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Attorneys for Plaintiffs

UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

DONALD MCDOUGALL, *et al*.,

Plaintiffs,

vs.

COUNTY OF VENTURA, CALIFORNIA, *et al*.,

Defendants.

Case No. 2:20-cv-02927-CBM (ASx)

PLAINTIFFS' REQUEST FOR JUDICIAL NOTICE IN SUPPORT OF THEIR OPPOSITION TO DEFENDANTS' MOTION TO DISMISS FIRST AMENDED COMPLAINT

Plaintiffs, by and through counsel, collectively request this Court take judicial notice, pursuant to Rule 201 of the Federal Rules of Evidence, of the following publicly available documents relevant to the adjudication of the Motion to Dismiss:

Exhibit 1: Los Angeles Times, *Tracking coronavirus in Ventura County*, June 6, 2020, https://www.latimes.com/projects/california-coronavirus-cases-tracking-outbreak/ventura-county/ (last visited June 6, 2020)

Exhibit 2: VC Reporter, *VC COVID-19 Updates*, June 1, 2020, https://vcreporter.com/2020/06/vc-covid-19-updates-ongoing-reporting/ (lasted visited June 6, 2020)

Exhibit 3: Los Angeles Times, *California braces for second wave of coronavirus even as first wave is far from over*, June 3, 2020, https://www.latimes.com/california/story/2020-06-03/california-braces-for-second-wave-first-wave-far-from-over (lasted visited June 6, 2020)

Exhibit 4: Johns Hopkins Coronavirus Resource Center, *America Is Reopening. But have we flattened the curve?* https://coronavirus.jhu.edu/data/new-cases-50-states/california (lasted visited June 6, 2020)

Exhibit 5: California Department of Public Health, *COVID-19 Updates*, https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/ncov2019.aspx (lasted visited June 6, 2020)

Exhibit 6: Centers for Disease Control & Prevention, *Forecasting*, June 2, 2020, https://www.cdc.gov/coronavirus/2019−ncov/covid−data/forecasting−us.html (lasted visited June 6, 2020)

Exhibit 7: Centers for Disease Control & Prevention, *Coronavirus Disease 2019*, June 5, 2020, https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html (lasted visited June 6, 2020)

Exhibit 8: Centers for Disease Control & Prevention, *Coronavirus Disease 2019*, June 4, 2020, https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html (lasted visited June 6, 2020)

/ / /

Exhibit 9: The Washington Post, *CDC director warns second wave of coronavirus is likely to be even more devastating*, April 21, 2020, https://www.washingtonpost.com/health/2020/04/21/coronavirus-secondwave-cdcdirector/ (lasted visited June 6, 2020)

Exhibit 10: UCLA Health, Internal Medicine, *This is What Everyone Can Do to Reduce SARSCoV-2 Spread During Civil Protesting*, https://www.uclahealth.org/internal-medicine/police-tactics-covid-public-health (lasted visited June 9, 2020)

Exhibit 11: California Healthline Daily Edition, *Newsom Warns California Residents To Brace For Surge Of Cases Following Protests*, https://californiahealthline.org/morning-briefing/ (lasted visited June 6, 2020)

Plaintiffs respectfully request judicial notice of the foregoing documents, copies of which are attached to this request, on the basis they are relevant to the issues before the Court and a proper subject for such notice because they are publicly available (i.e., generally known"), "can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned," and "not subject to reasonable dispute" regarding the information currently in the public realm about COVID-19. Fed. Rules Evid., rules 201(b)(1)-(2). As reflected in the illustrative examples listed in Defendants' own request for judicial notice of similar materials in support of their Motion to Dismiss, Doc. 42-1 (listing several cases), courts commonly take such judicial notice. *See also e.g., In re American Apparel, Inc. Shareholder Litigation*, 855 F.Supp.2d 1043, 1062 (C.D. Cal. 2012) ("Courts in the Ninth Circuit routinely take judicial notice of press releases."); *id.* (taking judicial notice of document that was "a government publication and matter of public record"); *Brodsky v. Yahoo! Inc.*, 630 F.Supp.2d 1104, 1111 (N.D. Cal. 2009) (granting judicial notice of "press releases, news articles, analyst reports, and third party press releases"); *U.S. ex rel. Modglin v. DJO Global Inc.*, 48 F.Supp.3d 1362,

1381 (C.D. Cal. 2014) ("Under Rule 201, the court can take judicial notice of '[p]ublic records and government documents available from reliable sources on the Internet,' such as websites run by governmental agencies").

Particularly since the defense seeks judicial notice of similar materials with similar contents pertaining to similar subject matter, judicial notice of these exhibits is proper and plaintiffs respectfully request the Court do so.

Dated: June 9, 2020

/s/ *Ronda Baldwin-Kennedy*
Ronda Baldwin-Kennedy

/s/ *Raymond DiGuiseppe*
Raymond DiGuiseppe

Attorneys for Plaintiffs

Los Angeles Times

Tracking coronavirus in Ventura County

By LOS ANGELES TIMES STAFF

UPDATED JUNE 6, 9:13 A.M. PACIFIC

1,261
confirmed cases

None yet today
+45 yesterday

35
deaths

None yet today
None yesterday

971
recoveries

None yet today
+19 yesterday

What we know

- **Over the past two weeks**, Ventura County has recorded 349 new cases, failing one of the governor's performance metrics. In that

time, five deaths have been reported.

- Ventura has the 18th **highest number of coronavirus cases among the state's 58 counties** and the 16th most deaths.
- **The county has reported cases** in 14 cities or communities. Oxnard has the most cases with 326.
- The number of patients at **county hospitals** has been steady. There are now 50 patients linked to COVID-19.
- **Nursing homes have been a focal point** of the crisis. In Ventura County, 14 facilities have reported an outbreak.

California counties +

Other trackers +

More coverage +

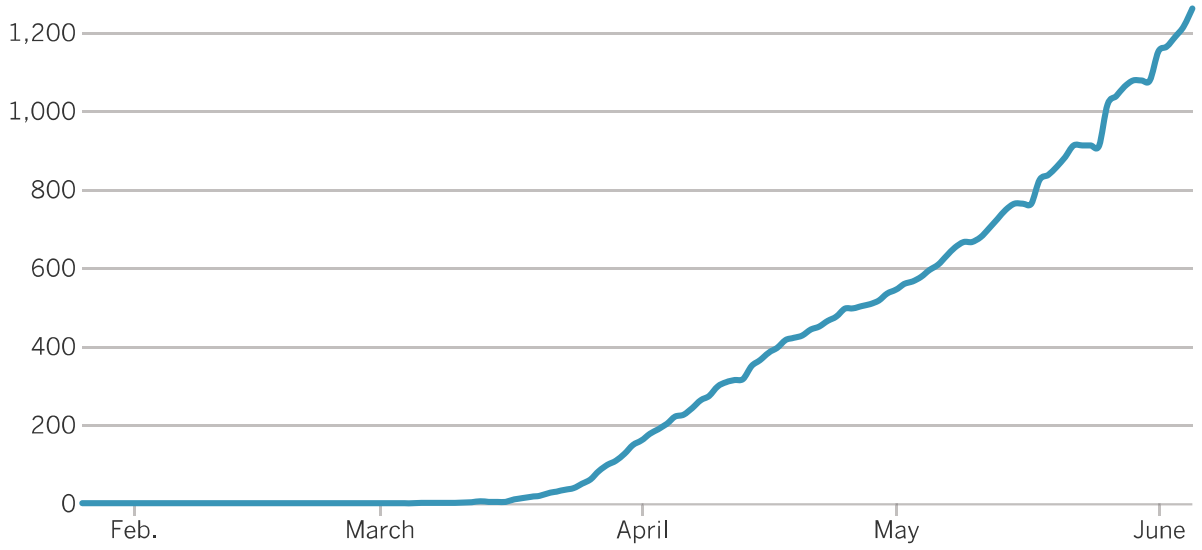
The latest trends

The Ventura County Health Care Agency announces new cases and deaths each day, though bottlenecks in testing and reporting lags can introduce delays.

Experts say the true number of people infected is unknown and likely much higher than official tallies.

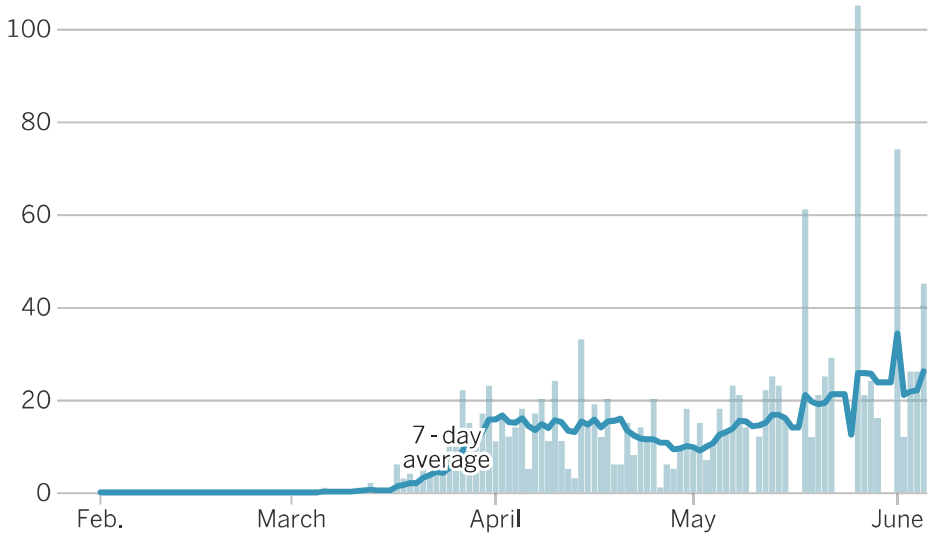
Cases	Deaths

Cumulative cases by day

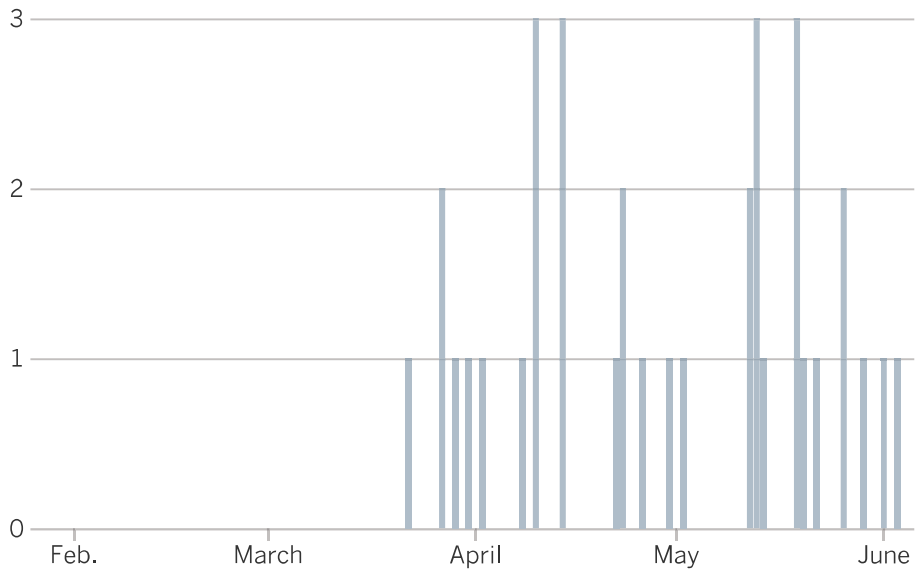


Over the past week, the county has averaged 26 new cases and 0.3 new deaths per day. The number of confirmed infections is currently doubling every 33.6 days.

New cases by day



Deaths by day

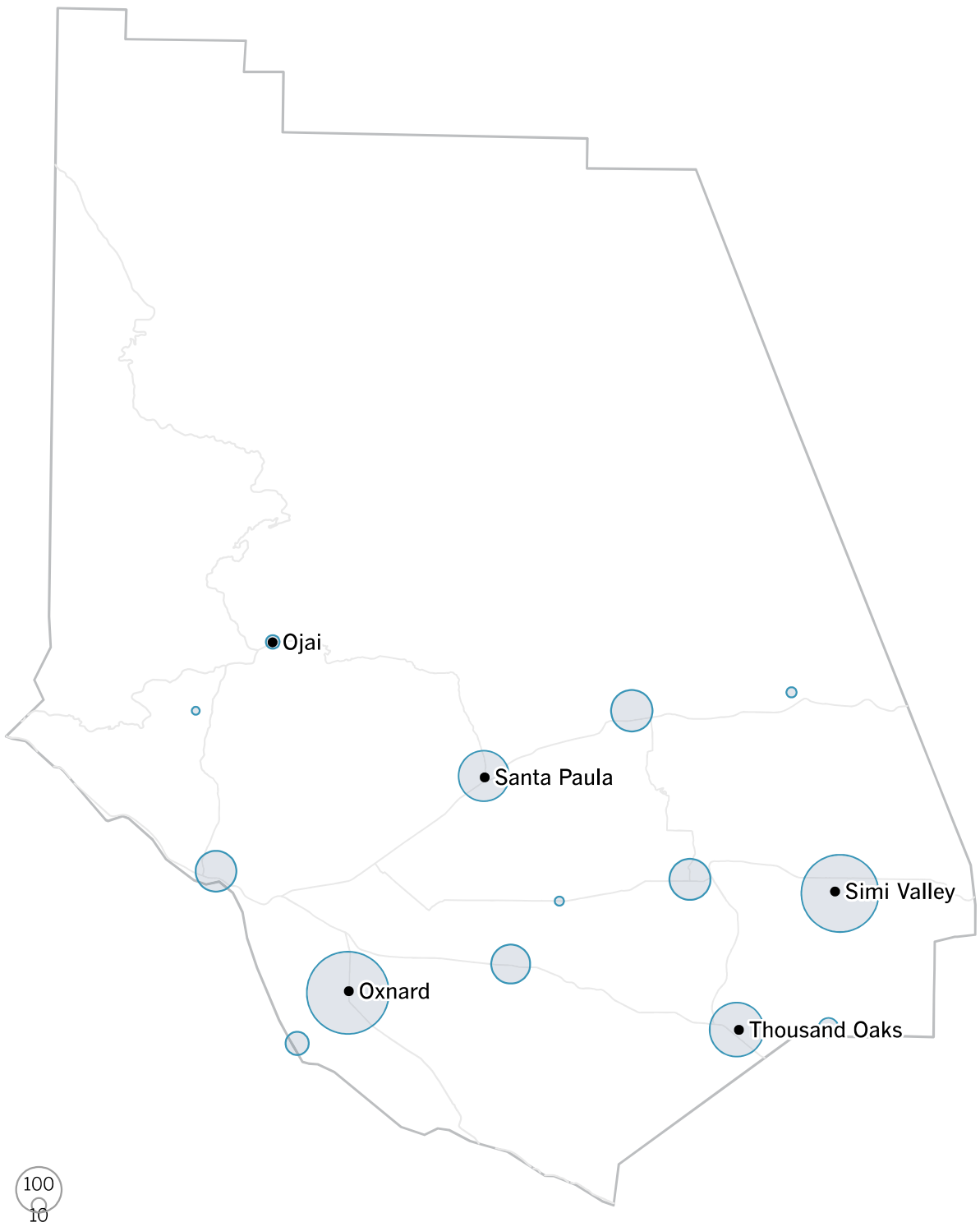


State and local officials are closely watching the latest figures as they weigh when and how to reopen. One metric is whether counties have kept the number of new cases reported over the last 14 days to less than 25 per 100,000 residents.

