UNIVERSITY OF CALIFORNIA
HEALTH

October 2, 2020 Update

COVID-19 AND 'CORONAVIRUS' UPDATES

CARRIE L. BYINGTON, MD
Executive Vice President, University of California Health

THE IMPACT ON OUR HEALTH SYSTEM

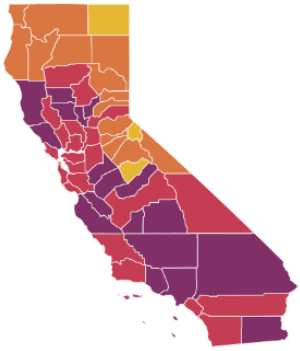
This is the 24th update for Regents regarding the SARS-CoV-2 virus pandemic and its impact on the University's health and academic enterprise.

COVID-19 BY THE NUMBERS

The pandemic continues in the United States, with a number of grim milestones. Since the September 4th update, the number of cases in the U.S. has risen to 7.2 million, and the number of COVID-19 deaths surpassed 200,000 and today stands at 207,302. Yesterday, we learned the President and First Lady of the United States have tested positive for SARS-CoV2. We wish them and all who have been infected with SARS-CoV-2 a full recovery.

We enter the fall with the knowledge that at least 90% of the U.S. population remains susceptible to SARS-CoV2. Daily testing alone did not protect the most powerful person on Earth. States in the Sunbelt and Midwest are experiencing outbreaks, with high case numbers per capita. In absolute numbers, Texas, California, Wisconsin, Florida and Illinois have reported the highest number of new cases in the past seven days. **Most Americans are coming to the realization that the pandemic is far from over.** We must continue to work together, using all public health measures available to drive down transmission and to protect our population.

The California Department of Public Health (**CDPH**) reports 813,687 cases and 15,888 deaths to date. CDPH reports some encouraging news as the 7-day rolling positivity rate in California decreased to 3.4%. The number of hospitalized patients with confirmed or suspected COVID-19 has declined to fewer than 3,300. Currently, 69% of test results are being returned in one day and 90% within two days. As of this week, a number of counties have improved from 'widespread' (purple) to 'substantial' (red) designation, allowing incremental loosening on business operations.



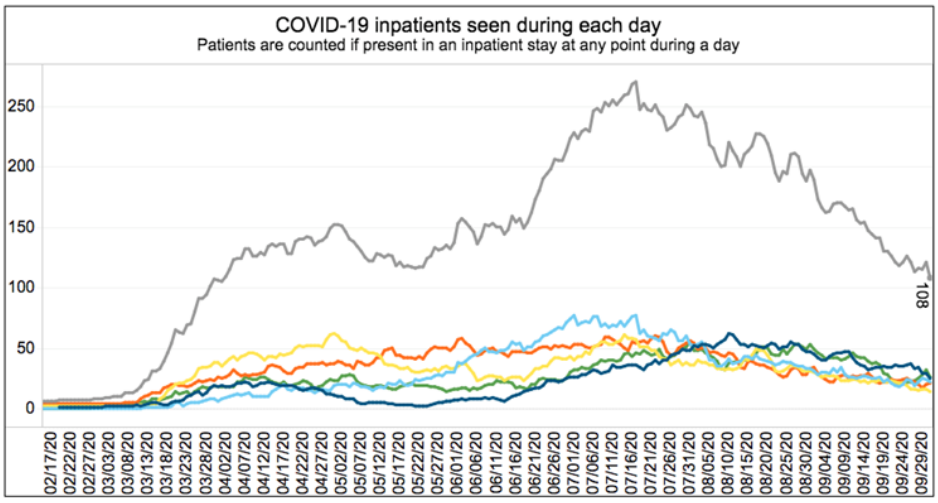
County	UC Location(s)	State Tier	Adj Case Rate (per 100K)	Test Positivity (%)
ALL	ANR	N/A		
San Francisco	UCSF, UCSF Health	Moderate	3.2 (-0.1)	2.0 (-0.3)
Alameda	UC Berkeley, LBNL, LLNL	Substantial	4.1 (+0.6)	2.3 (-0.2)
Orange	UC Irvine, UC Irvine Health	Substantial	4.4 (+0.8)	3.1 (-)
Riverside	UC Riverside	Substantial	6.7 (-)	5.8 (-0.6)

