San Francisco Village

COVID – 19
Research and Advisory Team:
Report and Recommendations #20
July 26, 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.

Note: the sections of this reported are ordered as follows: Recent Findings, San Francisco, Bay Area, California, US, Global, Recommendations

RECENT FINDINGS

1) Symptom Clusters: The COVID Symptom Study reveals six distinct 'types' of COVID-19

Analysis of data from the COVID Symptom Study, led by researchers from King's College London and the health technology company ZOE, reveals that there are six distinct 'types' of COVID-19, each distinguished by a particular cluster of symptoms. Moreover, the team found that these types differed in the severity of the disease and the need for respiratory support during hospitalization. The findings have major implications for clinical management of COVID-19, and could help doctors predict who is most at risk and likely to need hospital care in a second wave of coronavirus infections.

Although continuous cough, fever and loss of smell (anosmia) are usually highlighted as the three key symptoms of COVID-19, data gathered shows that people can experience a wide range of different symptoms including headaches, muscle pains, fatigue, diarrhea, confusion, loss of appetite, shortness of breath and more. The progression and outcomes also vary significantly between people, ranging from mild flu-like symptoms or a simple rash to severe or fatal disease.

The six clusters are as follows:
1 ('flu-like' with no fever): Headache, loss of smell, muscle pains, cough, sore throat, chest pain, no fever.
2 ('flu-like' with fever): Headache, loss of smell, cough, sore throat, hoarseness, fever, loss of appetite.
3 (gastrointestinal): Headache, loss of smell, loss of appetite, diarrhea, sore throat, chest pain, no cough.
4 (severe level one, fatigue): Headache, loss of smell, cough, fever, hoarseness, chest pain, fatigue.

5 (severe level two, confusion): Headache, loss of smell, loss of appetite, cough, fever, hoarseness, sore throat, chest pain, fatigue, confusion, muscle pain.
6 (severe level three, abdominal and respiratory): Headache, loss of smell, loss of appetite, cough, fever, hoarseness, sore throat, chest pain, fatigue, confusion, muscle pain, shortness of breath, diarrhea, abdominal pain.

Next, the team investigated whether people experiencing particular symptom clusters were more likely to require breathing support in the form of ventilation or additional oxygen. They discovered that only 1.5% of people with cluster 1, 4.4% of people with cluster 2 and 3.3% of people with cluster 3 COVID-19 required breathing support. These figures were 8.6%, 9.9% and 19.8% for clusters 4,5 and 6 respectively. Furthermore, nearly half of the patients in cluster 6 ended up in hospital, compared with just 16% of those in cluster 1.

Broadly, people with cluster 4,5 or 6 COVID-19 symptoms tended to be older and frailer, and were more likely to be overweight and have pre-existing conditions such as diabetes or lung disease than those with type 1,2 or 3.

2) Actual Covid-19 case count could be 6 to 24 times higher than official estimates, CDC study shows

The true number of coronavirus cases in the U.S. could be anywhere from six to 24 times higher than the confirmed number of cases, depending on location, according to a large federal study that relied on data from 10 U.S. cities and states. The study, published Tuesday in JAMA Internal Medicine, relied on serological tests — blood screens that search for antibodies to the virus and that determine whether someone was previously infected. They are different from diagnostic tests, which only detect people who currently have the virus, called SARS-CoV-2.

The data underscore two other points: that testing in the U.S. is not capturing the full scope of the outbreak, and that even hard-hit communities are not close to reaching a herd immunity threshold. The study rebukes the idea that current population-wide levels of acquired immunity (so-called herd immunity) will pose any substantial

impediment to the propagation of SARS-CoV-2 in the U.S. Experts estimate that 60% to 70% of people in a given area would need to be protected from the virus — either through recovering from an infection or vaccination — to reach herd immunity.
Experts note that the inability of diagnostic testing to keep up with cases is not just limited to problems with the tests, which have included a botched rollout, overwhelmed labs, and supply shortages. It's also that some 20% to 40% of Covid-19 infections are asymptomatic. Those people can still spread the virus, as can people who eventually develop symptoms but don't feel sick yet — which has complicated efforts to rein in the spread.

