San Francisco Village

COVID – 19
Research and Advisory Team:
Report and Recommendations #36
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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) Four reasons for encouragement based on Pfizer's Covid-19 vaccine results.

A preliminary analysis of the race frontrunner, Pfizer-BioNTech's mRNA vaccine, suggested it was 90% effective in preventing symptomatic Covid disease. While these are early findings — the trial is still ongoing — they suggest the vaccine could be very protective. There's another important caveat. We don't yet have details about whether the vaccine blocked mainly mild cases, or if there is evidence that it seemed to prevent some severe infections, too.

1) We are likely to have multiple successful Covid-19 vaccines.

The Pfizer vaccine targets the spike protein, the knobby protrusion on the SARS-CoV-2 virus that allows the virus to attach to and invade human cells, initiating infection. In fact, all of the vaccines being developed by major manufacturers working with Operation Warp Speed, the U.S. government effort to fast-track vaccines, target the spike protein. There have been at least theoretical concerns that this was the vaccine development equivalent of putting all our eggs in one basket. The interim Pfizer data suggests the basket is the right one. That forecast applies globally. All the vaccines being developed with the help of the Coalition for Epidemic Preparedness Innovations — which has been funding research and production with the aim of producing vaccine for worldwide distribution — target the spike protein. "We believe these interim results also increase the probability of success of other Covid-19 candidate vaccines which use a similar approach," CEPI CEO Richard Hatchett said in a statement.

2) This is terrific news for mRNA vaccines.

The two frontrunners in the race to develop Covid vaccines are Pfizer and Moderna; both use a new vaccine production technology known as mRNA. Research has been underway for years on this innovative approach to make vaccines, but to date no mRNA vaccine has been brought to market. The platform offers huge promise, both in terms of how quickly a vaccine can be designed and how quickly batches can be made.

3) We may be able to expect more from Covid-19 vaccines than we thought.

That could help persuade people to be vaccinated. It's important to note that at this point, there's no way to estimate how long protection from this or any

Covid vaccine would last. The duration of protection will only become clear after the vaccines are in use for a while. But there has been a fear with Covid vaccines that they might not be super protective. Many vaccines targeting pathogens that invade our respiratory tracts — think flu vaccine — don't generate terrific immune responses. The relatively low bar the Food and Drug Administration set for Covid vaccines was seen by many as lowering expectations. The FDA told manufacturers in guidance issued in June that it would accept a vaccine that reduces the risk of symptomatic Covid by 50%. "This vaccine could be more effective than we ever hoped for from the first generation of Covid-19 vaccines," Jeremy Farrar, director of the Wellcome Trust, said in a statement. If the early promise of the Pfizer vaccine holds, that could really help persuade people that getting vaccinated against the SARS-2 virus is worthwhile, Fauci said.

4) Pfizer's vaccine's long-term prospects now look better.
Pfizer's vaccine will almost certainly be the first to be authorized by the FDA. But it's also going to be the hardest one to use. The vaccine has to be shipped and stored at ultra-cold temperatures, -94 Fahrenheit (-70 Celsius). That requirement will limit where the vaccine can be used. Moderna's mRNA vaccine must be stored at -4 F (-20 C), which is not ideal, but not quite as challenging. Still, a vaccine that might be 90% efficacious becomes more attractive — regardless of distribution challenges.

2) In places you're most likely to catch Covid-19, reducing crowds can help
A small minority of places where people go frequently account for a large majority of coronavirus infections in big cities, according to a new modeling study. While much attention has focused on singular "superspreaders" — individuals who inadvertently pass the virus along to large groups of people — these researchers turned that idea on its head. Instead of looking at individual human superspreaders, the team explored "superspreader sites," places where the risk of transmission is dangerously high due to crowds or confined spaces.

The study, published in the journal Nature, suggests that reducing the maximum occupancy in such places -- especially restaurants, gyms, cafes and hotels -- can slow the spread of illness substantially. "Our model predicts that capping points-of-interest at 20% of maximum occupancy can reduce the infections by more than 80%, but we only lose around 40% of the visits when

compared to a fully reopening with usual maximum occupancy," Jure Leskovec, an author of the study

The researchers -- from Stanford University and Northwestern University -- used cell phone location data from SafeGraph to model the potential spread of Covid-19 within 10 of the largest metropolitan areas in the United States The data, representing the hourly movements of 98 million people, included mobility patterns from March to May. On average across metro areas, full-service restaurants, gyms, hotels, cafes, religious organizations, and limited-service restaurants produced the largest predicted increases in infections when reopened. Avoiding these establishments — if they are operating at full capacity — could be lifesaving as people navigate a cold, virus-laden winter, the study suggests. The model predicted that "infections are happening very unevenly -- that there are about 10% of points-of-interest that account for over 80% of all infections, and these are places that are smaller, more crowded and people dwell there longer.

Minority communities and low-income groups also suffer disproportionate risks of transmission. People living in lower-income and in less white neighborhoods were not able to reduce their mobility as much as higher-income neighborhoods, likely because they were essential workers or did not have the luxury of working from home. In turn, these groups were substantially likelier to have been infected.