Sacramento	UC Davis Health	Substantial	6.8 (+0.2)	4.6 (-)
San Diego	UC San Diego, UC San Diego Health	Substantial	6.7 (-0.2)	3.5 (-0.3)
Santa Barbara	UC Santa Barbara	Substantial	4.5 (-2.2)	3.2 (-1.6)
Santa Cruz	UC Santa Cruz	Substantial	7.0 (+0.4)	3.5 (-0.4)
Yolo	UC Davis	Substantial	3.1 (-1.6)	2.5 (-1.7)
Los Angeles	UCLA, UCLA Health	Widespread	7.3 (+0.3)	2.9 (+0.1)
Merced	UC Merced	Widespread	6.9 (-2.7)	3.6 (-1.4)

On October 6, the state will add another dimension to its color-tier system. The new "health equity" measurement drills down into the average positivity rate reported by a county for a more granular assessment of how widespread the infection is in disadvantaged neighborhoods. In large counties, while the average positivity rate may be relatively low, certain neighborhoods and populations may have much higher positivity rates. In order for a county to move to a less-restrictive tier, the disadvantaged neighborhoods — measured by a variety of social, health and economic factors — must come within 5% of the positive test rate required for that tier.

The new measurement is an effort to ensure that disproportionately impacted areas remain a focus of local efforts. This may result in some counties delaying loosening of restrictions, but it is a 'leave no one behind' effort to ensure that all California communities have the resources they need to address the pandemic. The University of California is contributing to these efforts through a number of initiatives across the state, some of which are highlighted in this update.

The people of California have worked hard to suppress spread of the virus, and yet we still do not know whether easing of restrictions will drive another bump in cases. As of October 1, the number of inpatients with a COVID-19 diagnosis is 108.



Source: UCH Data Warehouse. Please note that on September 11, we made a change to the algorithm used to generate many of our numbers. We are now only counting COVID-19 admissions if a positive test occurred up to 30 days prior, or during, the admission. All trend lines have been retroactively updated. Our previous practice was to count any and all admissions after a positive SARS-CoV-2 test. Now we will restrict to admissions 30 days or fewer after a positive test, so some of the numbers have dropped.

USE OF STATINS ASSOCIATED WITH BETTER OUTCOMES

UC San Diego Health researchers recently reported that statins — widely used cholesterol-lowering medications — are associated with reduced risk of developing severe COVID-19 disease, as well as faster recovery times. A second research team at UC San Diego School of Medicine has uncovered evidence that helps explains why: In short, removing cholesterol from cell membranes prevents the coronavirus from getting in.

A molecule known as ACE2 sits like a doorknob on the outer surfaces of many human cells, where it helps regulate and lower blood pressure. ACE2 can be affected by prescription statins and other medications used for cardiovascular disease. In January of this year, researchers discovered a new role for ACE2: SARS-CoV-2, the coronavirus that causes COVID-19, primarily uses the receptor to enter lung cells and establish respiratory infections.

The researchers found that statin use prior to hospital admission for COVID-19 was associated with a more than 50% reduction in risk of developing severe COVID-19, compared to those with COVID-19 but not taking statins. Patients with COVID-19 who were taking statins prior to hospitalization also recovered faster than those not taking the cholesterol-lowering medication. The findings came by retrospectively analyzing the anonymized data from the electronic medical records of 170 patients with COVID-19 and 5,281 COVID-negative control patients hospitalized at UC San Diego Health between February and June 2020. Moving forward, researchers will partner with the American Heart Association to analyze thousands of patients all over the country to corroborate the data.

The clinical study, published September 15, 2020, in American Journal of Cardiology, was led by Lori Daniels, MD, professor and director of the Cardiovascular Intensive Care Unit at UC San Diego Health, and Karen Messer, PhD, professor and chief of the Division of Biostatics and Bioinformatics in the Department of Family Medicine and Public Health.



From left: Lori Daniels, MD, Karen Messer, PhD, and Tariq Rana, PhD

The mechanistic study, published September 18, 2020, in The EMBO Journal, was led by Tariq Rana, PhD, professor and chief of the Division of Genetics in the Department of Pediatrics at UC San Diego School of Medicine and Moores Cancer Center.

UC PILOTS EXPOSURE NOTIFICATION APP

Two University of California campuses are piloting the use of a smartphone technology that will notify users if they have had a high-risk COVID-19 exposure that may result in infection. Importantly, privacy and security are central to the design of the technology, which does not collect location data from any device and never shares user identities.