3) Even once a vaccine gets approved, big hurdles remain for distribution
Once a vaccine is approved, every American won't be able to get it at once. This sets up the unenviable task of deciding, amid a deadly pandemic, who is most vulnerable to the disease and who is most essential to inoculate quickly. Experts will have to consider vulnerable populations like those in assisted-living facilities or prisons, people working in close quarters like meat packing plants and how to assess Americans with preexisting conditions.

The National Academy of Medicine hopes to have its recommendations publicly available in August or September. A second panel of vaccine advisers for the Centers for Disease Control and Prevention -- the Advisory Committee on Immunization Practices (ACIP) -- is also coming up with a set of guidelines. It's still unclear whether the administration will select one set of recommendations over the other or take both into account when making its final decisions. Last month, the ACIP convened to discuss who counts as an essential worker, where teachers should fall in the priority list, vaccinations for pregnant women and whether race and ethnicity should factor into priority considerations.

Once a vaccine is available, it could still take six months to a year to vaccinate enough of the population to slow the spread. Whichever vaccine becomes available will likely require an initial dose followed by a second booster shot, vaccine experts and suppliers said. Providing a vaccine is one thing. Convincing Americans to take get it is another. Some Americans are skeptical of all sorts of vaccines. Others are wary of the safety of the coronavirus vaccine in particular since it is being

produced on an accelerated timeline. To others, the vaccine effort is colored by politics.

4) Evidence That a Level of Pre-Existing COVID-19 / SARS-CoV-2 Immunity Is Present in the General Population

The T cells, along with antibodies, are an integral part of the human immune response against viral infections due to their ability to directly target and kill infected cells. A Singapore study has uncovered the presence of virus-specific T cell immunity in people who recovered from COVID-19 and SARS, as well as some healthy study subjects who had never been infected by either virus.

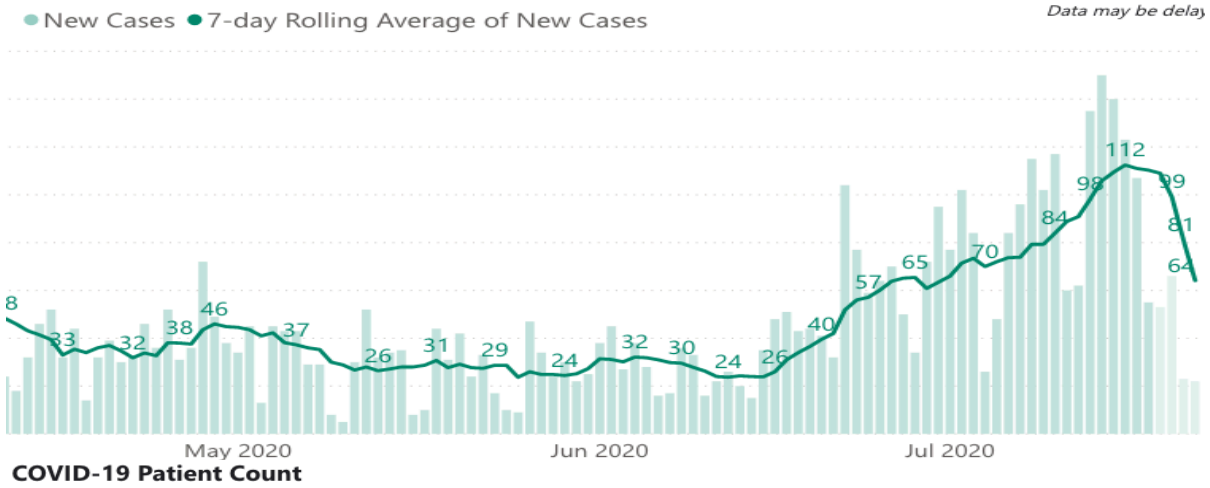
Singapore (NUS) Yong Loo Lin School of Medicine, Singapore General Hospital (SGH) and National Centre for Infectious Diseases (NCID) was published in *Nature*. The findings suggest infection and exposure to coronaviruses induces long-lasting memory T cells, which could help in the management of the current pandemic and in vaccine development against COVID-19.