3) One in five COVID-19 survivors develop mental illness

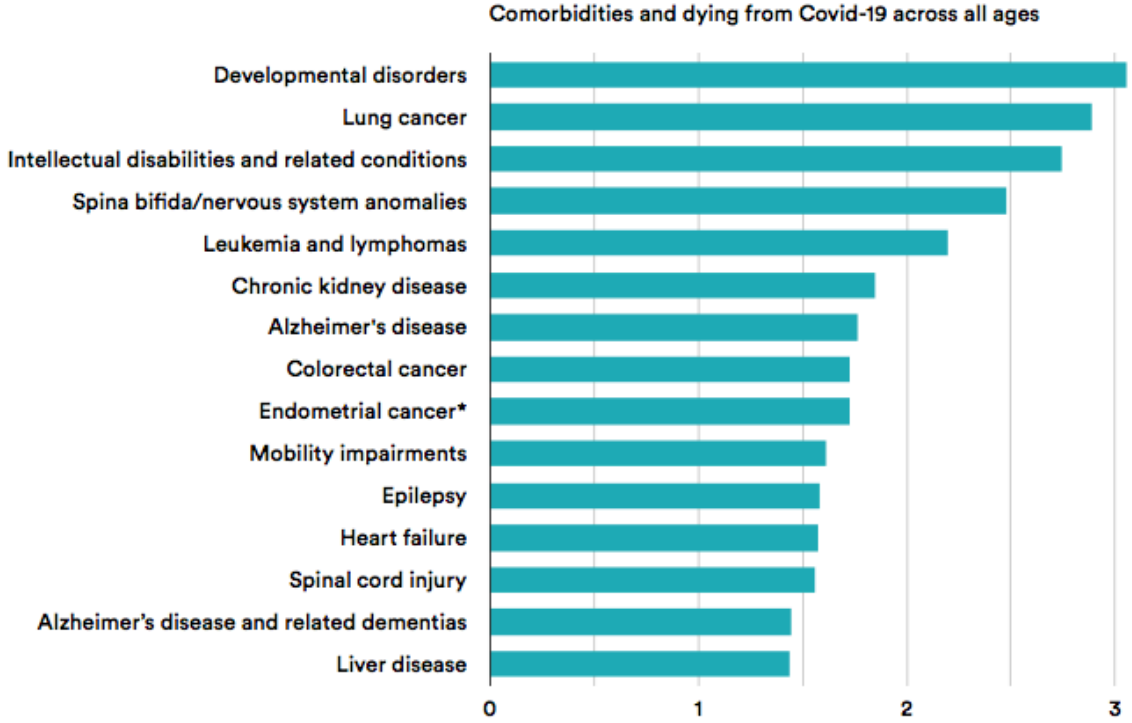
Many COVID-19 survivors are likely to be at greater risk of developing mental illness, psychiatrists said, after a large study found 20 percent of those infected with the coronavirus are diagnosed with a psychiatric disorder within 90 days. Anxiety, depression and insomnia were most common among the study's recovered COVID-19 patients who developed mental health problems, and the researchers also found significantly higher risks of dementia, a brain impairment condition. The study, published in The Lancet Psychiatry journal on Monday, analyzed electronic health records of 69 million people in the United States, including more than 62,000 who had cases of COVID-19.

In the three months following testing positive for COVID-19, one in five survivors were recorded as having a first-time diagnosis of anxiety, depression or insomnia. This was about twice as likely as for other groups of

patients in the same period, the researchers said. The study also found that people with a pre-existing mental illness were 65 percent more likely to be diagnosed with COVID-19 than those without one. The virus might be directly affecting the brain in some ways, maybe through the immune system, which leads to the mental health problem. But more importantly, the experience of having had COVID-19 and understanding all the things that might have happened to you with all the fears and concerns that the virus led people to have, may also be a reason.

4) Developmental disorders top the medical conditions that heighten the risk of dying from Covid-19

A study published by Fair Health looked for the risk factors that increased their odds of dying from Covid-19. Across all age groups, Covid-19 patients had greater odds of dying if they had any of the 15 underlying health conditions, also known as comorbidities, shown in the chart below.

