Washington University, who predicted Wednesday the country's daily death toll would likely double in 10 days, and soon see "close to 4,000 deaths a day."

RECOMMENDATIONS

We are entering one of the higher risk periods the State and San Francisco have seen. And it is occurring when infection and hospitalization rates are increasing, people are weary of restrictions and safety precautions, the holiday season has begun, and while the vaccine news is hopeful, the vaccine delivery timetable is uncertain. We all need to support each other and SFV members in staying connecting and maintaining precautions.