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THE IMPACT ON OUR HEALTH SYSTEM

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

As of April 15, there are 26,182 confirmed cases and 890 deaths in California, according to the [California Department of Public Health](#). The [Centers for Disease Control and Prevention](#) reported 632,548 confirmed and probable cases in the U.S. and 31,071 deaths attributable to COVID-19, as of April 16. We believe that we are entering the peak of the first wave in the U.S. and in California. We are hoping to begin to report declining numbers of cases in the weeks to come.

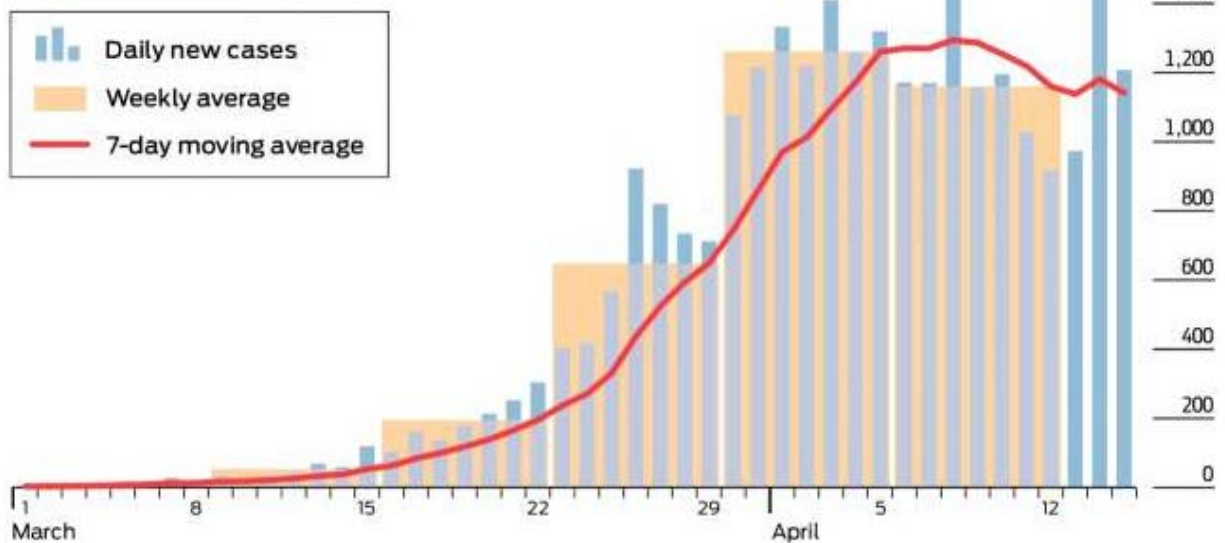
ENCOURAGING TRENDS STATEWIDE AND IN SF BAY AREA COUNTIES

We not only look at our data, seen in subsequent pages of this update, but also data from multiple sources to understand context and trends.

On April 16, the [San Francisco Chronicle](#) compared the number of new cases statewide and five Bay Area counties. The new case trends are encouraging, but the number of deaths per day statewide hit 96.

California curve

Confirmed coronavirus cases since March 1

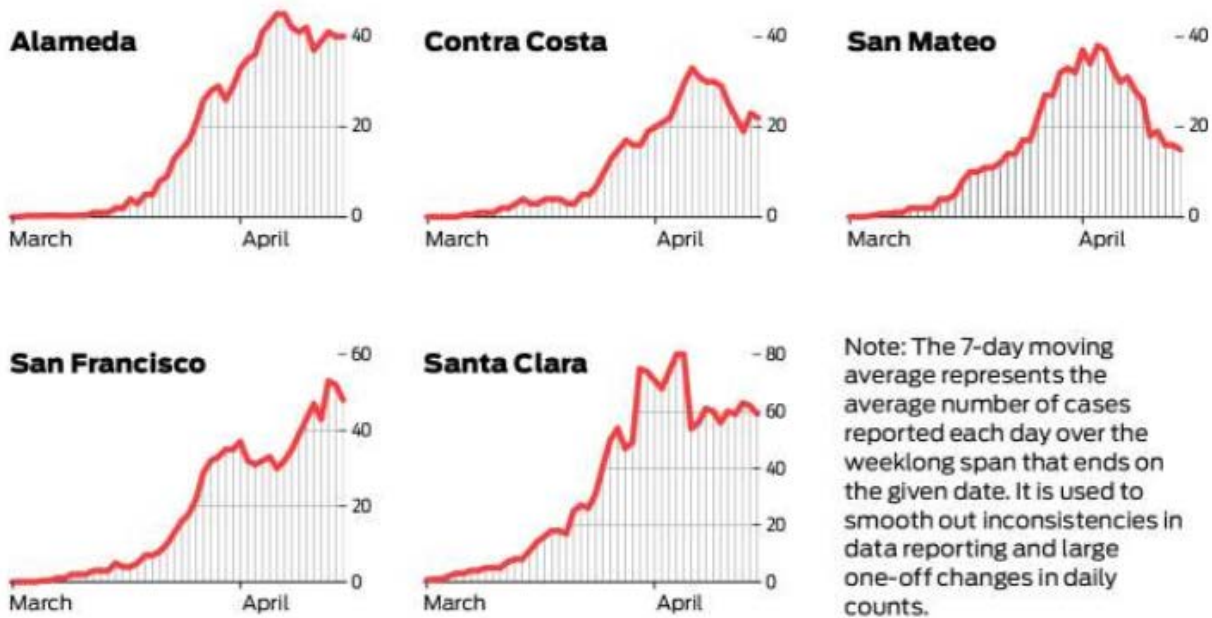


Note: As of 8 p.m. Wednesday

Sources: Centers for Disease Control and Prevention, California Department of Public Health, county public health departments, Chronicle reporting