The effort uses Google/Apple Exposure Notification (GAEN) technology on smartphones to supplement the essential work of human contact tracers and help further reduce the spread of SARS-CoV-2. A major goal of this pilot is to determine if using this smartphone technology can encourage users to respond to a high-risk exposure more quickly by self-isolating and receiving additional clinical resources, which are key to limiting the spread of the virus that causes

COVID-19. Dr. Chris Longhurst, chief information officer and associate medical director at UC San Diego Health, spearheaded the effort.

The limited pilot program is rolling out now at UC San Diego. UCSF plans to start using this technology in October for students, faculty and staff participating in onsite activities at select locations. These pilots will allow those who volunteer to use the technology to receive automatic smartphone notifications of a potential exposure to other enrolled users diagnosed with COVID-19, regardless of whether the users know each other. Other UC locations, including UC Office of the President, are likely to join the effort.


Chris Longhurst, MD

The Google/Apple technology employs Bluetooth to communicate with other Bluetooth-enabled devices nearby, such as the smartphones of people who at the same time are traveling on a plane, standing with in line at a grocery store or sharing space inside a classroom or dormitory. When a person opts into using the Google/Apple notification system, the user's phone broadcasts a random identification (ID) number to other phones in the area. When phones come within 6 feet of each another, they log each other's IDs — without names or locations attached.

If a person is later diagnosed with COVID-19, they can voluntarily enter a keycode indicating they received a positive test result. This approach will generate an anonymous alert to other users based on proximity and length of exposure.

As part of the privacy-first approach, users decide whether they want to share a verified positive test result with the app and determine whether they want to share that with other users. State and university epidemiologists will review the results of the pilot to determine how to optimize the smartphone-based technology and whether it should be rolled out more broadly.

We will need multiple approaches to exposure notification to meet the preferences and needs of individual Californians. This is a promising avenue to explore to supplement traditional methods. Fortunately, UC has the capacity to work on multiple fronts in the fight against COVID-19.

UC DAVIS WINS GRANT TO TRAIN COMMUNITY HEALTH WORKERS

UC Davis and two other universities have been awarded a $2.3 million grant from the National Institutes of Health to train and empower community health workers in research best practices, which could help reduce disparities related to the ongoing COVID-19 pandemic.

The grant from the NIH's National Center for Advancing Translational Sciences is shared by the UC Davis Clinical and Translational Science Center (CTSC) and the Center for Reducing Health Disparities (CRHD), the University of Michigan, and the University of Florida. All three universities do extensive work in promoting health equity among Latinx and Black populations. At UC Davis, the effort is led by Sergio Aguilar-Gaxiola, director of the CRHD and also director of the community engagement program of the CTSC.

Sergio Aguilar-Gaxiola, MD, PhD

The award acknowledges the increasing role that community health workers play in research to engage individuals from underserved communities.

Community health workers, sometimes known as promotoras de salud, are frontline public health workers who are trusted members of the community or have an unusually close understanding of the community they serve; sometimes they are embedded within underserved communities.

In recent years, they have taken on a critical role in research for their ability to reduce barriers in translation, particularly in in the area of health disparities.

The grant's timing allows Spanish-speaking community health workers to be trained in critical research like contact tracing to help slow the spread of COVID-19. UC Davis Health also will work closely with partners that can assist in outreach and recruitment, including the Mexican Consulate in Sacramento, Health Education Council, Rio Vista CARE and other organizations.

Latinx persons in California are infected with COVID-19 at a rate more than three times higher than whites, according to CDPH. Latinx, who are 39% of California's population, make up 60% of COVID-19 cases. Also, nearly 80% of COVID-19 related deaths in the 35-49 age group are Latinx, while this age group represents 41.5% of the California population. In the same age group, whites represent 7.8% of the deaths and 32.5% of the population.

UCSF CONTINUES TESTING DRIVES IN HARD-HIT COMMUNITIES

UCSF is partnering with Oakland-based community groups to sponsor two days of free mass testing in Oakland's Fruitvale neighborhood, and is organizing another testing drive for the unhoused in San Francisco's District 6, which includes the Tenderloin, Civic Center, Mid-Market, SOMA, Yerba Buena, Rincon Hill, South Beach, Mission Bay and Treasure Island.