Ventura County currently fails that test. Over the last two weeks, officials have confirmed 349 new cases, which amounts to 41.2 per 100,000.

Cases by city

Cases have been reported in 14 of Ventura County's cities and communities.



Area	Confirmed cases
Oxnard	326
Simi Valley	288
Thousand Oaks	141
Santa Paula	123
Fillmore	83

Area	Confirmed cases
Moorpark	81
Ventura	80
Camarillo	73
Port Hueneme	26
Oak Park	19

Show all

Learn more about the state ↗

Explore the latest data by visiting our statewide dashboard, as well as dedicated pages for Los Angeles, Alameda, Contra Costa, Fresno, Imperial, Kern, Kings, Monterey, Orange, Riverside, Sacramento, San Diego, San Bernardino, San Francisco, San Joaquin, San Mateo, Santa Barbara, Santa Clara, Sonoma, Tulare and Ventura counties.

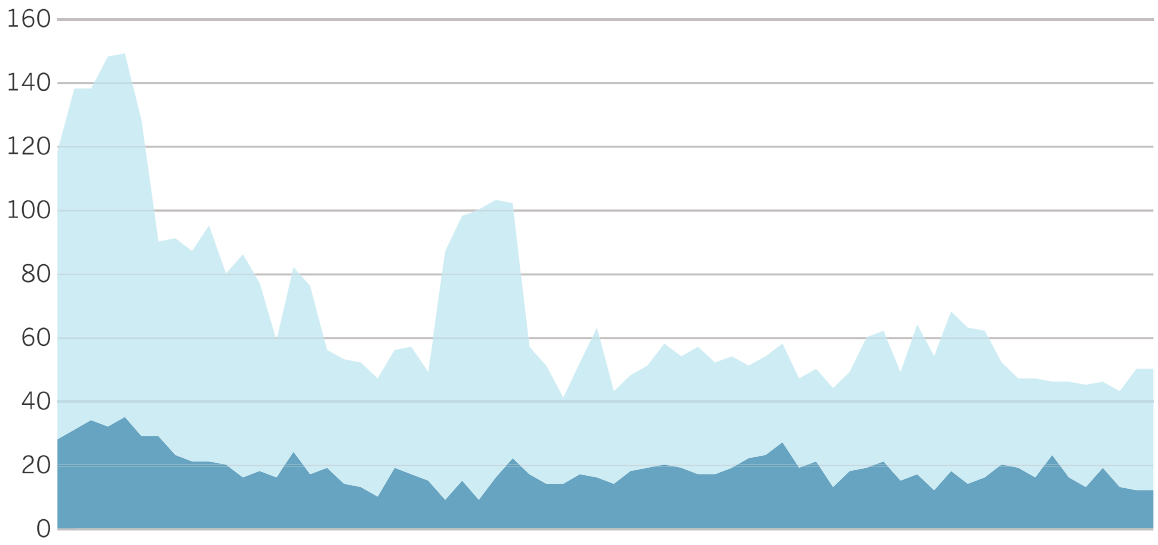
Hospitals and patients

One goal of the state's stay-at-home mandate is to slow the virus in hope of preventing hospitals from being overrun.

There are currently patients admitted to Ventura County hospitals who have a suspected or confirmed case of COVID-19, according to the latest government figures. Of those, are in an intensive-care unit.

All cases	Confirmed	Suspected

Intensive care and other hospitalized patients



California Department of Public Health

In order to reopen, counties must show that hospitalizations have stabilized, meaning that daily increases have averaged less 5% over a seven-day period, or that a county can't have more than 20 hospitalizations on any single day over a 14-day period.

Currently, 50 of the state's 58 counties pass this test, which is one of several that can be applied. Ventura County currently meets the standard.

Date	ICU	Other	Total	Status
Jun 5	12	38	50	Stable
Jun 4	12	38	50	Stable
Jun 3	13	30	43	Declining
Jun 2	19	27	46	Declining
Jun 1	13	32	45	Declining
May 31	16	30	46	Declining
May 30	23	23	46	Declining
May 29	16	31	47	Declining
May 28	19	28	47	Stable
May 27	20	32	52	Declining

Show all

Nursing homes

Nursing homes have become a tragic focal point of the coronavirus outbreak. California's Department of Public Health has listed 14 skilled nursing and assisted-living facilities in Ventura County that currently have COVID-19 cases.

	Residents	
Facility	**Cases**	**Deaths**
CAMARILLO HEALTHCARE CENTER	10 or fewer	-
GLENWOOD CARE CENTER	10 or fewer	-
GREENFIELD CARE CENTER OF FILLMORE, LLC	-	-
MARY HEALTH OF THE SICK CONVALESCENT & NURSING HOSPITAL	-	-
OAKVIEW SKILLED NURSING	-	-
OJAI HEALTH & REHABILITATION	10 or fewer	-
OXNARD MANOR HEALTHCARE CENTER	-	-
RESERVE AT THOUSAND OAKS, THE	10 or fewer	-
SIMI VALLEY CARE CENTER	-	-
SUNRISE AT WOOD RANCH	10 or fewer	10 or fewer

Show all

The state last updated the list on June 5. Officials withhold the precise number where there are 10 or fewer cases. The numbers reflect cumulative counts.

Lives lost to COVID-19↗

Learn more about those we've lost by reading Times obituaries of Californians who have died from coronavirus.

Reopenings and restrictions

County order: Modified stay at home order

Face coverings: Residents asked to wear face coverings in public places and at essential businesses

Essential retail: Grocery stores, pharmacies, banks and post offices, etc. are open

Retail: Retailers and shopping malls reopened

Restaurants: Dine-in restaurants reopened, but only household members per table.

Bars: Bars closed

Lifestyle: Gyms, movie theaters, etc., closed. Car washes, pet grooming, tanning facilities, barbershops, hair salons and landscape gardening reopened

Parks: Most county parks reopened. State park campgrounds, parking lots and indoor facilities closed

Beaches: Most county parks reopened. State park campgrounds, parking lots and indoor facilities closed

Schools: Most K-12 schools are distance learning. Colleges online only

Government: Open only for essential functions

Houses of worship: Some houses of worship reopened at reduced capacity

Gatherings: All nonessential public gatherings are prohibited

What's open in every county ↗

We're tracking what's open, closed and restricted throughout the state in ten different categories, including parks, retail, restaurants and more. Find out what's open where you live.

Alameda Contra Costa Fresno Imperial Kern Kings Los Angeles Monterey Orange

Riverside Sacramento San Bernardino San Diego San Francisco San Joaquin

San Mateo Santa Barbara Santa Clara Sonoma Tulare Ventura

Other trackers

Beach closures Housing homeless people Reopenings by county Statewide totals
The lives lost

More coverage

Symptoms How it spreads Get our newsletter

About the numbers

This page was created by Swetha Kannan, Casey Miller, Sean Greene, Lorena Iñiguez Elebee, Rong-Gong Lin II, Ryan Murphy, Melody Gutierrez, Priya Krishnakumar, Sandhya Kambhampati, Maloy Moore, Jennifer Lu, Aida Ylanan, Vanessa Martínez, Ryan Menezes, Thomas Suh Lauder, Andrea Roberson, Ben Poston, Nicole Santa Cruz, Iris Lee, Rahul Mukherjee, Jaclyn Cosgrove, Anthony Pesce, Paul Duginski and Phi Do.

State and county totals come from a continual Times survey of California's 58 county health agencies as well as the three run by cities. Those figures are ahead of the totals periodically released by the state's Department of Public Health. State officials acknowledge that their tallies lag behind the updates posted by local agencies throughout the day and do not dispute The Times' method. The Times switched to using this method on March 18, leading to increases over what it had published previously using state data.

The tallies here are mostly limited to residents of California, which is the standard method used to count patients by the state's health authorities. Those totals do not include people from other states who are quarantined here, such as the passengers and crew of the Grand Princess cruise ship that docked in Oakland.

In an effort to aid scientists and researchers in the fight against COVID-19, The Times has released its database of California coronavirus cases to the public.

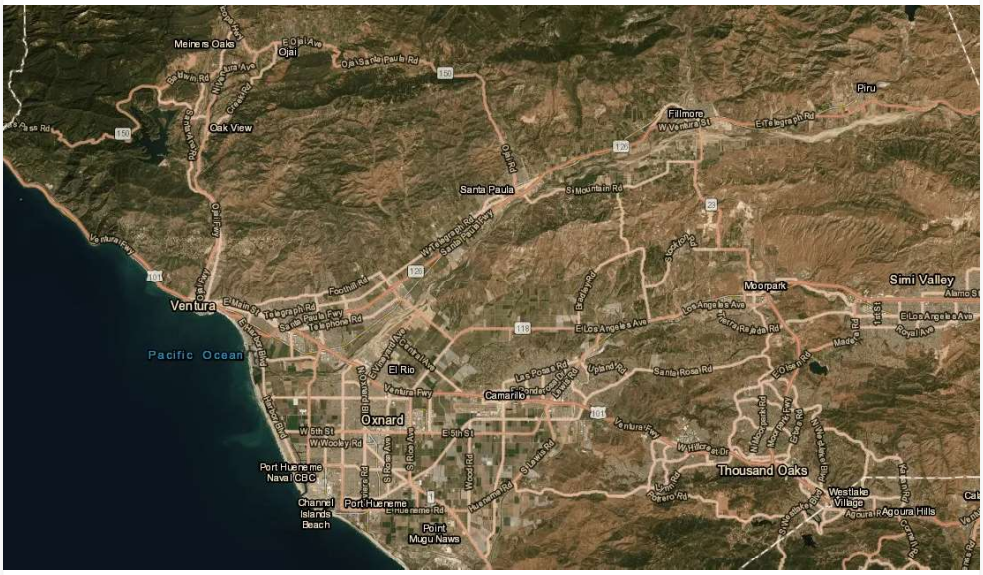
The database is available on Github, a popular website for hosting data and computer code. The files will be updated daily at github.com/datadesk/california-coronavirus-data.

Closures and restrictions are drawn from an ongoing Times survey of county governments.

National and global case data are collected by the the Centers for Disease Control and Prevention and researchers at the Johns Hopkins University Center for Systems Science and Engineering.

VC COVID-19 UPDATES | ONGOING REPORTING

Jun 1, 2020 | Kimberly Rivers, News, Ventura County | 0 |



This page will be updated as new information becomes available regarding novel coronavirus in Ventura County. The most recent, up to date information will be at the top of the page.

Tuesday, June 2 – 74 new cases reported since May 29. Ventura County Public Health has issued guidance to allow for family members to visit with people in long term care and nursing facilities.

- 74 new cases – an additional 12 cases were reported at 11 a.m. on June 2. for a total since May 29 of 86.
- 1164 total cases
- 886 people recovered
- 19 currently in hospital, 11 in Intensive Care Unit
- 244 under quarantine, active cases
- 34 deaths associated with COVID-19
- 28,367 people have been tested
- Most cases are in Oxnard, 287. Then Simi Valley with 272.

GUIDANCE FOR VISITING LONG TERM CARE FACILITIES:

- Implementation of this visitation guidance in Skilled Nursing Facilities (SNF) must only occur while the facility remains in Phase 3 of Reopening Nursing Homes and Opening Up America Again as outlined in the Centers for Medicare and Medicaid Services Memo QSO-20-30-NH.

website at **https://vcreporter.com/privacy-policy/**

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DIGITAL EDITIONS

CALIFORNIA

California braces for second wave of coronavirus even as first wave is far from over

The Pledge of Allegiance at a City Council meeting in Atwater, Calif., on May 26. (Genaro Molina / Los Angeles Times)

By RONG-GONG LIN II, IRIS LEE, COLLEEN SHALBY

JUNE 3, 2020 | 5 AM **UPDATED** 6:24 AM

SAN FRANCISCO — Health experts have long warned of a potential second wave of the coronavirus as the economy reopens. But while other states have seen the first wave fade, the Golden State continues to see cases rise at a rapid clip.

California is one of about 20 states where new cases are increasing over the past five days, according to Johns Hopkins University.