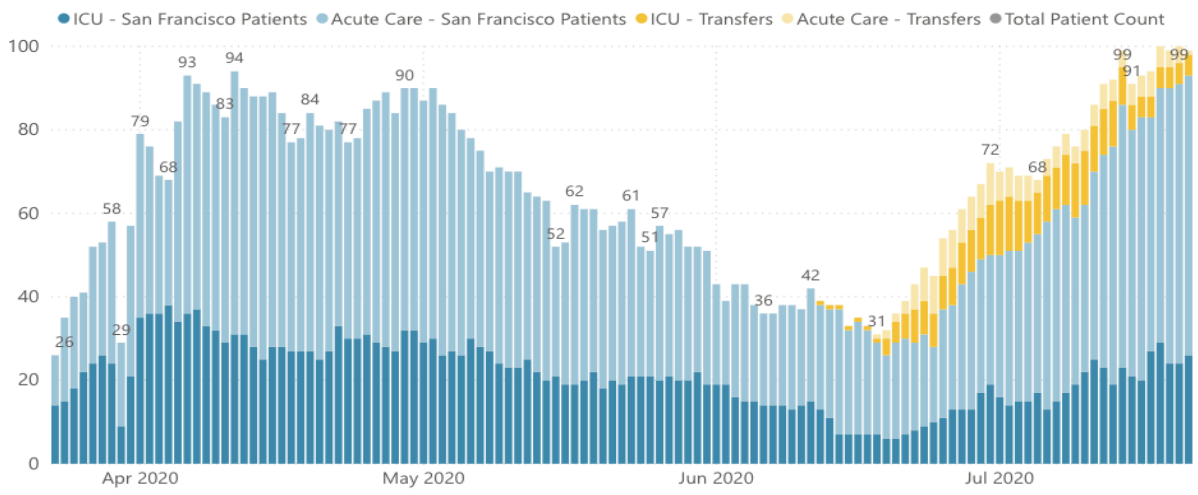
The team tested subjects who recovered from COVID-19 and found the presence of SARS-CoV-2-specific T cells in all of them, which suggests that T cells play an important role in this infection. Importantly, the team showed that patients who recovered from SARS 17 years ago after the 2003 outbreak, still possess virus-specific memory T cells and displayed cross-immunity to SARS-CoV-2.

The team will be conducting a larger study of exposed, uninfected subjects to examine whether T cells can protect against COVID-19 infection or alter the course of infection. They will also be exploring the potential therapeutic use of SARS-CoV-2-specific T cells.

SAN FRANCISCO
Total tests: 228,611
Confirmed cases: 5,787 — up by 108 (1.9%) since Friday
Cases per 100,000: 9.3 (81 new cases a day) (goal is less than 1.8 per 100,000)
Hospitalized: 122 Covid patients, with 34 in Covid ICU beds (an increase of 4 from 1 week ago)
Deaths: 56 (up from 50 deaths 3 weeks ago)

San Francisco recorded 115 new confirmed cases Friday, a 2.1-percent uptick, and 8 more people are hospitalized with confirmed or suspected cases than were in hospitals on Sunday — a total of 114, according to data submitted to the state. 477 new cases have been added in the city over the course of this week, and deaths have ticked up slightly as well. After no new deaths for three weeks beginning in mid-June, there have been six new deaths in SF since the first week of July.





1) SF expands face covering rules to address Covid-19 surge
These new rules take effect at 11:59 pm on July 23, 2020. The health order does not have a set expiration date.

a) You must wear face coverings in more situations:
Within 6 feet of people you don't live with, even outside
The new rules include wearing a face covering in cases like:

- Passing people on the sidewalk
- Passing people on a hiking trail or outdoor area

When indoors, if others might use the space later, even if you're alone
The new rules include wearing a face covering:

- In a common area (elevator, laundry room, break rooms, lobbies, hallways, bathrooms)
- Working in a cubicle or conference room
- Working at a desk you share with another person on different days
- Working around shared equipment

b) Older children must wear face coverings if they can

- Children under 2 should still not wear a face covering. They might suffocate.
- Children 2 to 9 years old should try to wear a face covering. You are still allowed to get essential services if your child in this age group cannot wear a face covering. Encourage them to cover their face, so you can protect others in our community.
- Children over age 9 must wear a face covering, like adults do.

c) If you can't wear a medical or fabric mask, try other options:
You are still required to wear something over your nose and mouth to block droplets. You can use a:

- Bandana
- Gaiter
- Face shield (including with drapes on the bottom edge)

If you will create a safety hazard at work (under established health and safety guidelines) by wearing anything on your face, you do not have to wear it.