The testing in Oakland is focused on the area's sizeable Latinx community. Both swab testing to diagnose active infections and antibody tests to detect past infections will be available. Organizers will help guide anyone who tests positive to the appropriate health and support services and ensure they have the food, housing and financial resources to go into quarantine or isolation. The effort is a collaboration among several community groups. "The data we collect will inform advocates, public health officials, and clinicians involved in the care of the Fruitvale community," said Alicia Fernández, MD, professor of medicine and director of the UCSF Latinx Center of Excellence. "We will make every effort to disseminate the data broadly so all can benefit."

In San Francisco, a coalition led by the UCSF Benioff Homelessness and Housing Initiative, Glide Church, St. Anthony's, the SF Department of Public Health, and District 6 Supervisor Matt Haney's Office will conduct two days of testing. The outreach focuses on unsheltered people. Mobile testing teams will visit encampments and other places where unsheltered individuals are staying to offer testing. People do not need to have symptoms to get tested. The participating organizations will offer support for people who test positive.

In both efforts, the testing is not considered a 'public charge' and will not adversely affect anyone's immigration status.

UCLA TO LEAD STATEWIDE STOP COVID-19 COALITION FUNDED BY NIH

UCLA will lead a coalition of 11 academic institutions to develop a statewide, community-engaged approach to addressing COVID-19. The coalition, called the COVID-19 California Alliance (STOP COVID-19 CA), is funded by a $4.1 million grant from the National Institutes of Health (NIH) and is part of the NIH's Community Engagement Alliance (CEAL) Against COVID-19 Disparities. CEAL teams across the nation focus on COVID-19 awareness and education research, especially among Black, Latino, and Indigenous populations that account for over half of all reported cases in the United States.

STOP COVID-19 CA brings together five medical centers across the UC system, UC Merced, UC Riverside, the University of Southern California, Stanford University, Scripps Research and San Diego State University. Using community-partnered principles, each site within STOP COVID-19 CA will rely on locally informed approaches, leveraging unique partnership networks and insights within each community to address local problems. The lessons learned from these efforts will help identify opportunities for application statewide and nationally.

Keith Norris. MD.

"The goals of STOP COVID-19 CA are to work with this network of partnerships across the state to reduce disparities in knowledge of COVID-19; increase participation of all Californians, including underrepresented populations, in prevention, vaccine, and therapeutic trials, and improve uptake of approved vaccines," said Dr. Keith Norris, a professor of medicine and vice-chair of the department of medicine's Office of Equity, Diversity, and Inclusion at the David Geffen School of Medicine at UCLA and a co-leader of the project.

UC DAVIS HEALTH TO OFFER FREE TESTING TO AREA FARMWORKERS

Four UC Davis research centers will share a $3.7 million grant to offer free COVID-19 testing for agricultural workers in the Central Valley, where the coronavirus pandemic has reached alarming levels, the National Institutes of Health (NIH) announced Wednesday.

The funding for the UC Davis Environmental Health Sciences Center, Clinical and Translational Science Center (CTSC), Center for Reducing Health Disparities and Comprehensive Cancer Center is part of a national strategy to improve COVID-19 testing for underserved and vulnerable populations. Under the initiative, UC Davis will send two mobile health vans to offer rapid antigen testing at locations convenient for the workers and their families. The university will hire a clinical coordinator and lab tech for each van, and work side-by-side with community partners who have longstanding relationships with farmworker groups.

California's hundreds of thousands of farm workers, the vast majority of whom are Latinx and considered essential workers, are among the state's highest risk populations for COVID-19 infections and complications.

SOME OF THE HEROES OF THE PANDEMIC

Top L: Former NFL player Armonty Bryant has a new outlook on life after a kidney transplant from an anonymous donor at UC San Diego Health.

Top R: UCLA endocrinology fellow Dr. Karen Tsai & brother, Dr. Kevin Tsai, run @DonatePPE and presented this year's Emmy for Outstanding Supporting Actor in Drama Series.

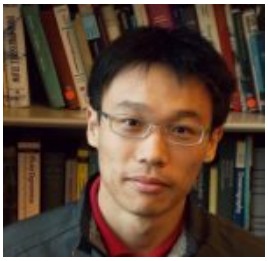
Center L: The Martino family established Matteo's Dream Fund to provide care for facility dogs Huggie, Paloma & Zeebee who bring so much joy to hospitalized patients at UC Davis Children's Hospital. The Martinos established the fund in honor of their son.