A Los Angeles Times analysis shows that the number of weekly cases in California continues to rise, exceeding 17,000 last week for the first time in the pandemic. There were nearly 10,000 alone in Los Angeles County alone last week, according to the analysis. L.A. County and the Southland remain the California epicenter of the coronavirus pandemic, but there have been some troubling increases in reported disease in some Bay Area counties.

Officials are not sure whether the new cases reflect a larger spike as the economy reopens or the result of increasing testing, or perhaps a combination of both.

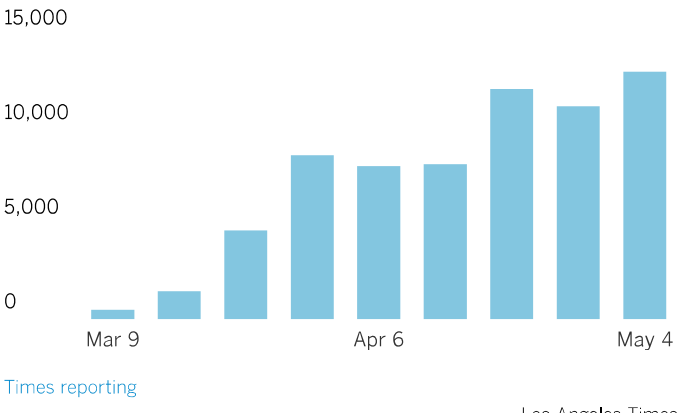
L.A. County reported a notable spike in cases on Friday — 1,824 new cases — a one-day record. But it included a backlog of 500 cases filed by a single lab.

“If we do see an uptick in cases in a couple of weeks from now, it will likely mean that there has already been two to four weeks of increasing transmission by that time,” said Dr. Christina Ghaly, director of health services of L.A. County. “So at this point, we could be in the midst of a new upward curve, or transmission may not have increased at all. We just don’t know yet.”

California coronavirus cases

The number of confirmed cases has continued to rise in recent weeks.

New cases by week



Worry about a second surge

Experts are already worried about the potential for new surges of disease as California reopens. Not only have churches and restaurant dining rooms been allowed to reopen in many parts of the state, political demonstrations in recent days have raised new concerns about rapid spread of disease.

"I'm always worried about a surge," Barbara Ferrer, the director of public health in Los Angeles County, said Monday. "We've always known that as more and more people are going to be out and about, we run this risk of there being a surge."

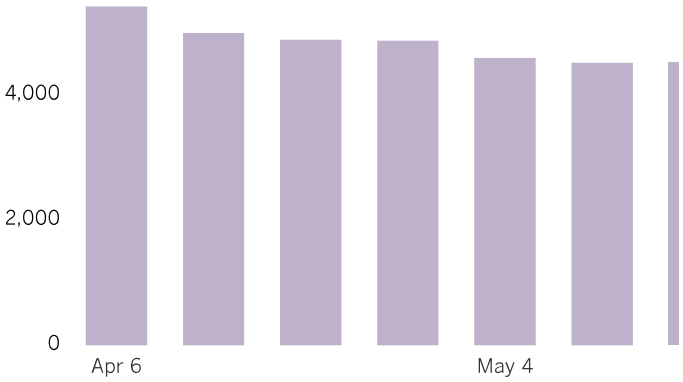
The U.S. Centers for Disease Control and Prevention estimates that 20% to 50% of people infected with the coronavirus do not show symptoms of illness. But asymptomatic carriers, or "silent spreaders," are believed to transmit disease just as easily as those with visible symptoms, according to the CDC's best estimate.

It can take three to four weeks after exposure to the virus for infected people to be hospitalized, and four to five weeks after exposure for patients to die from the disease.

The rise in cases comes as weekly hospitalizations and deaths are down statewide. There has been a 10% drop in the average number of people hospitalized daily with confirmed or suspected coronavirus infection last week compared to a month ago, from 4,859 on the week of April 27 to 4,392 last week.

California coronavirus hospitalizations

The average daily number of hospitalized patients each week with confirmed or suspected coronavirus infections has been declining.



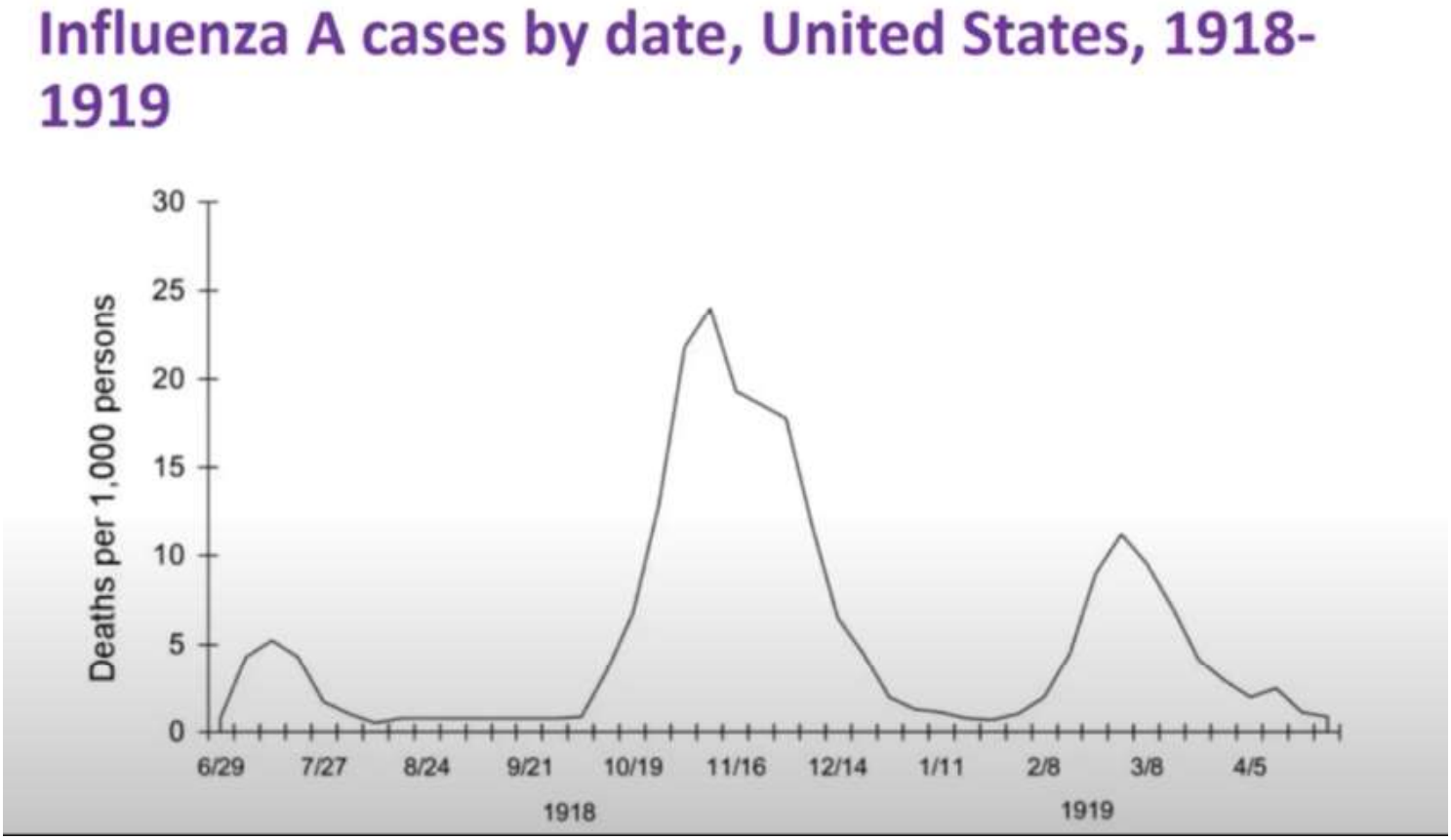
Source: California Health and Human Services Agency

Los Angeles Times

And the number of weekly deaths statewide last week fell 19% to 418; the week before, it was 515.

sword: You have avoided overloading one's healthcare system, which is really the primary public health goal. But at the same time, it means that you now have lengthened the curve out for a longer period of time."

Experts around the world have warned that the coronavirus need not follow the pattern of the 1918 flu pandemic, where a brief first wave in the spring in the U.S. was followed by a calm summer. It was only in the fall that a second, much larger and far deadlier wave hit.



There were three deadly waves of the flu in 1918 and 1919 in the United States. (UC San Francisco epidemiologist George Rutherford)

"We shouldn't just look to the fall, but we should be thinking about what's going to be happening in ... June, July, August," Dr. Thomas Inglesby, director of the Center for Health Security at the Johns Hopkins Bloomberg School of Public Health, said at a recent panel discussion.

Broad worry about a second wave

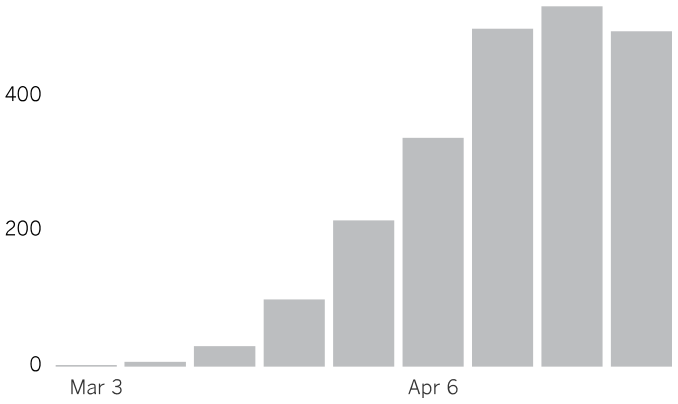
A survey of 1,000 residents of Silicon Valley found 73% of residents worried about a second wave of coronavirus outbreaks later this year, according to a poll conducted on behalf of Northern California's most populous county, Santa Clara County, between May 14 to 18.

Majorities said they were worried about themselves or those in their household being infected with the disease (54%) and not being able to see friends or family (55%). The poll found 41% were concerned about losing a job or not being able to find work and 39% worried about their mental health.

California COVID-19 deaths

The number of new deaths recorded declined the week of May 25.

New deaths reported by week



Times reporting

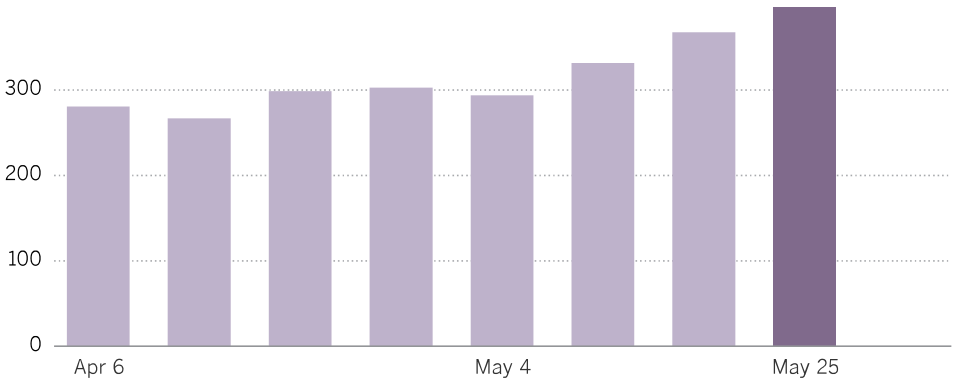
Los Angeles Times

But state officials have voiced concerns about an uptick in disease in certain pockets across the state, from the Mexican border, to parts of the San Francisco Bay Area, and a rural county close to the Oregon border.

Weekly hospitalizations for the coronavirus are up more than 30% over the past month in Orange County, California's third most populous county.

Orange County coronavirus hospitalizations

The average daily number of hospitalized patients each week with confirmed or suspected coronavirus infection has been risen about 33% in the last month.



Source: California Health and Human Services Agency

'We are still in the first wave'

For all the concern about a second wave that could come in the fall, where virus transmission could be aided by students returning to schools and universities, some experts point out we should be worried about the summer, too.

"We are still in the first wave," said Dr. Robert Kim-Farley, medical epidemiologist and infectious disease expert at the UCLA Fielding School of Public Health. "We've flattened the curve. However, flattening the curve is a two-edged

Officials pay close attention to a steep rise in cases in case it's a portent of something worse to come.

In Sonoma County, officials have been concerned about a rise in coronavirus cases and hospitalizations, and have held off on allowing in-store retail, hair salons and places of worship to reopen.

In Alameda County, the San Francisco Bay Area's second most populous county, new weekly cases rose by 19% last week compared to the previous week. Case rates are particularly high in East Oakland.

Authorities are checking to see if hospital resources are available if they are suddenly needed in the county of 1.6 million people, Dr. Mark Ghaly, secretary of the California Health and Human Services Agency, said.

Essential workers infected with coronavirus

Other counties are also keeping a close eye on troubling trends.

Marin County has seen an uptick in both cases and in the percentage of people testing positive for the highly infectious virus, rising from 4.4% to 5.3% in recent days.

"This means that even while we're testing more people, a greater proportion of those tested are infected. This suggests we're likely seeing at least a slight rise in actual virus transmission," Dr. Matt Willis, the Marin County health officer, said. Most people who are testing positive in Marin County must leave home to work, which includes employees of businesses like grocery stores, hospitals, long-term care facilities, construction and landscaping.

One of the nation's most important agricultural areas, Imperial County, saw such a surge in coronavirus patients needing hospital care that it has transferred nearly 200 patients into neighboring counties, Ghaly said, like San Diego and Riverside. There are only two hospitals in Imperial County, and hospitalizations for coronavirus cases doubled over the past five weeks.

'Horrendous outbreak' in Imperial County

"The Imperial Valley has a horrendous outbreak going on right now," said Dr. George Rutherford, UC San Francisco epidemiologist and infectious diseases expert, at a campus forum Friday.