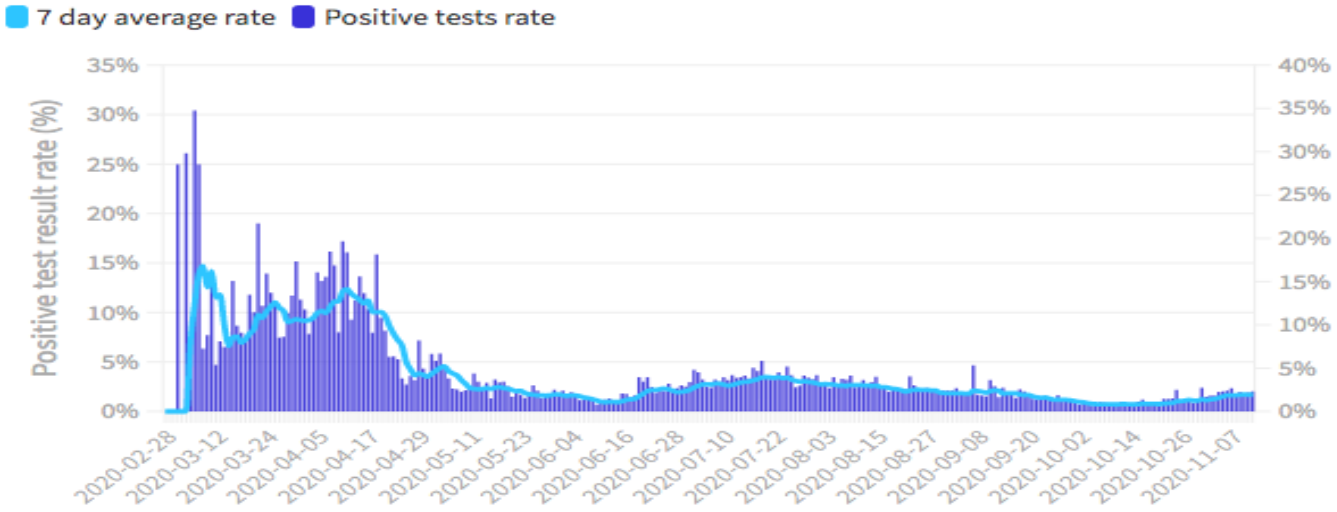


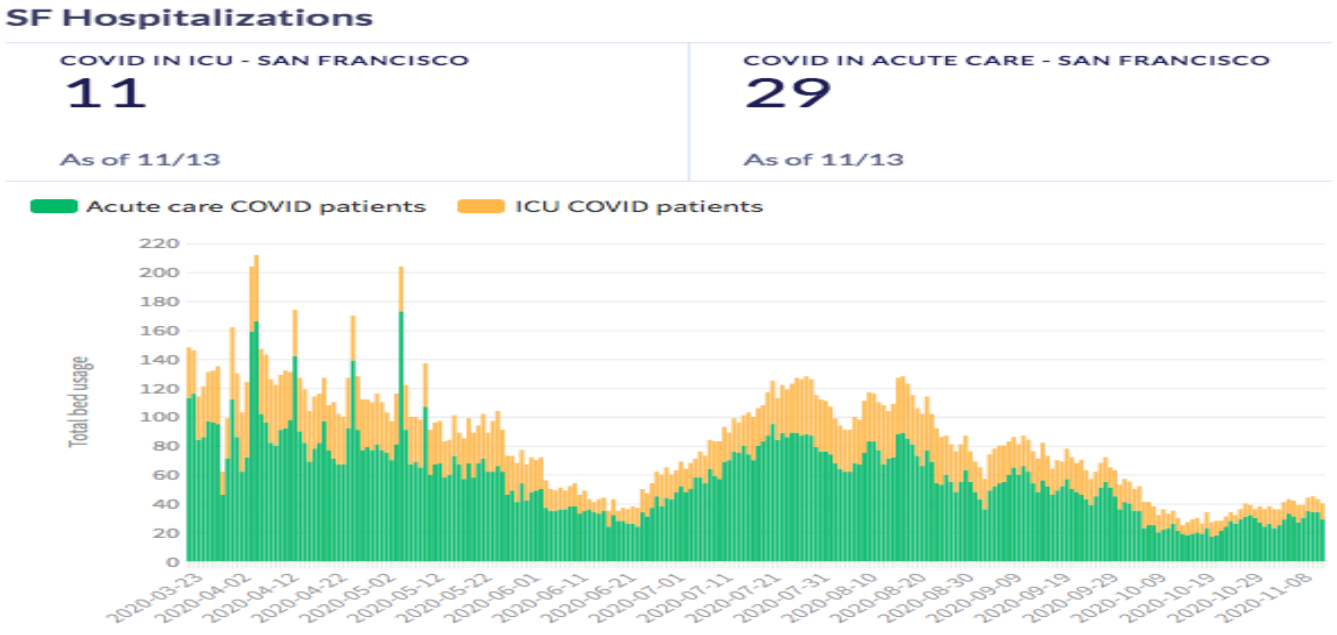
There are several possible reasons why individuals with developmental disorders and intellectual disabilities might be more likely to die from Covid-19. They often have multiple chronic conditions, and another of the findings was that the odds of dying from Covid-19 rise as the number of comorbidities increase. Individuals with intellectual and developmental disabilities are also at greater risk of becoming infected with the virus that causes Covid-19, both because they are disproportionately represented as workers in essential

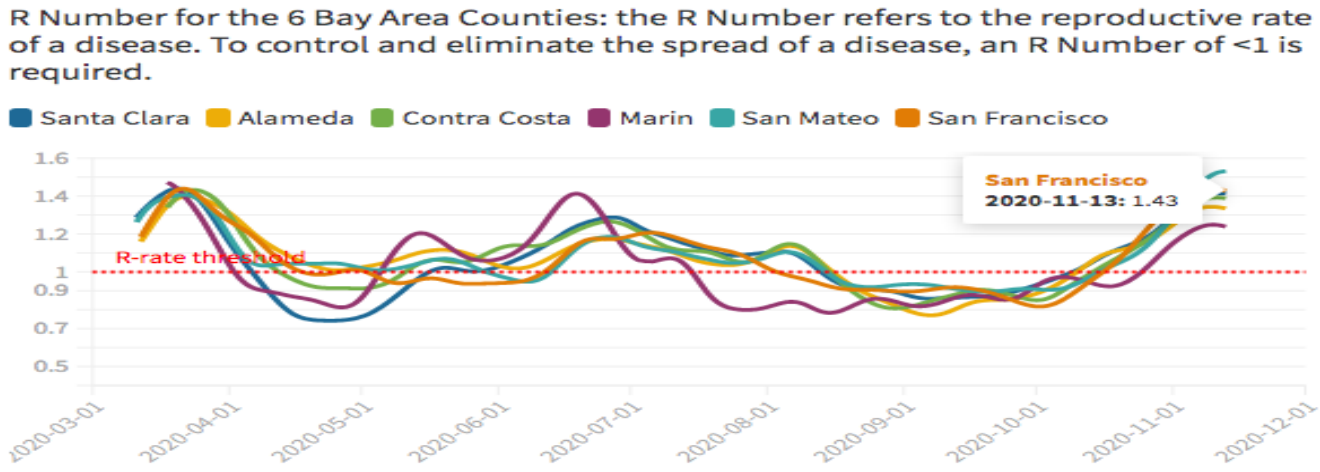
service, and because many live in group residential settings. Lung cancer, which ranked second in the all-age-groups list, ranked first in the under-70 list. Individuals age 70 and older accounted for just 4.8% of Covid-19 diagnoses, but accounted for 42.4% of all Covid-19 deaths.