Center R: UCI reminds us about the risks of Sepsis and encourages you to learn more.

Bottom: Flu season is almost here. (L) Governor Gavin Newsom gets his flu shot live on TV to encourage the public to be vaccinated this month. Chancellor Sam Hawgood, MD, sets the example at UCSF.

CDC MODEL ADDS UC SAN DIEGO FORECAST

A computational model that forecasts the number of COVID-19 deaths in the U.S. developed by a team of researchers from UC San Diego and Northeastern University is now part of the national mortality forecast issued by the Centers for Disease Control.



Yian Ma, PhD

UC San Diego joins a roster of prestigious institutions who are included in the CDC's prediction algorithms, including Harvard, Johns Hopkins and Notre Dame. At University of California, three institutions are part of the forecast: UC San Diego, UCLA and UC Merced. The UC San Diego-Northeastern model, called DeepGLEAM, is unique because it combines a physics-based model, known as GLEAM, with deep learning—a computing system made up of algorithms inspired by the way the human brain is organized. The hybrid model leverages rich data information about COVID-19 from the real world, such as when a person had been infected and where they have traveled.

Qi (Rose) Yu, PHD

Currently, the UCSD model is predicting a steady increase in the number of deaths during flu season, without dramatic spikes. "Our goal is to provide insights to policymakers as they make decisions about reopening," said Yian Ma, an assistant professor at the UC San Diego Halicioglu Data Science Institute who co-leads the UC San Diego modeling effort with Rose Yu, assistant professor in the Department of Computer Science and Engineering.

MEDICAID, CHIP AND COVERED CALIFORNIA ENROLLMENT GROWS

On September 30, the Centers for Medicare & Medicaid Services (CMS) released a report showing enrollment in Medicaid and CHIP nationally grew by more than four million nationally - a 5.7% increase - between February and June 2020. The monthly snapshot illustrates the early impact of the loss of employer-sponsored health care as pandemic-related job loses reverberated throughout the economy.

Covered California, the state's health insurance exchange, reported it had reached its the highest number of new covered members since its launch in 2014 and noted far more new enrollees were signing up after losing job-based coverage. The individual market has always served as an option for those without other coverage options and for those who experience changes in life circumstances such as job loss. California recorded 3.1 million unemployment claims in July 2020, translating to an estimated 1.4 million workers and their dependents potentially losing employer-sponsored insurance. Covered California enrollment now exceeds 1.53 million. In Covered California's policy brief of September 22, it also noted that people who disenroll from commercial exchange-provided plans are more often transitioning to Medi-Cal rather than to employer-sponsored insurance, which had been the pattern.

Covered California Special Enrollment Plan Selections: 2019 and 2020

Measures	2020	2019	Difference (2019 to 2020)	Percent Change
Pre-COVID SEP (Feb. 1 to March 19)	67,710	54,780	12,930	24%
Post-COVID SEP (March 20 to Aug. 31)	**289,460**	**134,700**	**154,760**	**115%**
Total (as of August 31)	357,170	189,470	167,700	89%

Source: Covered California administrative data.

UCH HOSPITALS RECOGNIZED FOR LGBTQ HEALTH CARE EQUALITY

University of California Health (UCH) hospitals across the state have been recognized as LGBTQ Healthcare Equality Leaders in the Human Rights Campaign Foundation's 2020 Healthcare Equality Index (HEI). The HEI, now in its 13th year, benchmarks health care facilities across the nation on policies and practices dedicated to the equitable treatment and inclusion of lesbian, gay, bisexual, transgender and queer patients, visitors and employees. A record 765 health care facilities nationwide participated in this year's HEI.

UCH locations earning the Healthcare Equality Leader designation all achieved the required score of 100 in the evaluation:

- UC Davis Health's Medical Center, which was recognized for the 10th consecutive year, and UC Davis Student Health and Counseling Services.
- UCI Health's Medical Center.
- UCLA Health's Ronald Reagan UCLA Medical Center, UCLA Mattel Children's Hospital, UCLA Resnick Neuropsychiatric Hospital, and UCLA Health – Santa Monica Medical Center. UCLA Health has been recognized each year since 2013.
- UC San Diego Health, with hospitals in La Jolla and Hillcrest, and clinics across the region, earned the designation for the eighth consecutive year.
- UCSF Health, including UCSF Medical Center and UCSF Benioff Children's Hospital San Francisco, which was the first major medical center in the nation to participate in the HEI when it was created in 2007 and the only major institution nationally to have received Equality Leader status for 13 consecutive years.