If you have documentation showing a medical professional has told you not to wear a face covering of any kind, you do not have to wear one. The document does not need to explain your medical condition.

d) Face coverings are not required when:

- At home (if you are not around someone at higher risk from COVID-19)
- Working alone in your own private office (as long as you can put on a face covering quickly if someone enters)
- In your car alone or if you're only with people you live with
- Sitting or standing outside alone or with people you live with (such as picnicking outside) and you are more than 6 feet from others
- When eating or drinking alone or with people you live with, and nobody else is within 6 feet
- Exercising outdoors alone or with people who live with you (walking, hiking, bicycling, or running) and no one else is within 6 feet

You should still have a face covering with you. It should be visible and readily accessible when you're exercising, like hanging around your neck. There might be times where you cannot avoid being around other people.

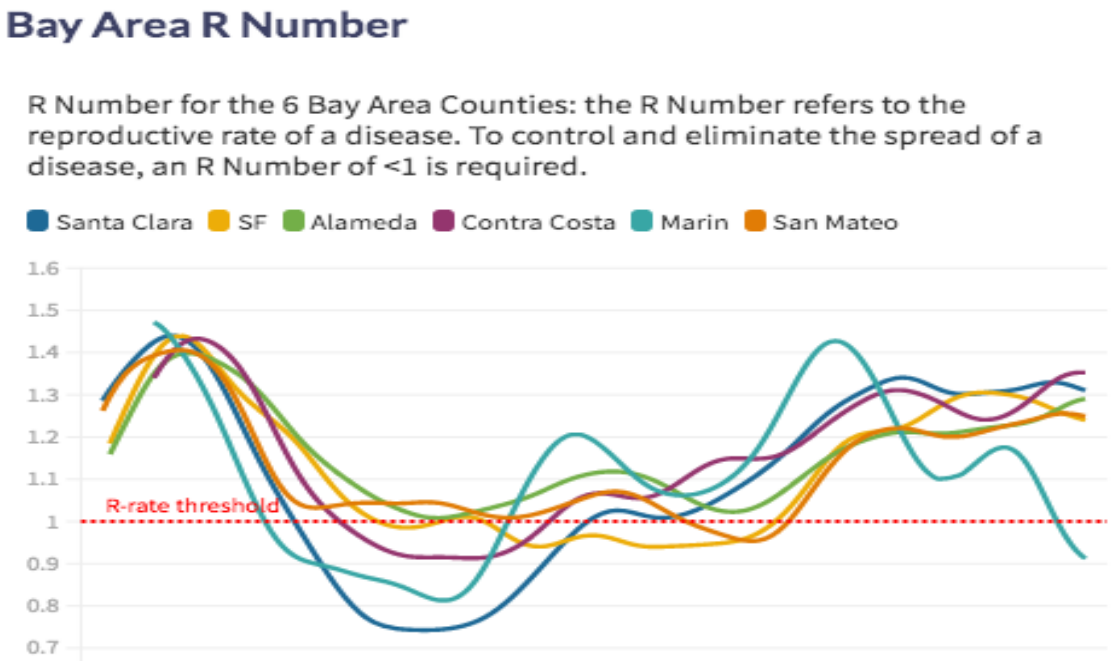
You should put on your face covering if you see someone within 30 feet of you (about the length of a Muni bus). That way, both of you will have enough time to put on your face coverings if you get close to each other.

2) Mayor Breed Announces Increase In San Francisco's COVID-19 Testing Capacity

Mayor London Breed announced Wednesday that the city will increase its COVID-19 testing capacity by adding appointments at existing sites and adding new mobile pop-up testing sites. Breed said the city will increase the Embarcadero testing site's daily capacity by 400 appointments per day. The city will also deploy two pop-up testing sites that will rotate to areas like Bayview-Hunters Point and the Excelsior District that are facing particularly high rates of infection. A third, permanent testing site is expected to launch in August in the southeast part of the city, Breed said. City officials are still taking community input about the location of the testing site, which will launch with the capacity for up to 500 tests per day. "This new capacity, along with the requirement for private partners to do their part, will help us make

testing more easily available, especially for symptomatic or high-risk individuals," Breed said.