And even the introduction of five coronavirus cases in sparsely populated northern county of Lassen caused officials in the county of 31,000 people to briefly shut down dine-in restaurant services and in-store shopping again. The health officer, Dr. Kenneth Korver, cited "alarming reports of irresponsible behavior," such as a failure to practice social distancing or employ good personal sanitation practices, for the temporary rollback of stay-at-home relaxation orders.

Southern California has moved faster than the Bay Area in reopening. L.A. County last week allowed the reopening of churches and hair salons and the resumption of indoor dining and indoor shopping at nonessential stores.

Reason for caution in L.A. County

In an interview, Rutherford said Los Angeles County's move to relax stay-at-home orders while cases are rising calls for caution.

"Given that cases are going up in Los Angeles, I think it could potentially be a problem. I think we have to wait and see what happens," Rutherford said.

Cases statewide »

126,329	4,538
confirmed	deaths

As of June 6, 9:13 a.m. Pacific

L.A. County did meet the state's criteria to move faster to reopen, which includes one standard that says the rate of tests that turn up positive for the coronavirus over the last week be no higher than 8%. But Rutherford said that isn't a particularly difficult target to meet.

"I don't view that as that hard of a criterion to meet. So I think you have to be a little bit cautious, still," Rutherford said.

Mandatory masks may help

Widespread rules on wearing masks in public will help, Rutherford said, which keep potentially infectious fluid in the mouth from spraying out while talking. Los Angeles and Orange counties require mask-wearing in public; Riverside and San Bernardino counties rescinded mandatory mask-wearing orders amid political pressure, and Ventura County never made it a requirement.

"Masks provide a helluva lot of protection. And I'm more comfortable relaxing things if everybody is wearing masks than if they weren't," Rutherford said.

Ferrer, the L.A. County public health director, defended L.A. County's reopening timeline Monday. "It is time for people to be able to get back to work in many of our sectors," she said. "That's really the secret here. ... At some point, we have to reopen. ... The name of the game is to make sure that when sectors are reopening, we're taking every single precaution we can."

Weekly hospitalizations have been declining every week in the past month in Los Angeles County.

Last week's L.A. County death toll, 254, was an 11% decrease from the previous week's death toll of 287. The numbers of daily deaths out of nursing homes has been declining, Ferrer said.

Lin reported from San Francisco, Lee and Shalby from Los Angeles. Times staff writer Hannah Fry contributed to this report.

CALIFORNIA | SCIENCE | CORONAVIRUS PANDEMIC

Rong-Gong Lin II

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Rong-Gong Lin II is a metro reporter, specializing in covering statewide earthquake safety issues. The Bay Area native is a graduate of UC Berkeley and started at the Los Angeles Times in 2004.

Iris Lee

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Iris Lee is a data journalist on the Los Angeles Times Data Desk. She previously reported for the San Fernando Valley Business Journal, covering healthcare and law. She graduated from the University of Southern California with a master's in journalism and holds chemistry and international studies degrees from UC Irvine.

Colleen Shalby

Twitter Instagram Email Facebook

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MAPS & TRENDS

America Is Reopening. But have we flattened the curve?

See New Case Trends in all 50 States

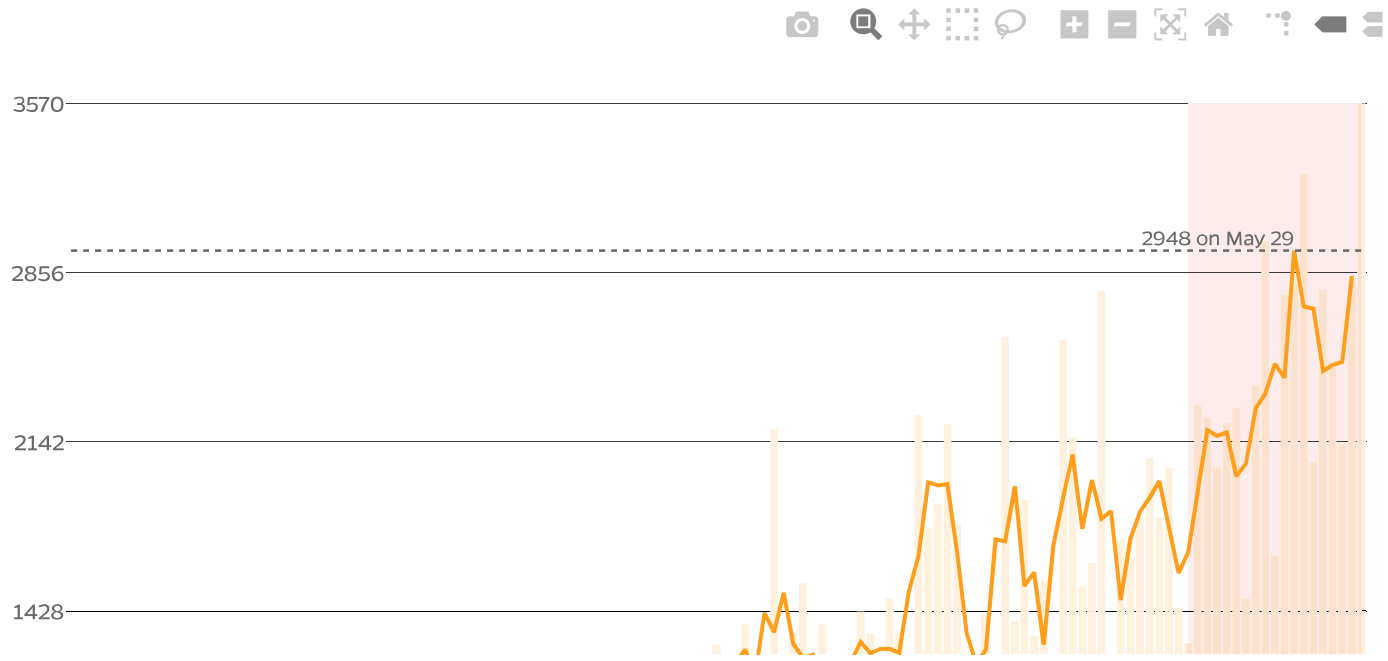
SHARE THIS PAGE:

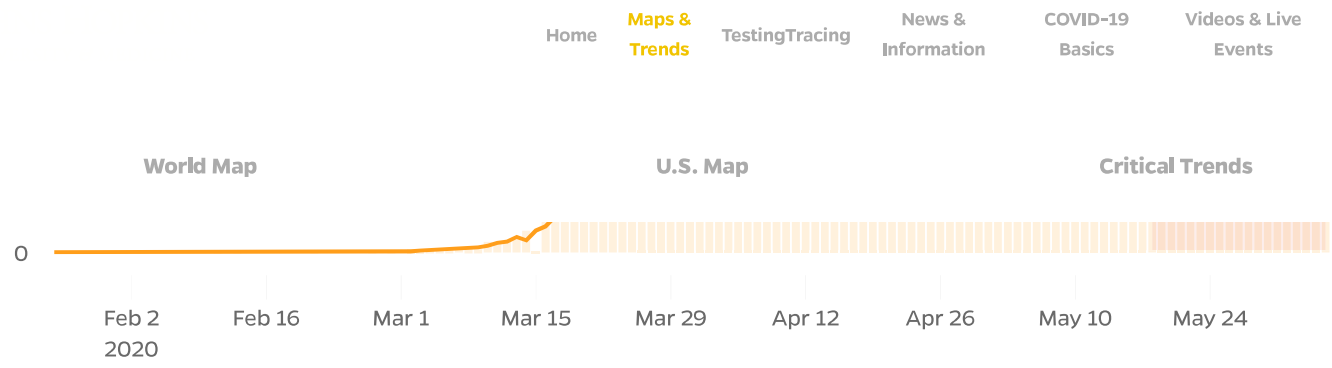
Daily confirmed new cases (5-day moving average)

Outbreak evolution for the 50 STATES, D.C, AND PUERTO RICO

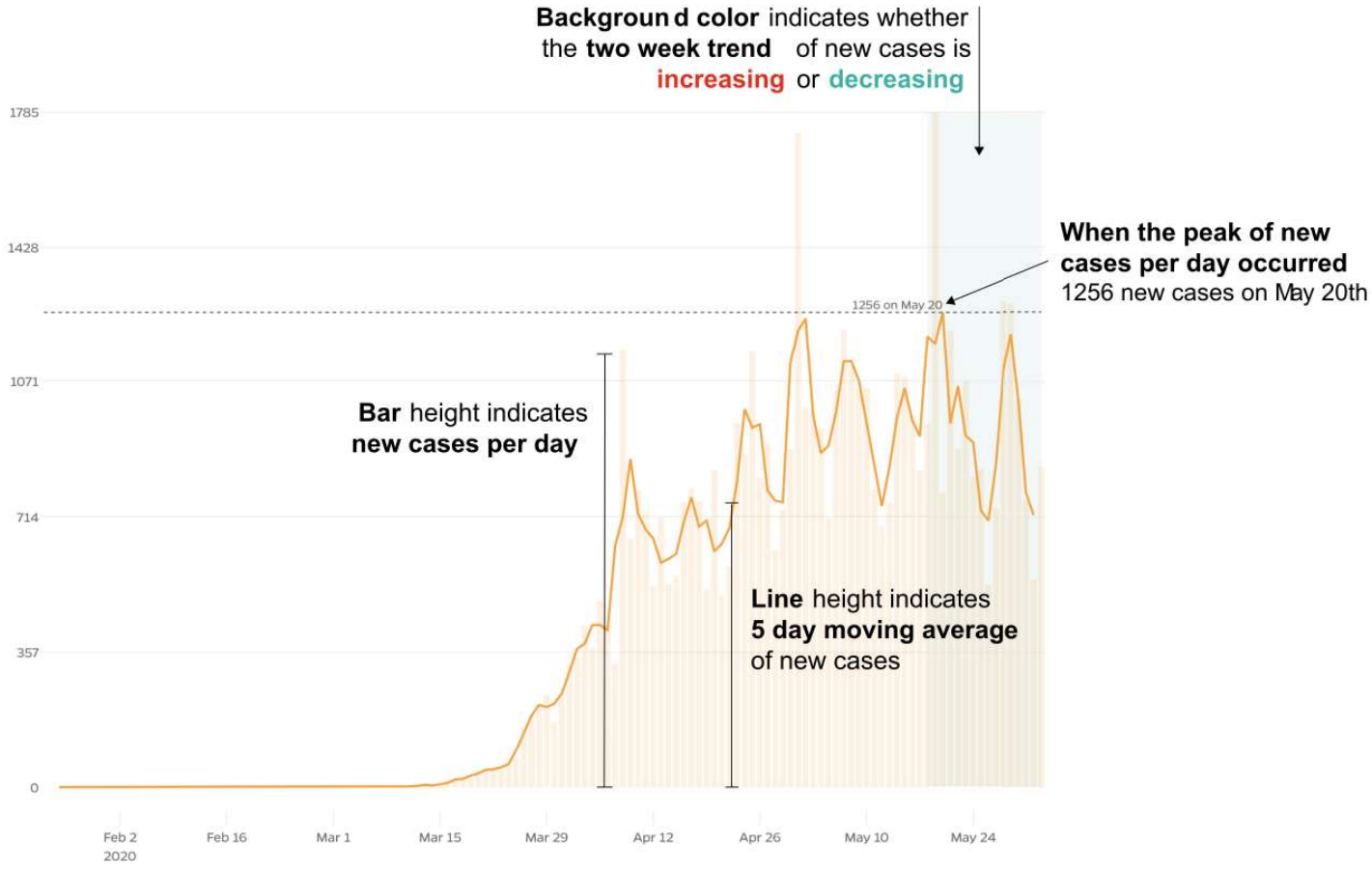
This page was last updated on Saturday, June 6, 2020 at 05:57 AM EDT.

All States | California



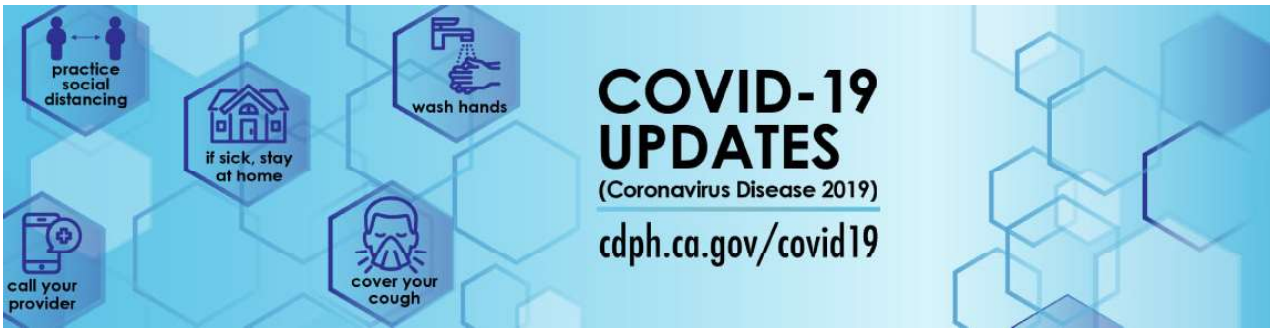


How to use this graphic:



Federal guidelines advise that states wait until they experience a downward trajectory of documented cases within a 14-day period before proceeding to a phased opening. In the state-specific view of the graph, this two-week period is highlighted in orange if cases are trending upward, or green if they are trending down.

COVID-19



Visit CDPH News Releases for daily COVID-19 updates.

En Español: Para obtener información en español, visite nuestra página del Coronavirus 2019 (COVID-19).