SAN FRANCISCO

Total Cases: 13,665
Deaths: 156
Total Tested: 770,322







1) San Francisco Shuts Down All Indoor Dining After 250 Percent Increase in COVID-19 Cases

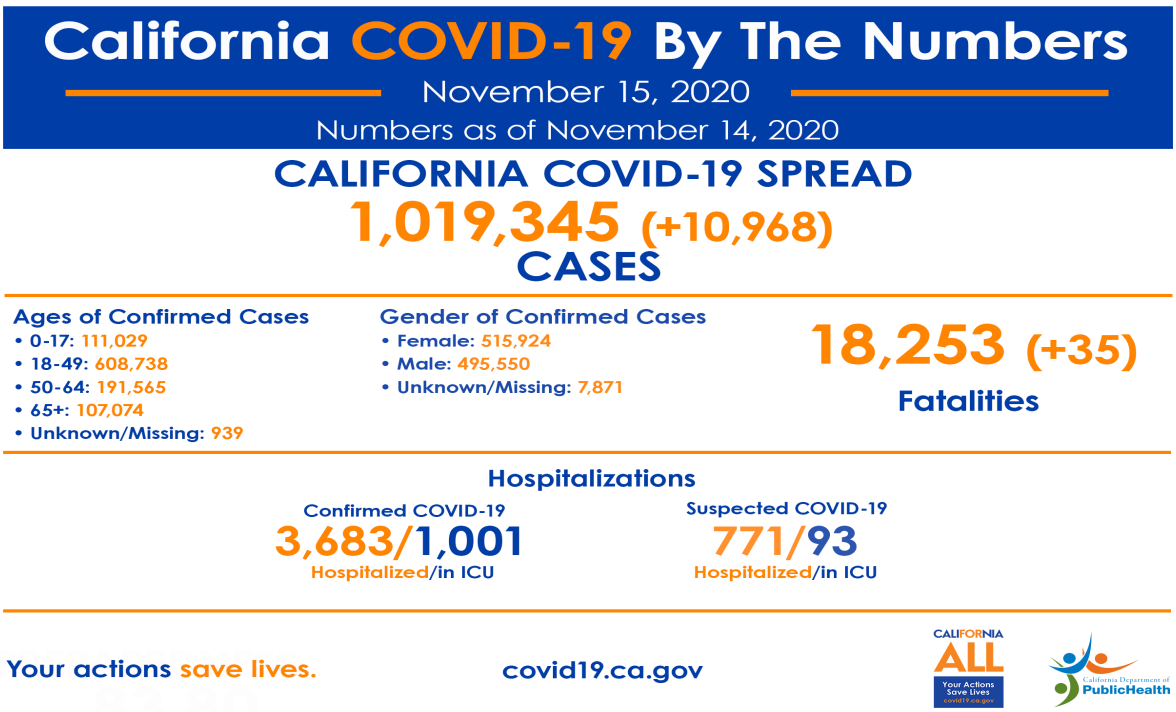
Six weeks after the city and county of San Francisco reopened restaurant dining rooms, cases of COVID-19 have skyrocketed by 250 percent, city officials say. That's why, as of 11:59 p.m. on Friday, November 13, 2020, restaurants will be required to shut their indoor dining operations down again, and to revert to an outdoor dining, takeout, and delivery model for an unknown period of time.

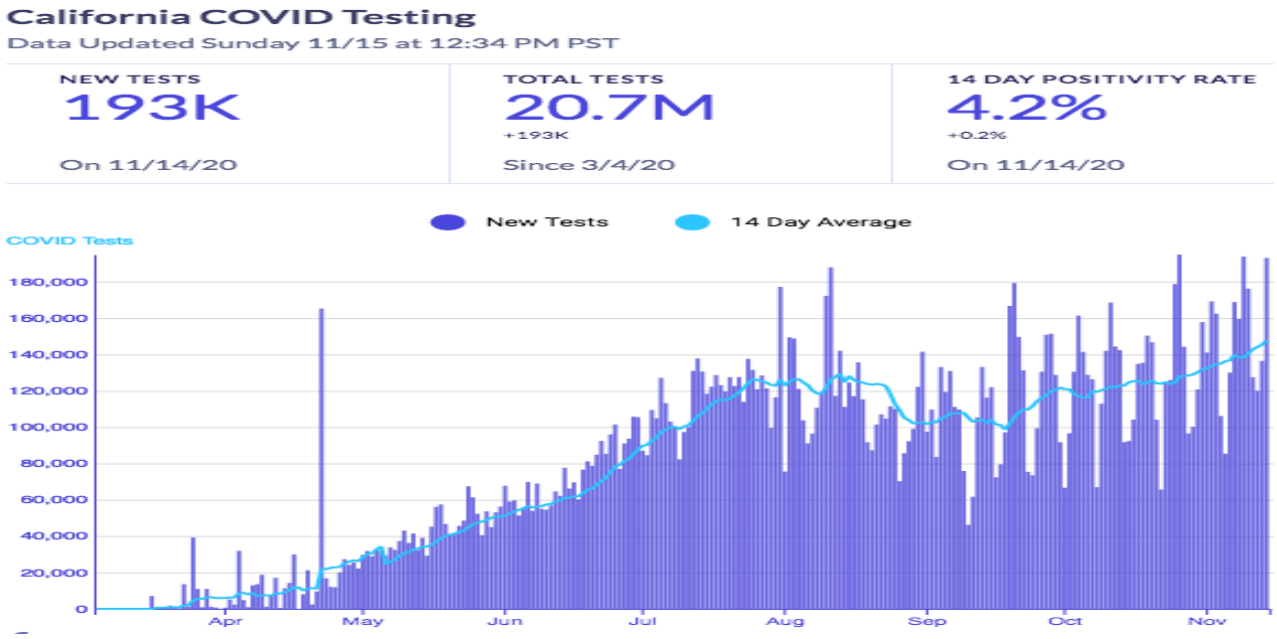
As of November 10, San Francisco County remains at the yellow stage, but according an announcement made by Mayor London Breed on Tuesday, since October 2, San Francisco has experienced a 250 percent increase in COVID-19 cases, so "the rolling back of certain businesses and activities is necessary to mitigate the aggressive growth of the virus that would cost lives and threaten the capacity of our health care system." And though the increase in COVID-19 cases was likely due to private household gatherings, San Francisco officials say that to stem the COVID-19 tide, the city must "minimize the activities that are known to be of higher risk for increasing the spread of the virus – particularly indoor activities, high traffic activities, and those that allow for mask removal or increase the production of aerosols, such as physical activity and eating."