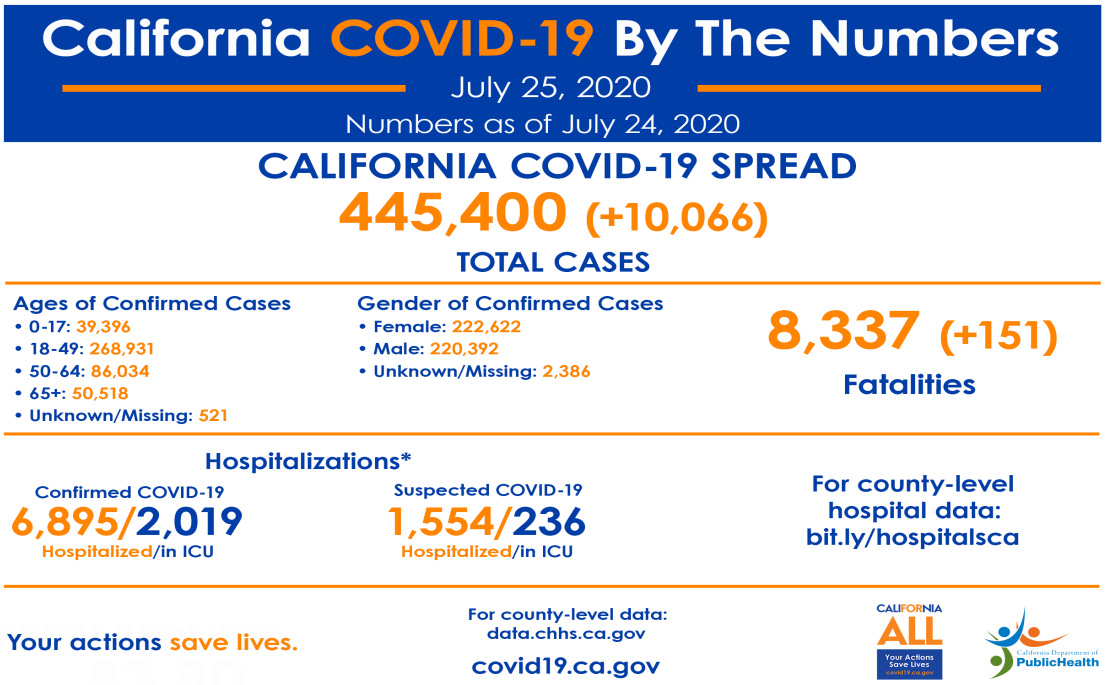
BAY AREA
Bay Area confirmed cases: 47,685 — up from 47,077 (1.4%) as of 7/25
Bay Area currently hospitalized: 943 — down by 75 (-7.4%) as of 7/24
Bay Area deaths: 760 — up by 2 as of 7/25