- Alerts
- COVID-19 by the Numbers
- Protect Yourself
- What If I'm Sick
- Getting Care
- Protecting Others
- Employment
- Guidance and Information (833) 544-2374

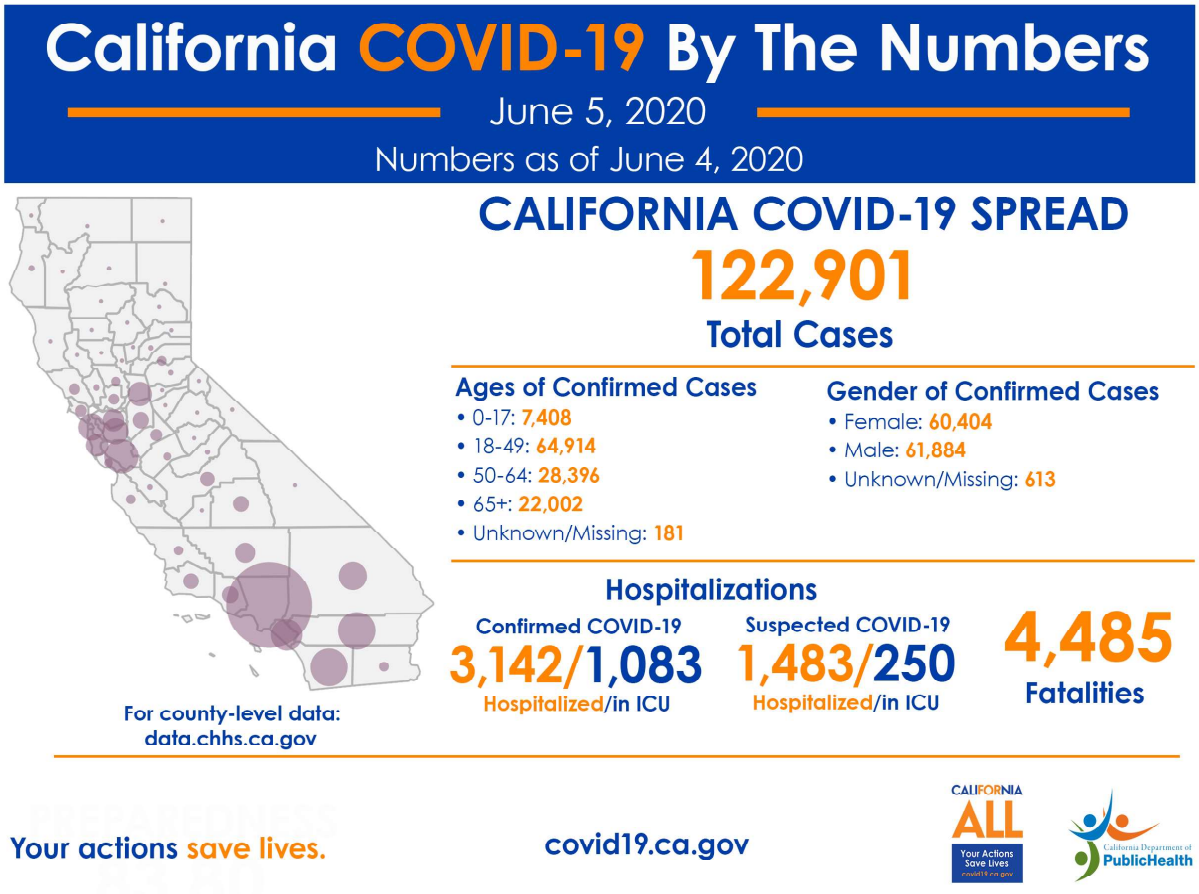
Alerts

Order of the State Public Health Officer (PDF) – May 7, 2020

Stay Home Except for Essential Needs FAQs – March 20, 2020

COVID-19 by the Numbers

As of June 4, 2020, there are a total of 122,901 positive cases and 4,485 deaths in California



For county level data, access the COVID-19 Public Dashboard.

For skilled nursing facility data, visit Skilled Nursing Facilites: COVID-19.

For age group data, visit Cases and Deaths Associated with COVID-19 by Age Group in California.

Racial Demographics - A More Complete Picture

The California Department of Public Health is committed to health equity and collecting more detailed racial and ethnic data that will provide additional understanding for determining future action. Health outcomes are affected by forces including structural racism, poverty and the disproportionate prevalence of underlying conditions such as asthma and heart disease among Latinos and African American Californians. Only by looking at the full picture can we understand how to ensure the best outcomes for all Californians.

The differences in health outcomes related to COVID-19 are most stark in COVID-19 deaths. We have nearly complete data on race and ethnicity for COVID-19 deaths, and we are seeing the following trends. Overall, for adults 18 and older, Latinos, African Americans and Native Hawaiians and Pacific Islanders are dying at disproportionately higher levels. The proportion of COVID-19 deaths in African Americans is about one-and-a half times their population representation across all adult age categories. For Native Hawaiians and Pacific Islanders,

overall numbers are low, but more than double difference between the proportion of COVID-19 deaths and their population representation. More males are dying from COVID-19 than females, in line with national trends.

For the additional information, visit COVID-19 Race and Ethnicity Data.

Testing in California

Twenty-five public health labs in California are testing samples for COVID-19. These labs include the California Department of Public Health's Laboratory in Richmond, Alameda, Butte, Contra Costa, Fresno, Humboldt, Imperial, Long Beach, Los Angeles, Monterey, Napa-Solano-Yolo-Marin (located in Solano), Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Shasta, Sonoma, Tulare and Ventura County public health laboratories. The Richmond Laboratory will provide diagnostic testing within a 48-hour turnaround time. This means California public health officials will get test results sooner, so that patients will get the best care.

Protect Yourself

How can people protect themselves?

There is currently no vaccine to prevent COVID-19. The best way to prevent illness is to avoid being exposed to this virus. The virus spreads mainly from person-to-person between people who are in close contact with one another (within about 6 feet). This occurs by respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. Surfaces can also get infected. Older adults and people who have severe underlying medical conditions like hypertension, obesity, heart or lung disease , diabetes or asthma seem to be at higher risk for developing more serious complications from COVID-19 illness. Every person has a role to play. So much of protecting yourself and your family comes down to common sense:

- Stay home except for essential needs/activities.
- Practice physical distancing – stay 6 feet away from people.
- Wear a cloth face mask if you leave home.
- Wash hands with soap and water for at least 20 seconds.

- Clean and disinfect frequently touched surfaces daily. If surfaces are dirty, clean them using detergent or soap and water prior to disinfection.
- Avoid touching eyes, nose or mouth.
- Cover your cough or sneeze with a tissue or your elbow or a tissue. Wash hands afterwards.
- Avoiding close contact with people who are sick.
- Stay home and away from people if you become sick with respiratory symptoms like fever and cough.
- If you smoke or vape, consider quitting. Smoking and vaping causes harm to the lungs.
- Follow guidance from public health officials.

Please consult with your health care provider about additional steps you may be able to take to protect yourself.

Who is at Higher Risk for Serious Illness from COVID-19?

Early information out of China, where COVID-19 first started, shows that some people are at higher risk of getting very sick from this illness. This includes:

- Smokers
- Older adults (65+)
- Individuals with compromised immune systems
- Individuals who have serious chronic medical conditions like:
  - Heart disease
  - Diabetes
  - Lung disease

If you are at higher risk for serious illness from COVID-19 because of your age or health condition, it is important for you to take extra actions to reduce your risk of getting sick with the disease:

- Stay home. It's the most important thing you can do.
- Avoid contact with people who are sick. Isolate anyone sick in your home in a separate room, if possible.
- Consider ways of getting food brought to your house through family, social, or commercial networks. Wipe off containers with disinfectant wipes.

It is also important that you listen to public health officials who may recommend community actions to reduce potential exposure to COVID-19, especially if COVID-19 is spreading in your community.

For more information visit the CDC's website.

What if I'm sick?

What are the symptoms of COVID-19?

Typically, human coronaviruses cause mild-to-moderate respiratory illness. Symptoms are wide ranging and can be similar to the flu, including:

- Fever
- Cough
- Shortness of breath
- Chills

- Repeated shaking with chills
- Muscle pain
- Headache
- Sore Throat
- New loss of taste or smell

COVID-19 can cause more severe respiratory illness. If you have any of the emergency warning signs listed below, you should contact your medical provider immediately:

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Bluish lips or face

What if I have symptoms?

Patient: If a person develops symptoms of COVID-19, including fever, cough or shortness of breath, and has reason to believe they may have been exposed, they should call their health care provider before seeking care. Contacting them in advance will make sure that people can get the care they need without putting others at risk. Please be sure to tell your health care provider about your travel history. You can also take the following precautionary measures: avoid contact with sick individuals, wash hands often with soap and warm water for at least 20 seconds.

Health Care Provider: Patients who may have infection with this novel coronavirus should wear a surgical mask and be placed in an airborne infection isolation room. If an airborne infection isolation room is not available, the patient should be placed in a private room with the door closed. Health care providers should use standard, contact and airborne precautions and use eye protection. Please see "Update and Interim Guidance on Outbreak of 2019 Novel Coronavirus (2019-nCoV) in Wuhan, China" for more information about infection control. The Public Health Department will issue All Facility Letters to regulated healthcare facilities within California with updated information and guidance; these can be found on the AFL webpage.

What should you do if you think you're sick?

Call ahead: If you are experiencing symptoms of COVID-19 and may have had contact with a person with COVID-19, or recently traveled to countries with apparent community spread, call your health care provider before seeking medical care so that appropriate precautions can be taken.

Necesito Hacerme La Prueba Del Covid-19? (PNG)

Is California able to test for COVID-19?

Twenty-two public health labs in California are testing samples for COVID-19. These labs include the California Department of Public Health's Laboratory in Richmond, Alameda, Contra Costa, Humboldt, Long Beach, Los Angeles, Monterey, Napa-Solano-Yolo-Marin (located in Solano), Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Shasta, Sonoma, Tulare and Ventura County public health laboratoriesThe Richmond Laboratory will provide diagnostic testing within a 48-hour turnaround time. More public health labs will soon be able to test samples for COVID-19. This means California public health officials will get test results sooner, so that patients will get the best care.

If a person develops symptoms of COVID-19 including fever, cough or shortness of breath, and has reason to believe they may have been exposed, they should call their health care provider before seeking care.

California has partnered with Verily's Project Baseline to launch a community COVID-19 testing program to expand screening and testing for high-risk individuals in certain areas of the state. High-risk individuals located in Santa Clara or San Mateo counties, or within 50 miles of the cities of Riverside or Sacramento, can complete the screener to see if they qualify for testing through this program. Potential participants need internet access and a Google account.

Getting Care

What is the treatment for COVID-19?

From the international data we have, of those who have tested positive for COVID-19, approximately 80 percent do not exhibit symptoms that would require hospitalization. For patients who are more severely ill, hospitals can provide supportive care. We are continuing to learn more about this novel coronavirus and treatment may change over time.

What if I don't have health insurance and I need screening or treatment for COVID-19?

- Check with your local community health center or hospital to see if fees for testing can be waived
- See if you're eligible for Medi-Cal
- See if you're eligible for Covered California

How is it decided whether a person with a confirmed case of COVID-19 can self-isolate at home or must be confined to a hospital or elsewhere?

Local health departments are working in partnership with the California Department of Public Health and the CDC, and making determinations on whether a person ill with COVID-19 requires hospitalization or if home isolation is appropriate. That decision may be based on multiple factors including severity of illness, need for testing, and appropriateness of home for isolation purposes.

Protecting Others

What is Social Distancing?

Social distancing is a practice recommended by public health officials to stop or slow down the spread of contagious diseases. It requires the creation of physical space between individuals who may spread certain infectious diseases. The key is to minimize the number of gatherings as much as possible and to achieve space between individuals when events or activities cannot be modified, postponed, or canceled. Achieving space between individuals of approximately six feet is advisable. Additionally, there is a particular focus on creating space between individuals who have come together on a one-time or rare basis and who have very different travel patterns such as those coming from multiple countries, states or counties.

For more information, see the Gathering Guidance (PDF).

Should public events be cancelled?

To protect public health and slow the rate of transmission of COVID-19, the California Department of Public Health has determined that all non-essential gatherings should be postponed or canceled across the state until further guidance is issued by the California Department of Public Health. This includes gatherings such as concerts, conferences, sporting events, gyms and theaters. Bars, night clubs, wineries, breweries and wine tasting rooms should close. Restaurants should be closed for in-restaurant seated dining and should be open only to drive-through or other pick-up/delivery options. Certain activities are essential to the functioning of our state and must continue. Hence, this does not apply to essential public transportation, airport travel, shopping at a store, mall, or farmers' market, or charitable food pantries and distributions.

Is it safe to go to restaurants and bars?

California public health officials have directed bars, night clubs, breweries and wine tasting rooms to close. Restaurants should focus on food delivery and takeout while maximizing social distancing for those who are inside their restaurant.

For more information, see the Food, Beverage and Other Services Guidance (PDF).

Should I wear a mask?

California's public health officials released guidance on April 1 on the use of cloth face coverings to protect against COVID-19 for Californians who must leave their homes to conduct essential activities. The guidance does not require people to wear face coverings – and is not a substitute for the state's current guidance regarding social distancing and hand washing. The state also does not recommend Californians use N-95 or surgical masks, which are needed for our health care workers and first responders who will be there for when our lives at risk.

The use of cloth face coverings could reduce the transmission of COVID-19 by individuals who do not have symptoms and may reinforce physical distancing. Public health officials also caution that face coverings may increase risk if users reduce their use of strong defenses such as physical distancing and frequent hand washing.

A link to the new guidance can be found on the California Department of Public Health Face Coverings Guidance web page.

What is the state doing to protect our health?

California has been actively and extensively planning with our local public health and health care delivery systems. Here are some of the actions California is taking to combat COVID-19:

- Directed Californians to stay at home to slow the spread of the virus
- Made testing free for most Californians who are medically eligible for testing
- Ensured students continue to learn and get meals even when schools physically close
- Deployed the California National Guard to work at food banks
- Distributed millions of N95 masks and other protective gear to health care workers, with more to come soon
- Secured travel trailers and hotels to house people experiencing homelessness

Employment

What should I do if I am unable to work after being exposed to COVID-19?