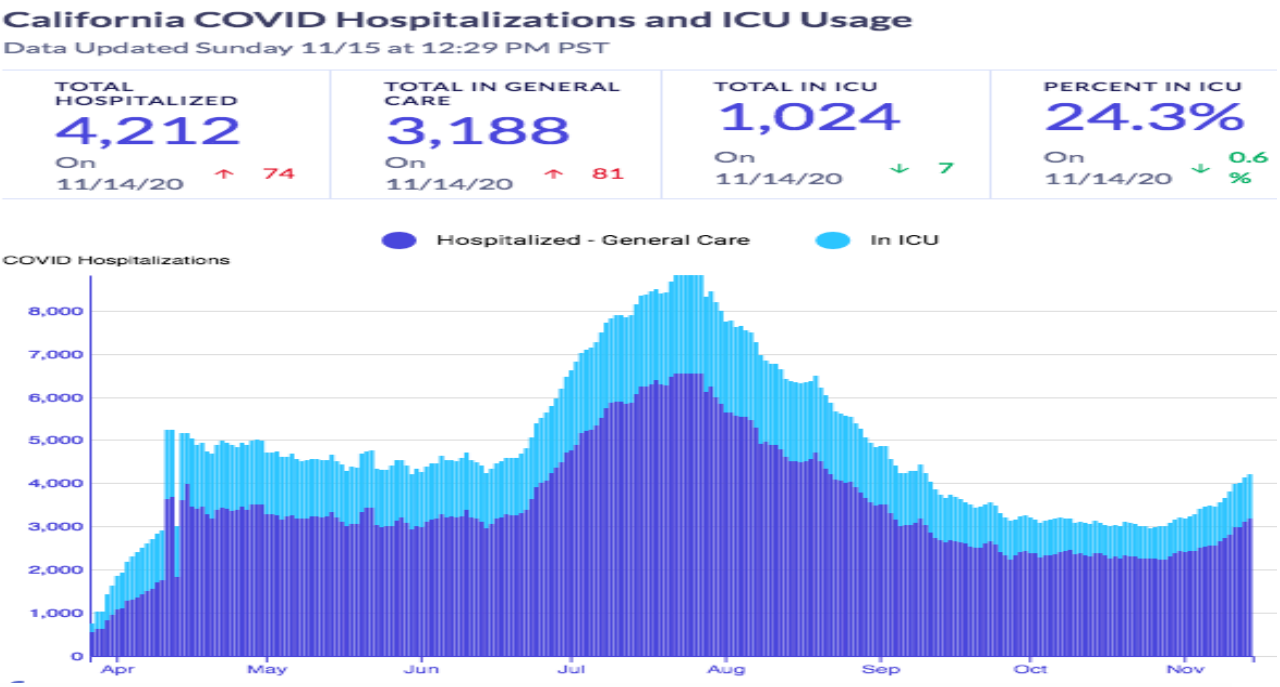
As part of today's announcement, gyms and fitness centers will also be required to reduce capacity, as must movie theaters. In addition, high schools in San Francisco that have yet to reopen must "remain closed for any indoor instruction," the city says.

2) Bay Area recommends 2-week quarantine for holiday travelers
If you plan to travel over the holidays this year amid the coronavirus pandemic, health officers from 10 counties and one city in the greater Bay Area are recommending that you self-quarantine for 14 days when you return home. Marin, Alameda, Contra Costa, Monterey, Napa, San Mateo, San Francisco, Santa Clara, Santa Cruz and Sonoma, as well as the city of Berkeley, issued a joint recommendation Monday advising against nonessential travel, including holiday trips that could increase chances of infection and potentially spread the virus. For those who do opt to travel, health officials are asking them stay home for two weeks after their return if they engaged in activities that put them at risk for the virus, including spending time with people outside their household and traveling on planes, buses, trains, public transportation or other shared vehicles. The recommendation also suggests that people get tested before and after traveling. This news comes as COVID-19 cases are exploding across the country and the Bay Area's nine counties have seen an increase of 25% or more this week compared with last

CALIFORNIA







1) California becomes the second US state to top 1 million Covid-19 cases
California just became the second state to surpass 1 million Covid-19 infections since the start of the pandemic -- closely following Texas, which hit the grim milestone earlier this week. More than 5,000 new cases and 18 new deaths have been reported so far on Thursday, for a total of 1,000,631

confirmed cases and 18,126 deaths statewide, according to Johns Hopkins University data.

And health officials report that, like most other states in the country, California's Covid-19 numbers are all trending in the wrong direction.
At a November 9 news conference, Gov. Gavin Newsom announced the state recorded more than 7,200 new cases in a day and had a 7-day average of about 5,889 infections. Hospitalizations in the state have also began creeping upward. The number of patients hospitalized with Covid-19 had increased by 31.6% over a 14-day period. ICU hospitalizations have also increased climbing by nearly 30% in two weeks. In his news conference, the governor said Covid-19 hospitalizations on Monday made up about 4% of the state's entire health care system capacity, and ICU admissions took up about 11% of the total number of ICU beds available.