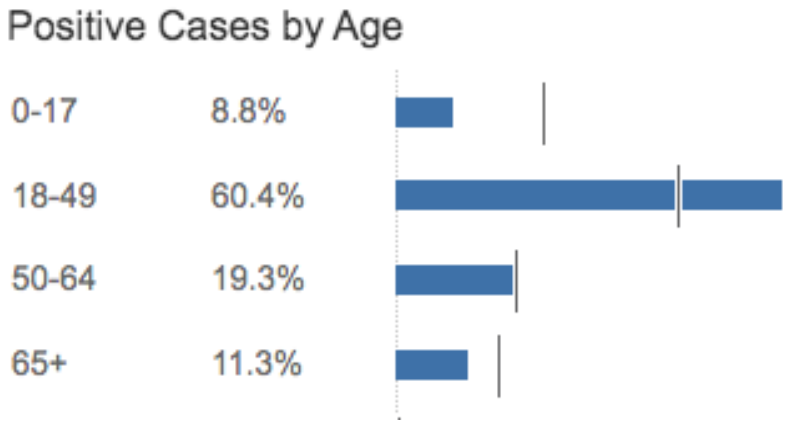


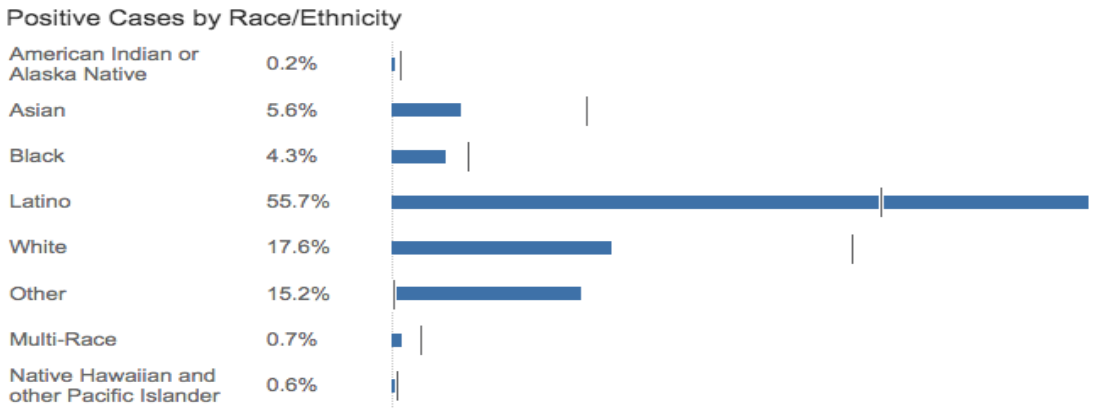
<u>1) Numbers worsen: This has officially been the worst week to date in this pandemic for COVID hospitalizations in the region, and likely the deadliest.</u>
The Bay Area has also added over 5,600 new cases since Sunday — with an average of around 900 new cases per day, that is more than double the rate seen in mid-June, which was around 390 cases per day. There have been 54 new deaths recorded since Sunday, making this the deadliest week of the pandemic in the nine-county region since early April, and potentially the deadliest once Solano county's numbers are in. And at least 170 new COVID patients have needed hospitalizations in the Bay Area, bringing us the highest total of concurrent hospitalizations since the pandemic began: 1,008. Without knowing how many patients were discharged, but knowing that 54 have died, that means at least 170 new severe cases have appeared in the Bay Area this week.

In terms of new hospitalizations, the Bay Area is now outpacing the state of California, with the state seeing an average daily rise in new patients this week of 0.2 percent, while the Bay Area has seen a 6.7-percent average uptick each day (today's is 7% and counting, with at least 66 new sick patients).

CALIFORNIA



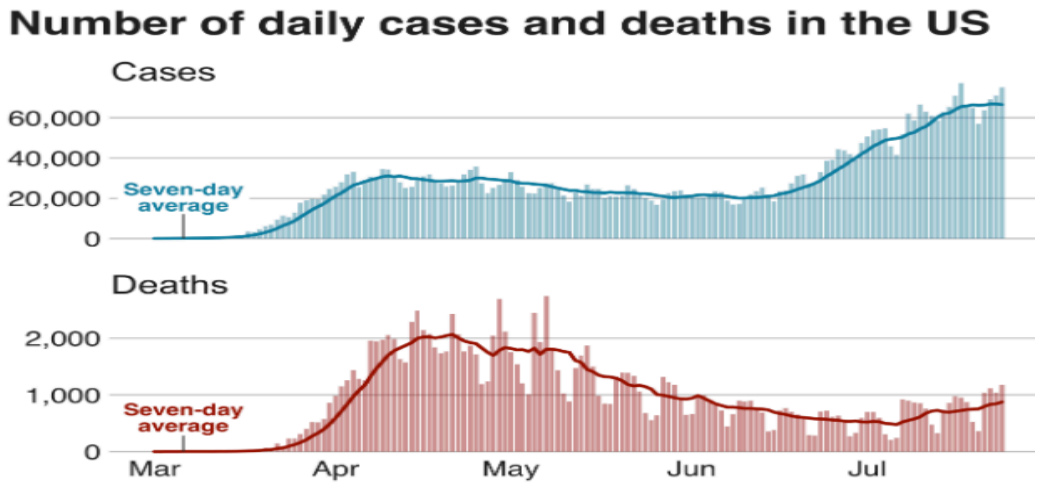




1) On 7/22, Counties around the state reported more deaths than any previous day of the COVID-19 pandemic: 155, pushing the cumulative death toll north of 8,000 and the seven-day average over 96 per day. That afternoon, the state surpassed New York for the country's highest case count, rising to 418,964 with another 12,122 positive tests Tuesday — the second-most in a single day. The majority of California's deaths and hospitalizations from the virus continue to occur in Central and Southern California. Los Angeles contributed 59 of the 155 statewide deaths Wednesday, while the 28 deaths in Riverside County were its most in a single day and the second-most in the state.