Individuals who are unable to work due to having or being exposed to COVID-19 (certified by a medical professional) can file a Disability Insurance (DI) claim.

Disability Insurance provides short-term benefit payments to eligible workers who have full or partial loss of wages due to a non-work-related illness, injury, or pregnancy. Benefit amounts are approximately 60-70 percent of wages (depending on income) and range from $50 - $1,300 a week.

Californians who are unable to work because they are caring for an ill or quarantined family member with COVID-19 (certified by a medical professional) can file a Paid Family Leave (PFL) claim.

Paid Family Leave provides up to six weeks of benefit payments to eligibile workers who have a full or partial loss of wages because they need time off work to care for a seriously ill family member or to bond with a new child. Benefit amounts are approximately 60-70 percent of wages (depending on income) and range from $50-$1,300 a week.

For more information related to resources for California's Employers and Workers, please visit this Labor and Workforce Development Agency webpage.

More Information

What is the difference between COVID-19 and other coronaviruses?

Coronaviruses are a large family of viruses. There are some coronaviruses that commonly circulate in humans. These viruses cause mild to moderate respiratory illness, although rarely they can cause severe disease. COVID-19 is closely related to two other animal coronaviruses that have caused outbreaks in people—the SARS coronavirus and the MERS (middle east respiratory syndrome) coronavirus.

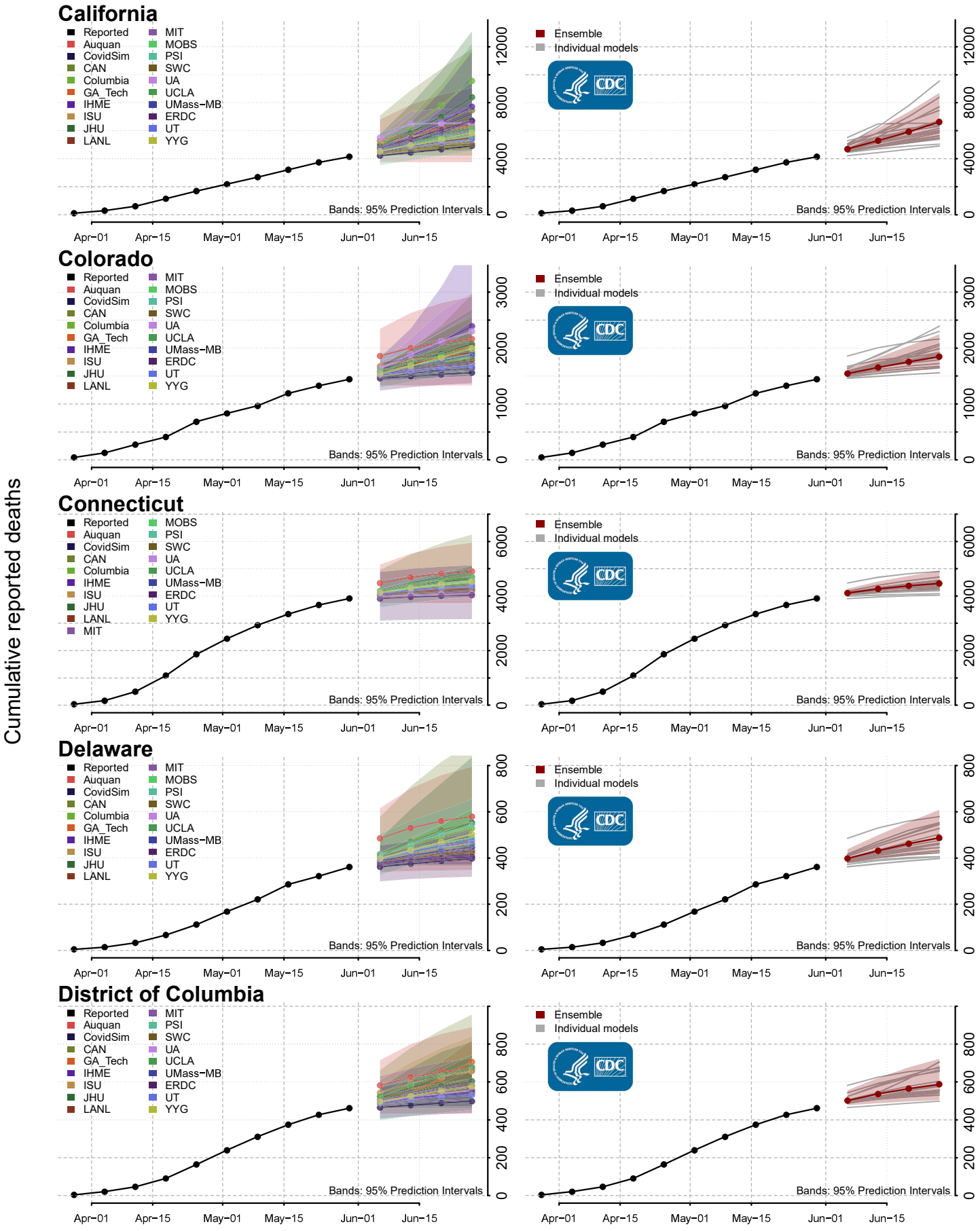
Guidance and Information

Public: If you have questions about COVID-19 and need assistance finding information online or clarification regarding the information, a statewide hotline number is available 8 a.m. – 5 p.m., 7 days a week at (833) 544-2374.

Media: If you are with a media outlet and have questions for the California Department of Public Health, please email CDPHPressOPA@cdph.ca.gov.

Page Last Updated : June 5, 2020

Update: 2020-06-02 https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html



Centers for Disease Control and Prevention

Coronavirus Disease 2019 (COVID-19)

Cases in the U.S.

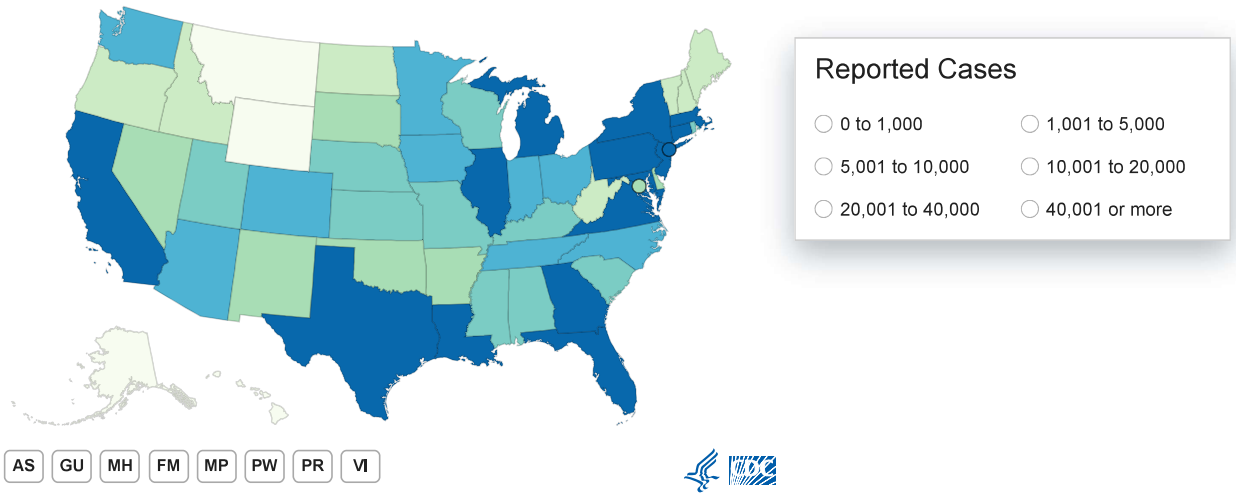
Last updated on June 5, 2020

TOTAL CASES	TOTAL DEATHS
1,862,656	108,064
20,555 New Cases*	1,035 New Deaths*

Cases & Deaths by Jurisdiction

34 jurisdictions report more than 10,000 cases of COVID-19.

This map shows COVID-19 cases and deaths reported by U.S. states, the District of Columbia, New York City, and other U.S.-affiliated jurisdictions. Hover over the map to see the number of cases and deaths reported in each jurisdiction. To go to a jurisdiction's health department website, click on the jurisdiction on the map.



New York State's case and death counts do not include New York City's counts.

Not all jurisdictions report confirmed and probable cases and deaths to CDC. When not available to CDC, it is noted as N/A.

Add U.S. Map to Your Website

Cases & Deaths by County

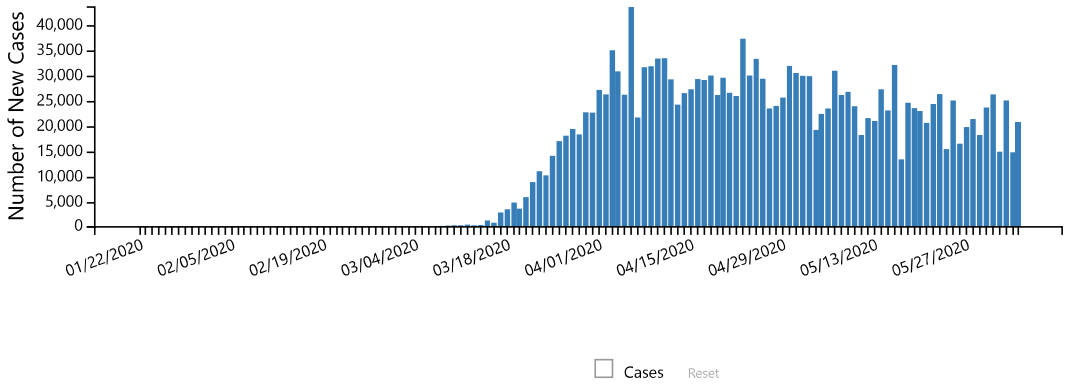
Select a state to view the number of cases and deaths by county. This data is courtesy of USAFacts.org

Select a State

View County Data

New Cases by Day

The following chart shows the number of new COVID-19 cases reported each day in the U.S. since the beginning of the outbreak. Hover over the bars to see the number of new cases by day.

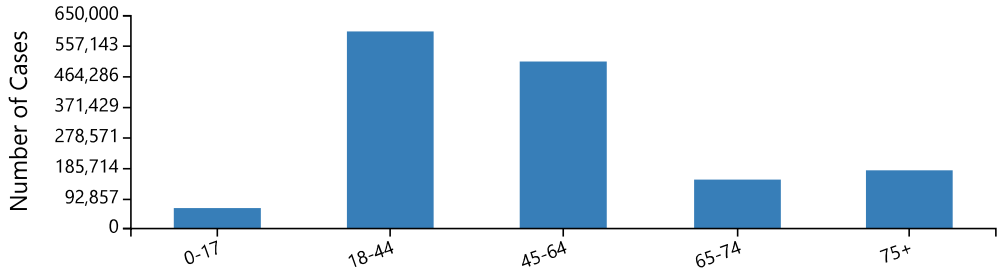


View Data +

Cases by Age

The following chart shows the age of people with COVID-19. Hover over each bar or click on the plus (+) sign below the chart to see the number of cases in each age group.

Data were collected from 1,500,126 people, and age was available for 1,497,211 (99.8%) people.

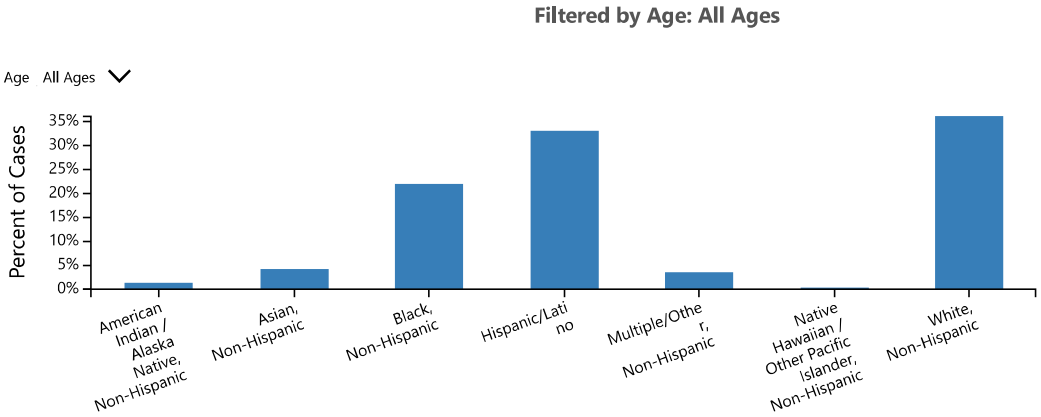


View Data +

Cases by Race/Ethnicity

The following chart shows the race/ethnicity of people with COVID-19. Hover over each bar or click on the plus (+) sign below the chart to see the percentage for each race/ethnicity group. Select from the "Age" dropdown list to see the percentage for each age group.

Data were collected from 1,500,126 people, but race/ethnicity was only available for 636,341 (42.4 %) people. CDC is working with states to provide more information on race/ethnicity for reported cases. The percent of reported cases that include race/ethnicity data is increasing.



View Data +

These data only represent the geographic areas that contributed data on race/ethnicity. Every geographic area has a different racial and ethnic composition. These data are not generalizable to the entire U.S. population.

If cases were distributed equally across racial and ethnic populations, one would expect to see more cases in those populations that are more highly represented in geographic areas that contributed data.

Cases & Deaths among Healthcare Personnel

Data were collected from 1,502,795 people, but healthcare personnel status was only available for 323,412 (21.5%) people. For the 69,761 cases of COVID-19 among healthcare personnel, death status was only available for 39,266 (56.3%).

CASES AMONG HCP	DEATHS AMONG HCP
69,761	368

Previous Data +

CDC has moved the following information to the Previous U.S. COVID-19 Case Data page.