Officials also announced this week three more counties are moving back to the state's most restrictive tier -- indicating widespread Covid-19 risk -- Sacramento, San Diego and Stanislaus counties. Eight other counties also moved back a tier, indicating substantial or moderate risk in their area. With the state's climbing numbers, no counties are moving forward to less restrictive tiers this week.

2) West Coast states recommend 2-week travel quarantine

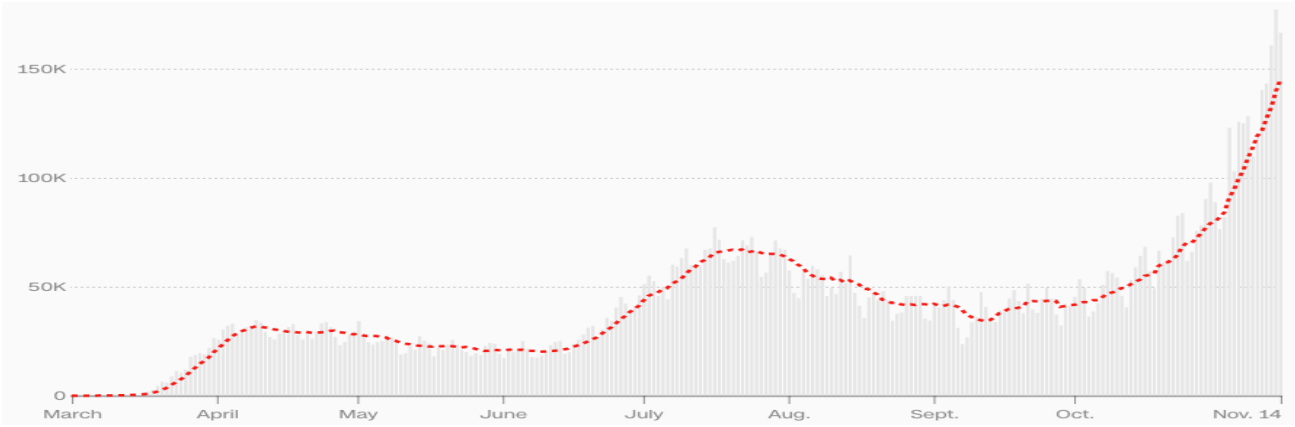
Three West Coast states issued a travel advisory Friday urging against nonessential travel and recommending quarantines for those who do travel between states and internationally. California Gov. Gavin Newsom, Oregon Gov. Kate Brown and Washington Gov. Jay Inslee recommend travelers to their states and residents who leave and then return home self-quarantine for 14 days. This recommendation does not apply to individuals who cross state borders for essential travel, which includes travel for work, study, critical infrastructure support, economic services, health, immediate medical care and safety.

UNITED STATES

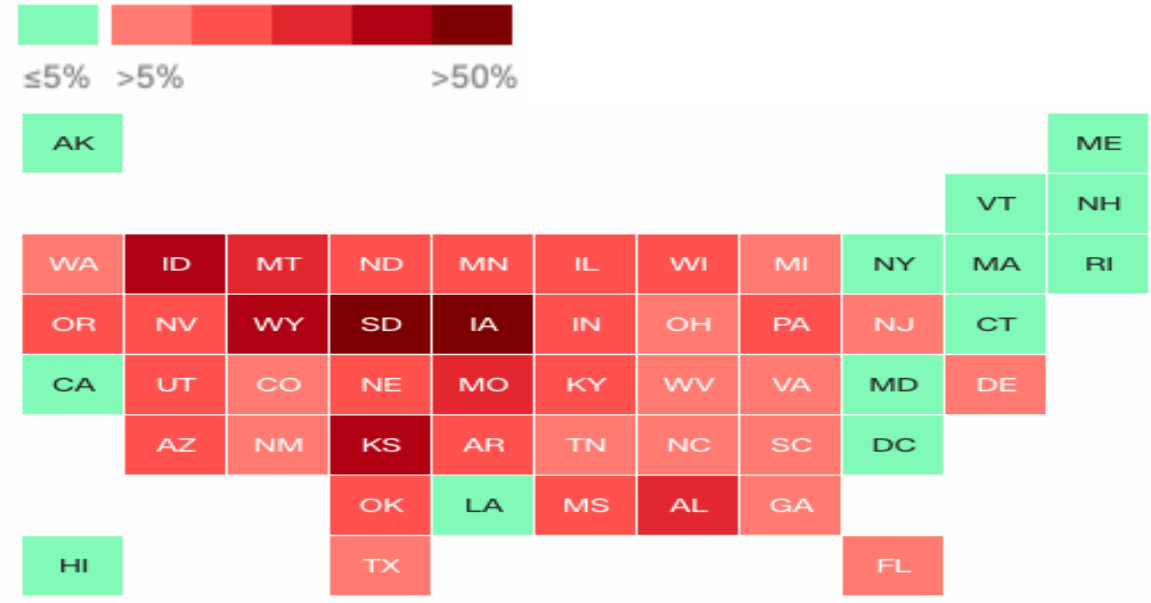
Total Cases: 10.997,987
Deaths: 245,979

Thursday brought the United States' highest one-day infection total (above 153,000) and seven-day average for new daily infections (more than 131,000) on record, according to Johns Hopkins University data.