2) Gov. Gavin Newsom announced additional protections for essential workers in California.
Newsom says that the majority of farm workers, construction workers, cooks, laborers, food prep workers, truck drivers and cashiers in California are mostly members of the Latinx community. Many Asian and Black Californians are also disproportionately represented in those jobs. The state is introducing new and extending existing worker safeguards in the hopes of reducing coronavirus transmission among essential workers. First off, is making sure anyone who is sick or exposed has a place to isolate or self-quarantine.

UNITED STATES
Total Cases: 4,165,500
Total Deaths: 145,978



<u>1) The first Phase 3 coronavirus vaccine trial in the US is expected to begin next week.</u>
The vaccine is being developed by the Vaccine Research Center at the National Institutes of Health's National Institute of Allergy and Infectious Diseases, in partnership with the biotechnology company Moderna. The vaccine is expected to enter Phase 3 testing next week. This phase of the trial is expected to involve 30,000 volunteers and will test whether the vaccine protects people against the coronavirus.

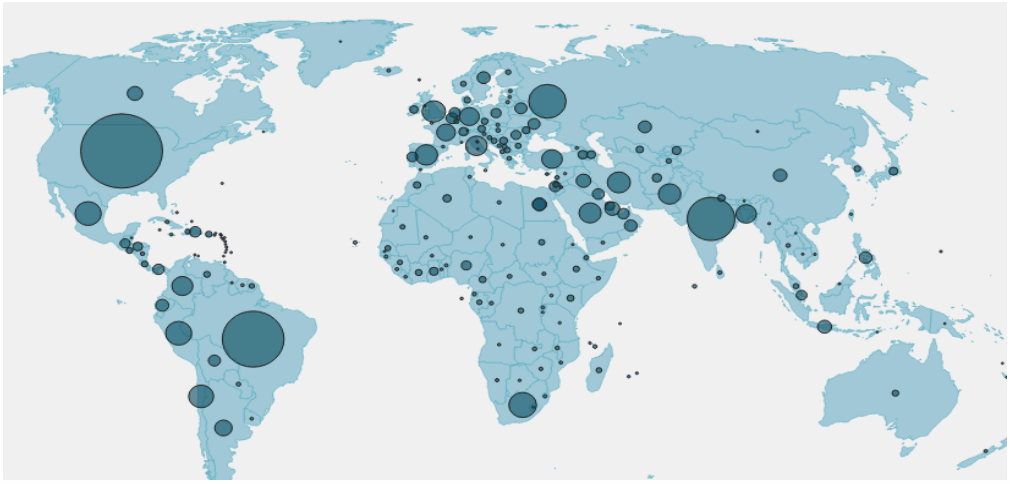
The vaccine uses messenger RNA (mRNA), which are cells used to build proteins -- in this case, the proteins that are needed to build the coronavirus' spike protein, which the virus uses to attach itself to and infect human cells. Once the immune system learns to recognize this target -- thanks to the vaccine -- it can mount a response faster than if it encountered the virus for the first time due to an infection.

<u>2) NIH to start 'flurry' of large studies of potential Covid-19 treatments</u>.
The clinical trials to test new approaches to treating Covid-19, according to the agency's director, hoping to expand what for now remains a limited arsenal of therapies to help people with the disease.

Among the trials: studies of antiviral monoclonal antibodies to treat Covid-19 in both hospitalized patients and patients who can be treated at home; studies of drugs to quell overreaction of the immune system that the agency has picked from dozens of approved treatments; and studies of blood thinners in very sick Covid-19 patients to prevent problems caused by blood clots. Those treatment studies will be on top of the work that the NIH is also doing on vaccines,

Currently, only two drugs have been shown to be effective in patients with the disease. In clinical trials, Gilead's remdesivir reduced the time it took patients to recover; dexamethasone, a steroid, prolonged survival in the sickest patients in a study conducted in the U.K.

GLOBAL:
Total Confirmed: 15,914,581
Deaths: 641,940
Top 3 countries: US (4,167,663), Brazil (2343,366), India (1,337,024)



RECOMMENDATIONS

No new recommendations at this time