- Level of community transmission by jurisdiction — last updated May 18, 2020
- Total number of cases by day — last updated April 28, 2020
- Number of cases by source of exposure — last updated April 16, 2020
- Number of cases from Wuhan, China and the Diamond Princess cruise — last updated April 16, 2020
- Number of cases by illness start date — last updated April 15, 2020

About the Data +

Updated Daily

This page is updated daily based on data confirmed at 4:00pm ET the day before.

Reported by Jurisdiction's Health Department

Data on this page are reported voluntarily by each jurisdiction's health department.

Number of Jurisdictions

There are currently 56 U.S.-affiliated jurisdictions reporting cases of COVID-19. This includes 50 states, District of Columbia, Guam, New York City, the Northern Mariana Islands, Puerto Rico, and the U.S Virgin Islands. New York State's case and death counts do not include New York City's counts as they are separate jurisdictions.

Confirmed & Probable Counts

As of April 14, 2020, CDC case counts and death counts include both confirmed and probable cases and deaths. This change was made to reflect an interim COVID-19 position statement issued by the Council for State and Territorial Epidemiologists on April 5, 2020. The position statement included a case definition and made COVID-19 a nationally notifiable disease.

A confirmed case or death is defined by meeting confirmatory laboratory evidence for COVID-19.

A probable case or death is defined by one of the following:

- Meeting clinical criteria AND epidemiologic evidence with no confirmatory laboratory testing performed for COVID-19
- Meeting presumptive laboratory evidence AND either clinical criteria OR epidemiologic evidence
- Meeting vital records criteria with no confirmatory laboratory testing performed for COVID19

Not all jurisdictions report confirmed and probable cases and deaths to CDC. When not available to CDC, it is noted as N/A.

Accuracy of Data

CDC does not know the exact number of COVID-19 illnesses, hospitalizations, and deaths for a variety of reasons. COVID-19 can cause mild illness, symptoms might not appear immediately, there are delays in reporting and testing, not everyone who is infected gets tested or seeks medical care, and there may be differences in how jurisdictions confirm numbers.

Changes & Fluctuations in Data

Health departments may update case data over time when they receive more complete and accurate information.

The number of new cases reported each day fluctuates. There is generally less reporting on the weekends and holidays.

Differences between CDC and Jurisdiction Data

If the number of cases or deaths reported by CDC is different from the number reported by jurisdiction health departments, data reported by jurisdictions should be considered the most up to date. The differences may be due to the timing of the reporting and website updates.

More Information

- COVIDView – A Weekly Surveillance Summary of U.S. COVID-19 Activity
- Previous U.S. COVID-19 Case Data
- FAQ: COVID-19 Data and Surveillance
- Testing Data in the U.S.
- World Map
- Health Departments

Page last reviewed: June 5, 2020

Centers for Disease Control and Prevention

Coronavirus Disease 2019 (COVID-19)

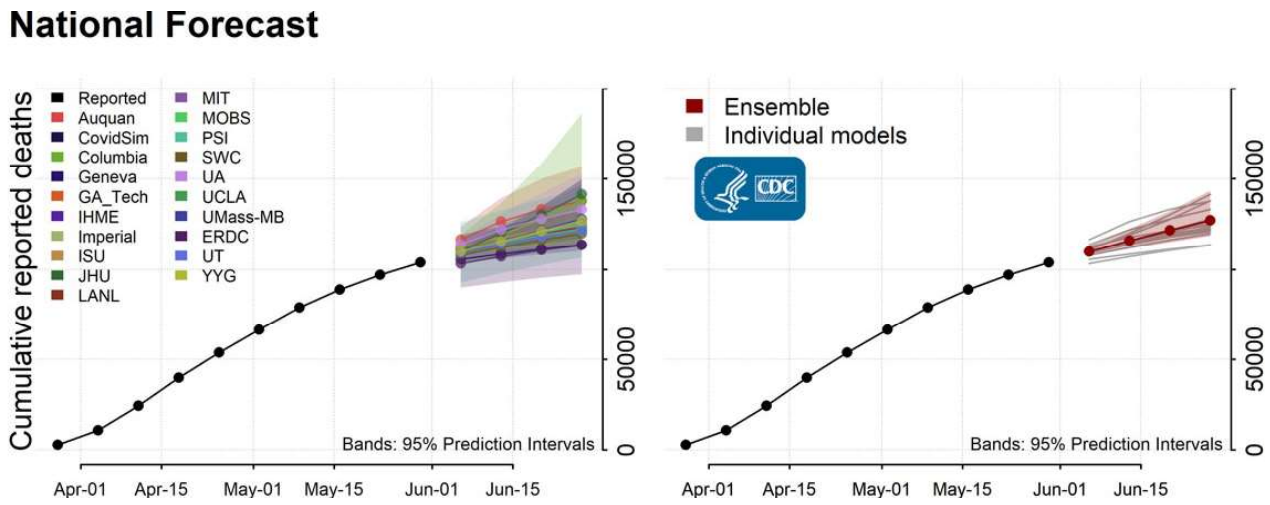
COVID-19 Forecasts: Cumulative Deaths

Updated June 4, 2020

Interpretation of Cumulative Death Forecasts

- This week CDC received 20 individual national forecasts.
- This week's national ensemble forecast suggests that the number of newly-reported COVID-19 deaths per week will continue to decline. It predicts between 118,000 and 143,000 cumulative COVID-19 deaths by June 27.
- Ensemble forecasts indicate that the rate of newly-reported deaths will vary among the states. In some states, cumulative deaths will increase at roughly the same rate as they have in recent weeks, while other states are likely to experience only a small number of additional deaths from COVID-19.

National Forecast



- These forecasts show cumulative reported COVID-19 deaths since February and forecasted deaths for the next four weeks in the United States.
- Models make various assumptions about the levels of social distancing and other interventions, which may not reflect recent changes in behavior. See model descriptions below for details.

State Forecasts

State-level forecasts show observed and forecasted state-level cumulative COVID-19 deaths in the US. Each state forecast uses a different scale, due to differences in the numbers of COVID-19 deaths occurring in each state.

Forecasts fall into one of two categories

- The Auquan, CAN, ERDC, GA_Tech, Geneva, Imperial, ISU, LANL, MIT, MOBS, PSI, SWC, UA, UCLA, UMass-MB, and UT forecasts assume that existing control measures will remain in place during the prediction period.
- The Columbia, CovidSim, GT_CHHS, JHU, and YYG forecasts make different assumptions about how levels of social distancing will change in the future.

Download state forecasts [12 pages]

Download forecast data [1 sheet]

Why Forecasting COVID-19 Deaths in the US is Critical

CDC is responding to a pandemic of coronavirus disease 2019 (COVID-19) caused by a novel coronavirus, SARS-CoV-2, that is spreading from person to person. The federal government is working closely with state, tribal, local, and territorial health departments, and other public health partners, to respond to this situation. Forecasts of deaths will help inform public health decision-making by projecting the likely impact in coming weeks.

What the Forecasts Aim to Predict

Forecasts based on statistical or mathematical models aim to predict changes in national- and state-level cumulative reported COVID-19 deaths for the next four weeks. Forecasting teams predict numbers of deaths using different types of data (e.g., COVID-19 data, demographic data, mobility data), methods (see below), and estimates of the impacts of interventions (e.g. social distancing, use of face coverings).

Working to Bring Together Forecasts for COVID-19 Deaths in the US

CDC works with partners to bring together weekly forecasts for COVID-19 deaths in one place. These forecasts have been developed independently and shared publicly. It is important to bring these forecasts together to help understand how they compare with each other and how much uncertainty there is about what may happen in the upcoming four weeks.

Auquan Data Science (state-level forecasts only)

Model names: Auquan

Intervention assumptions: These projections do not make specific assumptions about which interventions have been implemented or will remain in place.

Methods: SEIR model

Columbia University

Model name: Columbia

Intervention assumptions: This model is based on assumptions about how levels of social distancing will change in the future. It assumes a 20% reduction in contact rates for each successive week that stay-at-home orders remain in place or are expected to remain in place. Once a state has re-opened, contact rates are assumed to increase by 5% each week.

Methods
Metapopulation SEIR model

COVID Act Now (state-level forecasts only)

Model name: CAN

Intervention assumptions: These projections do not make specific assumptions about which interventions have been implemented or will remain in place.

Methods: SEIR model

COVID-19 Simulator Consortium

Model name: CovidSim

Intervention assumptions: These projections assume that contact rates will increase by 20% after stay-at-home orders are lifted.

Methods: SEIR model

Georgia Institute of Technology, Center for Health and Humanitarian Systems (Georgia forecasts only)

Model name: GT_CHHS

Intervention assumptions: This model assumes that once stay-at-home orders are lifted, contact rates will gradually increase. It also assumes that households containing symptomatic cases will self-quarantine.

Methods
Agent-based model

Georgia Institute of Technology, College of Computing

Model name: GA_Tech

Intervention Assumptions: This model assumes that the effects of interventions are reflected in the observed data and will continue going forward.

Methods: Deep learning

Imperial College, London (national-level forecasts only)

Model name: Imperial

Intervention Assumptions: These projections do not make specific assumptions about which interventions have been implemented or will remain in place.

Methods: Ensembles of mechanistic transmission models, fit to different parameter assumptions.

Institute of Health Metrics and Evaluation

Model name: IHME

Intervention assumptions: Projections are adjusted to reflect differences in aggregate population mobility and community mitigation policies.

Methods: Combination of a mechanistic disease transmission model and a curve-fitting approach

Iowa State University

Model name: ISU

Intervention Assumptions: These projections do not make specific assumptions about which interventions have been implemented or will remain in place.

Methods: Nonparametric spatiotemporal model

Johns Hopkins University

Model name: JHU

Intervention Assumptions: This model assumes that the effectiveness of interventions is reduced after shelter-in-place orders are lifted.

Methods: Stochastic metapopulation SEIR model

Los Alamos National Laboratory

Model name: LANL

Intervention assumptions: This model assumes that currently implemented interventions and corresponding reductions in transmission will continue, resulting in an overall decrease in the growth rate of COVID-19 deaths.

Methods
Statistical dynamical growth model accounting for population susceptibility

Massachusetts Institute of Technology

Model name: MIT

Intervention Assumptions: The projections assume that current interventions will remain in place indefinitely.

Methods: SEIR model

Northeastern University

Model name: MOBS (Laboratory for the Modeling of Biological and Socio-technical Systems)

Intervention assumptions: The projections assume that social distancing policies in place at the date of calibration are extended for the future weeks.

Methods: Metapopulation, age-structured SLIR model

Predictive Science Inc.

Model name: PSI

Intervention assumptions: These projections assume that current interventions will not change during the forecasted period.

Methods: Stochastic SEIRX model

Snyder Wilson Consulting

Model name: SWC

Intervention assumptions: These projections do not make specific assumptions about which interventions have been implemented or will remain in place.

Methods: Bayesian SEIR model

US Army Engineer Research and Development Center

Model name: ERDC

Intervention assumptions: These projections assume that current interventions will not change during the forecasted period.

Methods: SEIR mechanistic model.

University of Arizona

Model name: UA

Intervention assumptions: This model assumes that current interventions will remain in effect for at least four weeks after the forecasts are made.

Methods: Statistical curve-fitting approach

University of California, Los Angeles

Model name: UCLA

Intervention assumptions: These projections assume that current interventions will not change during the forecasted period.

Methods: Modified SEIR model

University of Geneva / Swiss Data Science Center (national one-week ahead forecasts only)

Model name: Geneva

Intervention assumptions: The projections assume that social distancing policies in place at the date of calibration are extended for the future weeks.

Methods
Exponential and linear statistical models fit to the recent growth rate of cumulative deaths.

University of Massachusetts, Amherst

Model names: UMass-MB, Ensemble

Intervention assumptions:

- UMass-MB: These projections do not make specific assumptions about which interventions have been implemented or will remain in place.
- Ensemble: The national and state-level ensemble forecasts include models that assume certain social distancing measures will continue and models that assume those measures will not continue.

Methods:

- UMass-MB: Bayesian SEIRD model.
- Ensemble: Equal-weighted combination of 2 to 11 models, depending on the availability of national and state-level forecasts. To ensure consistency, the ensemble includes only models with 4 week-ahead forecasts and models that do not assign a significant probability to there being fewer cumulative deaths than have already been reported. Only one model was available for the forecasts for Guam and the Northern Mariana Islands.

University of Texas, Austin

Model name: UT

Intervention assumptions: This model estimates the extent of social distancing using geolocation data from mobile phones and assumes that the extent of social distancing will not change during the period of forecasting. The model is designed to predict confirmed COVID-19 deaths resulting from only a single wave of transmission.

Methods
Nonlinear Bayesian hierarchical regression with a negative-binomial model for daily variation in death rates.

Youyang Gu (COVID-Projections)

Model name: YYG

Intervention assumptions: The model accounts for individual state-by-state re-openings and their impact on infections and deaths.

Methods
SEIS mechanistic model.

Additional Resources:

Previous COVID-19 Forecasts

FAQ: COVID-19 Data and Surveillance

CDC COVID Data Tracker

COVID-19 Mathematical Modeling

Page last reviewed: May 14, 2020

The Washington Post
Democracy Dies in Darkness

CDC director warns second wave of coronavirus is likely to be even more devastating

By **Lena H. Sun**

April 21, 2020 at 6:41 p.m. EDT

Even as states move ahead with plans to reopen their economies, the director of the Centers for Disease Control and Prevention warned Tuesday that a second wave of the novel coronavirus will be far more dire because it is likely to coincide with the start of flu season.

"There's a possibility that the assault of the virus on our nation next winter will actually be even more difficult than the one we just went through," CDC Director Robert Redfield said in an interview with The Washington Post. "And when I've said this to others, they kind of put their head back, they don't understand what I mean."

"We're going to have the flu epidemic and the coronavirus epidemic at the same time," he said.