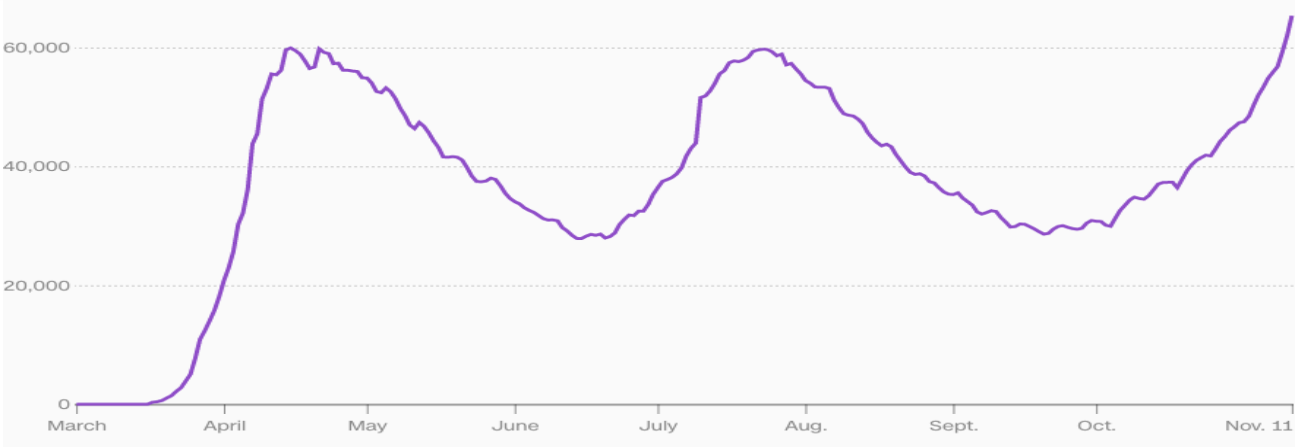
7-day average:



Each state's positivity rates are "the most sensitive indicator" of how the coronavirus situation is unfolding at any time and place:



The number of Covid-19 patients in US hospitals surpassed 65,300 and hit a pandemic high on Wednesday, according to data from the COVID Tracking Project



1) U.S. Reports 1 Million New Virus Cases In First 10 Days Of November Alone

The U.S. has surpassed 1 million new confirmed coronavirus cases in just the first 10 days of November, with more than 100,000 infections each day becoming the norm in a surge that shows no signs of slowing. The alarming wave of cases across the U.S. looks bigger and is more widespread than the surges that happened in the spring, mainly in the Northeast, and then in the summer, primarily in the Sun Belt. Deaths — a lagging indicator, since it takes time for people to get sick and die — are climbing again, reaching an average of more than 930 a day. Hospitals are getting filled. And unlike the earlier outbreaks, this one is not confined to a region or two. Cases are on the rise in 49 states.

But there is also some good news. Doctors now better know how to treat severe cases, meaning higher percentages of the COVID-19 patients who go into intensive care units are coming out alive. Also, testing is more widely available. In addition, a vaccine appears to be on the horizon.

2) U.S. Hits All-Time High For COVID-19 Hospitalizations

The number of hospitalizations linked to COVID-19 has hit an all-time high after medical facilities across the U.S. reported that 61,964 patients were hospitalized on Tuesday with serious cases of the virus, the latest sign that the worst of the pandemic may lie ahead. The figure was tallied by the COVID Tracking Project. Hospitals have once again issued dire warnings about

running out of bed space amid an influx of patients with severe symptoms. Some states have already said the most recent surge is the worst since the pandemic began.

The previous hospitalization high was in the early days of the pandemic, on April 15, as the nation's top health officials were still working on messaging to get the virus under control. A series of state lockdown measures helped bring that April high of 59,940 hospitalizations down by more than half in June. The numbers began to rise again in mid-July after lockdown measures were lifted, hitting an almost identical high of 59,718 on July 23 before hospitalizations fell once more. Tuesday's figures exceed both those tallies. The seven-day average of new cases now exceeds 111,000, and 10 million Americans have tested positive for the virus since the pandemic began. The U.S. reported 1 million new cases in November alone.

We're already seeing our hospitals at breaking point in some parts of the country. And that means it doesn't just affect patients with coronavirus. It also means that elective surgeries are being put off for things like hip replacements, for cancer surgery or heart surgery in some cases.

3) CDC guidelines on celebrating safer holidays

Unfortunately, the COVID-19 epidemic is worsening, and small household gatherings are an important contributor to the rise in COVID-19 cases. CDC offers the following considerations to slow the spread of COVID-19 during small gatherings. Celebrating virtually or with members of your own household (who are consistently taking measures to reduce the spread of COVID-19) poses the lowest risk for spread.

There are several factors that contribute to the risk of getting and spreading COVID-19 at small in-person gatherings. In combination, these factors will create various amounts of risk:

- Community levels of COVID-19 – High or increasing levels of COVID-19 cases in the gathering location, as well as in the areas where attendees are coming from, increase the risk of infection and spread among attendees. Family and friends should consider the number of COVID-19 cases in their community and in the community where they plan to celebrate when deciding whether to host or attend a gathering. Information on the number of cases in an area can often be found on the local health department website.