UC CAMPUSES BEGIN FALL WITH LIMITED DORM OCCUPANCY

UC Merced and UC Berkeley, both of which are semester campuses, were the first to open for fall classes, using remote learning and significantly reduced occupancy in dorms.

At UC Merced, there are 388 students housed on campus in compared to 4,016 that would have been expected for the fall semester. Housing was offered to students who petitioned for on-campus housing on grounds that it was the safest, only or most financially secure option. On-campus housing is limited to one student per dorm room. UC Merced implemented an asymptomatic testing protocol for returning students. The campus surveillance testing strategy, developed in partnership with UCSF, uses a lot quality assurance methodology to conduct random testing on a weekly basis. The University is using the same protocol for faculty and staff who are accessing the campus.

Since the August 1 start of the testing protocol, the student positivity rate is 0.6% out of 749 unique persons tested, and the positivity rate among employees is 0%. Weekly updates are posted at: https://doyourpart.ucmerced.edu/covid-19-statistics

At UC Berkeley, approximately 5,500 students are housed on-campus, with around 1,700 undergraduates and resident advisors/resident directors living in dorms. Resident halls are at 25% of typical capacity and operating using single occupancy. Some apartment style housing is a combination of single and double occupancy.

Berkeley's students, resident advisors and resident directors in dorms are offered twice-a-week testing. The same pattern of testing is suggested for everyone living in other types of on-campus housing. Persons living off-campus are encouraged to be tested weekly. Among all 14,757 tests performed thus far on 4,472 unique students who are living in University housing, 78 positive tests have yielded a positivity rate of 1.7%. UC Berkeley provides additional views of test counts and positivity rate by other populations at: https://datastudio.google.com/u/0/reporting/1yEtW1v20JYo9l75j4Ma3C4MDDxdXhWry/page/F4QXB

At both campuses, concern remains about student anxiety, stress and loneliness due to physical distancing requirements and few in-person social events.

Early observations note that the student arrival policy recommended by the system-wide Testing and Tracing Task Force which recommended testing on arrival followed by sequestration and repeat testing has been associated with safer re-entry for the campus community.

Students were tested, move in times were staggered, and periodic testing and contact tracing programs are in place. All are reporting low rates of positivity for COVID-19 and the UCH Coordinating Committee continues to work with all campuses to support their plans for responsible on-campus activities.

IN CLOSING

We have officially entered the fall season and all the changes that come with it. In a pandemic year, the fall looks different and is associated with many uncertainties and anxieties. Classes have started for students in K-12 and across our universities, the weather is turning cooler, and we will start to be inside more. We know that we may be entering the next phase of the pandemic which is our first winter with COVID-19 in the U.S.

As a pediatrician, I would always use the Fall to prepare my patients for the winter. I called it winterizing. I made sure vaccines were up to date, the flu shot was given, prescriptions for asthma medications were updated and many other recommendations that could make for a healthier winter. These suggestions still make sense, and with the pandemic, it is even more important to conserve our strength, protect ourselves, and prepare our families and communities for winter.

This winter our collective mental health needs even more attention. We do not know when the pandemic will end and living with this uncertainty is difficult. Acknowledging the uncertainty, cultivating healthy habits and practices, and looking to our communities for support may make the winter easier to bear. I am following the advice of Dr. Virginia Sturm and colleagues at UCSF to engage in “awe walks.” I have found these moments to engender gratitude and a sense of calm. I also enjoy taking pictures of the beautiful flora and fauna that we have in our own backyards.

If anyone needs mental health support during these difficult times, the STAND Together During COVID-19 website at UCLA, in collaboration with Beyonce's BeyGOOD Foundation and the Start Small fund, offers resources and tools designed to lift moods and ease anxiety and depression.

The pandemic will continue to shape us as a society and our actions will define our world for generations. In these challenging times, I am grateful to work with colleagues across the University of California and for their ongoing commitment to the health and well-being of our students, employees, and all Californians.

With Gratitude.

Carrie L. Byington, MD
Executive Vice President
University of California Health