Having two simultaneous respiratory outbreaks would put unimaginable strain on the health-care system, he said. The first wave of covid-19, the disease caused by the coronavirus, has already killed more than 42,000 people across the country. It has overwhelmed hospitals and revealed gaping shortages in test kits, ventilators and protective equipment for health-care workers.

In a wide-ranging interview, Redfield said federal and state officials need to use the coming months to prepare for what lies ahead. As stay-at-home orders are lifted, officials need to stress the continued importance of social distancing, he said. They also need to massively scale up their ability to identify the infected through testing and find everyone they interact with through contact tracing. Doing so prevents new cases from becoming larger outbreaks.

Asked about protests against stay-at-home orders and calls on states to be "liberated" from restrictions, Redfield said: "It's not helpful." The president himself has tweeted encouragements of such protests, urging followers to "LIBERATE MINNESOTA!" and "LIBERATE MICHIGAN!"

Redfield said that he, along with other members of the White House coronavirus task force, have emphasized the importance of social distancing "and the enormous impact that it's had on this outbreak in our nation."

As part of the White House guidelines released last week for a gradual reopening of the country, testing by CDC teams is already underway in nursing homes in four states for asymptomatic cases. The four states are Nebraska, New Mexico, North Dakota and Tennessee.

The CDC has also drafted detailed guidance for state and local governments on how they can ease mitigation efforts, moving from drastic restrictions such as stay-at-home orders in a phased way to support a safe reopening. Redfield said that guidance will be "in the public domain shortly."

The CDC has about 500 staff in the states working on a variety of public health issues, and most will pivot to the covid-19 response, Redfield said. The CDC also plans to hire at least another 650 people as experts to "substantially augment" public health personnel in the states and assist with contact tracing, among other tasks, he said.

But he acknowledged a much larger workforce is needed. Redfield said the agency is talking with state officials about the possibility of using Census Bureau workers and Peace Corps and AmeriCorps volunteers to build "an alternative workforce."

The Census Bureau had earlier suspended field operations because of the pandemic and census personnel are already located in every jurisdiction, Redfield said. If there is an agreement to use census workers, they could be trained "to be part of a comprehensive contact tracing effort," he said.

"These are all discussions that are going on to try to determine what is the optimal strategy to be used," he said. "And it may be some combination of all three."

Former CDC director Tom Frieden has estimated that as many as 300,000 contact tracers would be needed in the United States. The Johns Hopkins Center for Health

Security and the Association of State and Territorial Health Officials — which represents state health departments — estimate 100,000 more contact tracers are needed than are in the states now and call for $3.6 billion in emergency funding from Congress.

In the summer months, U.S. health officials need to persuade Americans to think ahead to the fall and the importance of getting flu shots. That way, public health officials can minimize the number of people hospitalized from flu. Getting a flu vaccination, Redfield said, “may allow there to be a hospital bed available for your mother or grandmother that may get coronavirus.”

Luckily, the arrival of the novel coronavirus in the United States came as the regular flu season was waning, he said. By itself, a severe influenza season can strain hospitals and clinics.

If the first wave of the coronavirus outbreak and flu season had peaked at the same time, he said, “it could have been really, really, really, really difficult in terms of health capacity.”

During the 2009 H1N1 swine flu pandemic, the United States experienced the first wave of cases in the spring, followed by a second, larger wave in the fall and winter, during flu season.

This is What Everyone Can Do to Reduce SARS-CoV-2 Spread During Civil Protesting

Civil unrest over George Floyd's murder during this SARS-CoV-2 pandemic will increase community transmission of this highly contagious virus and contribute to increased incidence of morbidity and mortality associated with COVID-19. Any large gathering creates risk for transmission. This risk impacts all participants in protests, including protestors, law enforcement officers, journalists, and bystanders. While many have urged protestors to wear facemasks to reduce virus spread, no specific, written safety recommendations for these activities have been developed to mitigate risk or to plan for an outbreak among anyone who attends, as well as their household members. Moreover, protestors themselves do not control all of the factors contributing to risk. For example, law enforcement officials control rules of engagement, including the circumstances when booking and incarceration are employed rather than citation. Public health authorities perform or facilitate testing, early diagnosis, contact tracing, and treatment. All of these actions can reduce the risk of spread of COVID-19. We invite all stakeholders to engage in these considerations and discuss what they can do to reduce transmission in their communities, agencies, and jurisdictions.

The right to join others in protest or peaceful assembly is critical to a functioning democracy. Speech and assembly are core Constitutional First Amendment freedoms. Protests against injustice are an essential activity to call attention to and combat civil rights violations and structural racism. As abstinence in the form of strict adherence to stay-at-home orders is widely viewed as an unacceptable response, tantamount to silence or inaction, harm reduction during and following these protests will reduce the risk of SARS-COV-2 spread in our communities. The responsibility of law enforcement officials to uphold the law includes the responsibility to protect the rights of individuals to assemble.

Epidemiological studies show that large, crowded, and loudly expressive events that involve shouting or singing increase the spread of SARS-COV-2, causing COVID-19 outbreaks. Recent studies show as many as 80% of infected cases are asymptomatic, making close physical proximity to potentially infected individuals dangerous. In addition, CDC has long warned that sneezing and coughing also significantly spread the virus. Asymptomatically infected people are unaware of their contagiousness, but nonetheless spread the virus. The series of recommendations below may reduce harm by decreasing the transmission of the virus during civil rights protests, with a focus on the role of protesters and observers, law enforcement personnel, and public health officials.

How can persons participating in group protests reduce the risk of SARS-CoV-2 spread?

1. All protesters, journalists, public safety personnel, bystanders, and public officials attending protests should wear facemasks covering their mouths and noses at all times and goggles to protect against tear gas and pepper spray.
2. Carry extra facemasks to distribute to others (not wearing facemasks). As we say, my mask protects you and your mask protects me.
3. Attend vigils and protests with persons you have sheltered-in-place with, such as household members.
4. To protect your fellow protestors, stay home if you have potential COVID symptoms.
5. Always maintain at least 6 feet of physical distance from any other person (two arms lengths).

6. Consider alternatives to loud chanting, singing, and shouting. Examples include use of drums and other noise makers and carrying signs. Consider the effect of contemplative, soulful, soft chanting as a dramatic way to protest in public.
7. Carry hand sanitizer, use it often, and share it liberally with others.
8. Many protesters are traveling to and during protest events. Continue safe spacing, face masks and soft voice practices while you make your way to and from the protest.
9. Self-quarantine when you return home. This is especially important when your household members are at high risk for COVID-19 (e.g., adults age 60 and older, household members with diabetes, or underlying heart and lung diseases).
    1. Wearing a mask and physical distancing from household members while at home during the period after the protest may suffice if self-quarantining is not possible.
    2. Check your temperature and monitor yourself daily for symptoms of COVID-19. Immediately consult a healthcare provider and obtain SARS-COV-2 testing if fever, shortness of breath, cough, sore throat, diarrhea, loss of smell or taste, or headache develop in the days following the protest event.
    3. Persons who are without symptoms after attending protests may end their quarantine period once they receive a PCR test (such as those offered free in many locations) for the virus that is negative, indicating no infection. In the case of a known close contact to someone with COVID-19, consult and follow the recommendations of a physician or local public health.
    4. In the absence of a test, it is recommended to self-quarantine for 14 days.
10. We recommend SARS-COV-2 testing 3-7 days following a protest to detect asymptomatic disease for anyone present at the event. For those who do not have access to asymptomatic testing through their health care providers, the State of California has set up free testing sites throughout the State in partnership with Verily. See https://covid19.ca.gov/testing-and-treatment/ for details. Persons outside of California can check with local public health websites.
    1. Activists groups and coalitions should develop internal strategies for encouraging members to notify them if they test positive for COVID and for then safely sharing this information with their fellow protesters who were potential contacts.
11. Minimize the sharing of personal items, such a phones. If you do share them, make sure to wipe them down with an alcohol wipe before you re-use them.

How can law enforcement agencies reduce the risks of SARS-CoV-2 spread?

1. Law enforcement officers and field support staff should wear facemasks covering their mouth and nose at all times on duty or when transiting to duty areas. Facemasks should remain on whenever speaking with protestors, other officers, or field workers.
2. Tear gas and other agents cause sneezing, coughing, and tearfulness; additionally, pain increases the likelihood that people will touch their face. Their use may accelerate the spread of the SARS-COV-2 among *all* in attendance, protestors and law enforcement officers alike. Agencies may wish to consider re-evaluating their protocols for use of these tools during the SARS-CoV-2 pandemic.
3. Likewise, procedures commonly employed to subdue or arrest protestors – and observed in video and photographic accounts of recent protests – can spread SARS-CoV-2. These include removing face masks, handcuffing and seating protestors shoulder-to-shoulder for prolonged periods, and placing protestors in prone positions where faces rest on pavement. These approaches do not permit safe physical distancing, prevent mouth or nose covering with

coughing or sneezing, and cause contact with surfaces that harbor virus. Agencies should consider the following:

1. Facemasks that remain on with adequate space for breathing are essential. Provide clean masks to protestors who do not have one, for their protection and for the protection of law enforcement officials.
2. Vehicles are often crowded and unsafe for transporting protesters and law enforcement officers. Consider issuing citations and court summons on site. Face masks and physical distancing throughout the process will reduce the risk of infection spread.
3. Local jails may be poorly ventilated and over-crowded. Close confinement during the COVID-19 pandemic is unhealthy for protesters, law enforcement and corrections officers alike. Arraignment may be necessary, but consider rapid processing and release of non-violent protesters to return for legal hearings later.
4. Where incarceration is required, facemasks, frequent handwashing with soap and water, and physical distance are important to protect all in a jail environment from SARS-COV-2.
5. Avoid using the public health term “contact tracing” to apply to law enforcement activities. Contact tracing is an essential public health tool for reducing COVID-19 transmission. Its use outside of public health will confuse the public and reduce trust in public health.

How can local public health agencies reduce risks of SARS-CoV-2 spread in connection with protests?

1. Issue local evidence-based official guidance to reduce SARS-COV-2 spread.
2. Increase available test sites in the community and ensure existing community testing resources remain open.
    1. Closing testing sites will further and disproportionately harm individuals and communities already most burdened by the COVID-19 pandemic and by racism.
    2. Innovate drive-through and other forms of pop-up and mobile testing opportunities for COVID-19 hot-spots to address urgent and changing needs.
3. Collaborate with the community and provide outreach testing and diagnostic services for persons attending protests, law enforcement officers and journalists.
    1. Collaborate with formal and informal community leaders to develop resources and coalitions to develop (SARS-COV-2) testing and case-finding approaches, contact tracing, and rapid treatment, where COVID-19 develops.
    2. Create social marketing campaigns to improve adherence to facemask use, physical distancing, handwashing, and testing and treatment recommendations.
    3. Partner with community leaders and local media to communicate messages that emphasize harm reduction during protests as a valuable, feasible, effective tool to prevent COVID-19 (e.g., *promotoras de salud,* community health workers).
    4. Implement policies and procedures that protect privacy of SARS-COV-2 test results and treatment and confidentiality of contact tracing information above and beyond regulatory minimum standards.
    5. Collaborate with formal and informal community leaders, including protest principals, law enforcement, and local and state legislators to develop ongoing dialogue and policy formation that include reforms that eliminate structural racism.
4. Ensure that critical public health and medical services remain open and available wherever possible to meet the needs of the communities you serve.

COVID-19 has disproportionately harmed communities of color across the nation. First responders also been affected due to their work. Everyone has a stake in reducing the risk of the spread of SARS-CoV-2 to themselves and their families. We encourage all stakeholders to actively engage with one another and adopt policies and practices to reduce transmission in their families, communities, agencies, and jurisdictions.

Signed,

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California Healthline Daily Edition

LATEST CALIFORNIA HEALTHLINE STORIES

Daily Edition for Friday, June 5, 2020 (https://californiahealthline.org/morning-briefing/friday-june-5-2020/)

June 5, 2020

Newsom Warns California Residents To Brace For Surge Of Cases Following Protests (https://www.sfchronicle.com/bayarea/article/Newsom-says-protests-may-cause-California-s-15318507.php): "If you're not [concerned], you're not paying attention to the epidemiology, to the virulence of this disease," Gov. Gavin Newsom said. Newsom added that he's concerned about the virus' disproportionate impact on California's black community, which accounts for nearly 5% of all positive cases but 10% of virus-related deaths. Mark Ghaly, secretary of the California Health and Human Services agency, said the effects of the protest on the spread of the virus will not be known for weeks. He emphasized the "importance of the freedom and liberty to protest," but said, "it does create infectious disease concern that we weren't contending with before."

Daily Edition for Thursday, June 4, 2020 (https://californiahealthline.org/morning-briefing/thursday-june-4-2020/)

June 4, 2020

'The Bottom Dropped Out Overnight': Hospitals Reeling From Pandemic's Financial Blow (https://www.sfchronicle.com/business/article/California-hospitals-lose-billions-to-15315296.php): California hospital revenue plummeted by more than a third in the first four months of the pandemic as costs to care for coronavirus patients rose, a shocking financial blow that threatens to raise health care prices, according to a recent report. The report, published Wednesday by the California Health Care Foundation, said hospital revenue fell by a cumulative $13 billion from March to June — a 37% reduction from pre-coronavirus levels — as state and local shelter-in-place orders nearly eliminated surgeries and halved emergency room visits. Even with some patients now returning to hospitals as restrictions ease, dire financial losses persist. The report projected that beyond immediate financial losses, the state's economic recession could reshape health care as jobless Californians lose employer-sponsored coverage and shift to either Medi-Cal or stay uninsured, which means less reimbursement for hospitals. Read more from Mallory Moench of the San Francisco Chronicle (https://www.sfchronicle.com/business/article/California-hospitals-lose-billions-to-15315296.php).