- Exposure during travel – Airports, bus stations, train stations, public transport, gas stations, and rest stops are all places travelers can be exposed to the virus in the air and on surfaces.
- Location of the gathering – Indoor gatherings, especially those with poor ventilation (for example, small enclosed spaces with no outside air), pose more risk than outdoor gatherings.
- Duration of the gathering – Gatherings that last longer pose more risk than shorter gatherings. Being within 6 feet of someone who has COVID-19 for a cumulative total of 15 minutes or more greatly increases the risk of becoming sick and requires a 14-day quarantine.
- Number and crowding of people at the gathering – Gatherings with more people pose more risk than gatherings with fewer people. CDC does not have a limit or recommend a specific number of attendees for gatherings. The size of a holiday gathering should be determined based on the ability of attendees from different households to stay 6 feet (2 arm lengths) apart, wear masks, wash hands, and follow state, local, territorial, or tribal health and safety laws, rules, and regulations.
- Behaviors of attendees *prior to the gathering* – Individuals who did not consistently adhere to social distancing (staying at least 6 feet apart), mask wearing, handwashing, and other prevention behaviors pose more risk than those who consistently practiced these safety measures.
- Behaviors of attendees *during the gathering* – Gatherings with more safety measures in place, such as mask wearing, social distancing, and handwashing, pose less risk than gatherings where fewer or no preventive measures are being implemented. Use of alcohol or drugs may alter judgment and make it more difficult to practice COVID-19 safety measures.

Considerations for Hosting or Attending a Gathering:
If you will be hosting a gathering during the holiday season that brings people who live in different households together, follow CDC tips for hosting gatherings. If you will be attending a gathering that someone else is hosting, follow CDC Considerations for Events and Gatherings. Below are some general considerations for hosting a gathering that brings together people from different households. Guests should be aware of these considerations and ask their host what mitigation measures will be in place during the gathering. Hosts should consider the following:

- Check the COVID-19 infection rates in areas where attendees live on state, local, territorial, or tribal health department websites. Based on the current status of the pandemic, consider if it is safe to hold or attend the gathering on the proposed date.
- Limit the number of attendees as much as possible to allow people from different households to remain at least 6 feet apart at all times. Guests should avoid direct contact, including handshakes and hugs, with others not from their household.
- Host outdoor rather than indoor gatherings as much as possible. Even outdoors, require guests to wear masks when not eating or drinking.
- Avoid holding gatherings in crowded, poorly ventilated spaces with persons who are not in your household.
- Increase ventilation by opening windows and doors to the extent that is safe and feasible based on the weather, or by placing central air and heating on continuous circulation.
    - For additional information on increasing ventilation, visit CDC's information on Cleaning and Disinfecting Your Home.
    - Winter weather can be cold, wet, and unpredictable. Inclement weather makes it difficult to increase ventilation by opening windows or to hold an event outdoors.
- If setting up outdoor seating under a pop-up open air tent, ensure guests are still seated with physical distancing in mind. Enclosed 4-wall tents will have less air circulation than open air tents. If outdoor temperature or weather forces you to put up the tent sidewalls, consider leaving one or more sides open or rolling up the bottom 12" of each sidewall to enhance ventilation while still providing a wind break.
- Require guests to wear masks. At gatherings that include persons of different households, everyone should always wear a mask that covers both the mouth and nose, except when eating or drinking. It is also important to stay at least 6 feet away from people who are not in your household at all times.
- Encourage guests to avoid singing or shouting, especially indoors. Keep music levels down so people don't have to shout or speak loudly to be heard.
- Encourage attendees to wash their hands often with soap and water for at least 20 seconds. If soap and water are not readily available, use hand sanitizer that contains at least 60% alcohol.

- Provide guests information about any COVID-19 safety guidelines and steps that will be in place at the gathering to prevent the spread of the virus.
- Provide and/or encourage attendees to bring supplies to help everyone to stay healthy. These include extra masks (do not share or swap with others), hand sanitizer that contains at least 60% alcohol, and tissues. Stock bathrooms with enough hand soap and single use towels.
- Limit contact with commonly touched surfaces or shared items such as serving utensils.
- Clean and disinfect commonly touched surfaces and any shared items between use when feasible. Use EPA-approved disinfectantsexternal icon.
- Use touchless garbage cans if available. Use gloves when removing garbage bags or handling and disposing of trash. Wash hands after removing gloves.
- Plan ahead and ask guests to avoid contact with people outside of their households for 14 days before the gathering.
- Treat pets as you would other human family members – do not let pets interact with people outside the household.

Food and drinks at small holiday gatherings:
Currently, there is no evidence to suggest that handling food or eating is associated with directly spreading COVID-19. It is possible that a person can get COVID-19 by touching a surface or object, including food, food packaging, or utensils that have the virus on it and then touching their own mouth, nose, or possibly their eyes. However, this is not thought to be the main way that the virus is spread. Remember, it is always important to follow food safety practices to reduce the risk of illness from common foodborne germs.

- Encourage guests to bring food and drinks for themselves and for members of their own household only; avoid potluck-style gatherings.
- Wear a mask while preparing food for or serving food to others who don't live in your household.
- All attendees should have a plan for where to store their mask while eating and drinking. Keep it in a dry, breathable bag (like a paper or mesh fabric bag) to keep it clean between uses.
- Limit people going in and out of the areas where food is being prepared or handled, such as in the kitchen or around the grill, if possible.
- Have one person who is wearing a mask serve all the food so that multiple people are not handling the serving utensils.

- Use single-use options or identify one person to serve sharable items, like salad dressings, food containers, plates and utensils, and condiments.
- Make sure everyone washes their hands with soap and water for 20 seconds before and after preparing, serving, and eating food and after taking trash out. Use hand sanitizer that contains at least 60% alcohol if soap and water are not available.
- Designate a space for guests to wash hands after handling or eating food.
- Limit crowding in areas where food is served by having one person dispense food individually to plates, always keeping a minimum of a 6-foot distance from the person whom they are serving. Avoid crowded buffet and drink stations. Change and launder linen items (e.g., seating covers, tablecloths, linen napkins) immediately following the event.
- Offer no-touch trash cans for guests to easily throw away food items.
- Wash dishes in the dishwasher or with hot soapy water immediately following the gathering.

For additional recommendations, please visit the CDC site: https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/holidays.html

RECOMMENDATIONS

We have no new recommendations at this time.