Todd Trumbull / The Chronicle

Tracking the curve by county



Note: As of 8 p.m. Wednesday

On Wednesday, April 15, I had the opportunity to update the UC Board of Regent's Health Services Committee about UC Health's comprehensive response to the pandemic. Reports included a description of our surge capacity, as shown in Table 1. We were able to increase our hospital beds across the UC system by almost 1,500. I also reported on our ICU and ventilator use, our increased in-house testing capacity, and the remarkable response of our health care work force. Across UC Health, we greatly appreciate the support of the Regents during this challenging time.

The Health Services Committee meeting can be [viewed here](#).

Table 1. Increased UC Hospital Capacity for COVID-19

Hospital	Pre-surge Beds	Surge Beds	Total Beds	Surge Beds as % of Pre-surge
UC Davis	625	273	898	44%
UCI	402	163	565	41%
UCLA	726	374	1,100	52%
UC San Diego	803	174	977	22%
UCSF	1,242	497	1,739	40%
TOTALS	3,798	1,481	5,279	39%

GOVERNOR NEWSOM SETS CRITERIA FOR A GRADUAL LIFTING OF ORDERS

On March 19, Governor Newsom issued a stay-at-home order for the state, following similar local declarations by public health officials in the San Francisco Bay Area on March 15. Since then, people have been asking when these orders will be lifted and under what circumstances.

On April 14, the Governor outlined six indicators that need to be achieved in order to modify the stay-at-home order. They are:

1. The ability to monitor and protect our communities through testing, contact tracing, isolating and supporting those who are positive or exposed;
2. The ability to prevent infection in people who are at risk for more severe COVID-19;
3. The ability of hospitals and health systems to handle surges;
4. The ability to develop therapeutics to meet the demand;
5. The ability for businesses, schools, and child care facilities to support physical distancing; and,
6. The ability to determine when to reinstitute certain measures, such as the stay-at-home orders, if necessary.

The framework does not involve a precise timeline, but indicates the *'new normal'* will be different than what people were used to prior to the pandemic. Economic pressure to resume normal activities continues to build after 22 million Americans filed for unemployment in recent weeks, including 2.7 million Californians. The state's unemployment rate is now 5.3%.

Although the models show we are nearing California's peak, it does not mean the threat from the virus has diminished. It's important to remember that efforts to 'Flatten the Curve' do not reduce the total number of cases, but slow down the number of new cases per day so that hospitals can provide high-quality care to all patients.

An abrupt lifting of 'stay at home' orders or abandonment of physical distancing and other nonpharmaceutical interventions would undo our shared success and bring about the very surge we have mitigated thus far.

Many of our UC faculty have contributed expertise that has informed these indicators. I support the Governor's gradual, science-informed process.



WHITE HOUSE RELEASES GUIDANCE TO THE STATES AND LOCALITIES

On April 16, President Trump stated the decision to begin phased reopening of geographic areas would be left to local and state officials. That same day, the White House released its guidance that includes gating criteria, followed by three phases.

The gating criteria are:

- Downward trajectory of influenza-like illnesses (ILI) reported within a 14-day period, **and** a downward trajectory of COVID-like syndromic cases reported within a 14-day period.
- Downward trajectory of documented cases within a 14-day period **or** a downward trajectory of positive tests as a percent of total tests within a 14-day period based on flat volume or an increasing volume of tests.

- Hospitals are able to treat all patients without crisis care, and a robust testing program in place for at-risk health care workers, including emerging antibody testing.

The federal government also identified several areas deemed core state responsibilities, including testing of symptomatic individuals and contact tracing on positive cases, the capacity of health care systems to supply sufficient personal protective equipment (**PPE**) and other critical equipment along with the ability to surge ICU capacity, establishing plans to protect the health and safety of workers in critical and high-risk industries, and the overall ability to mitigate any rebounds in outbreaks.

The federal guidance also outlines the expectations of employers and individuals through the three-phase process. Physical distancing and other nonpharmaceutical interventions remain in place throughout much of the process.

WE ARE MINDFUL OF THE PANDEMIC'S IMPACT ON ALL PATIENTS

As academic health centers, our hospitals do not typically perform “elective” procedures. The focus on preparing for a surge included creating inpatient capacity by delaying a number of procedures that, while non-emergency, have a profound impact on patients. These procedures need to gradually resume in a thoughtful, controlled manner to provide relief to these patients while ensuring we retain sufficient capacity in case of a delayed surge or rebound surge.

Examples include halting kidney transplants from living donors because of the resources required for donors and recipients. Kidney transplants from deceased donors, however, have continued, such as in a case at UC Davis Health.

Alex Gonzales, a 17-year old, was born with a life-threatening condition and originally received a kidney transplant from his mother. Unfortunately, this organ was failing. When a suitable kidney from a deceased donor became available, the UC Davis medical team knew they needed to act. [On March 22, he received the kidney transplant.](#)

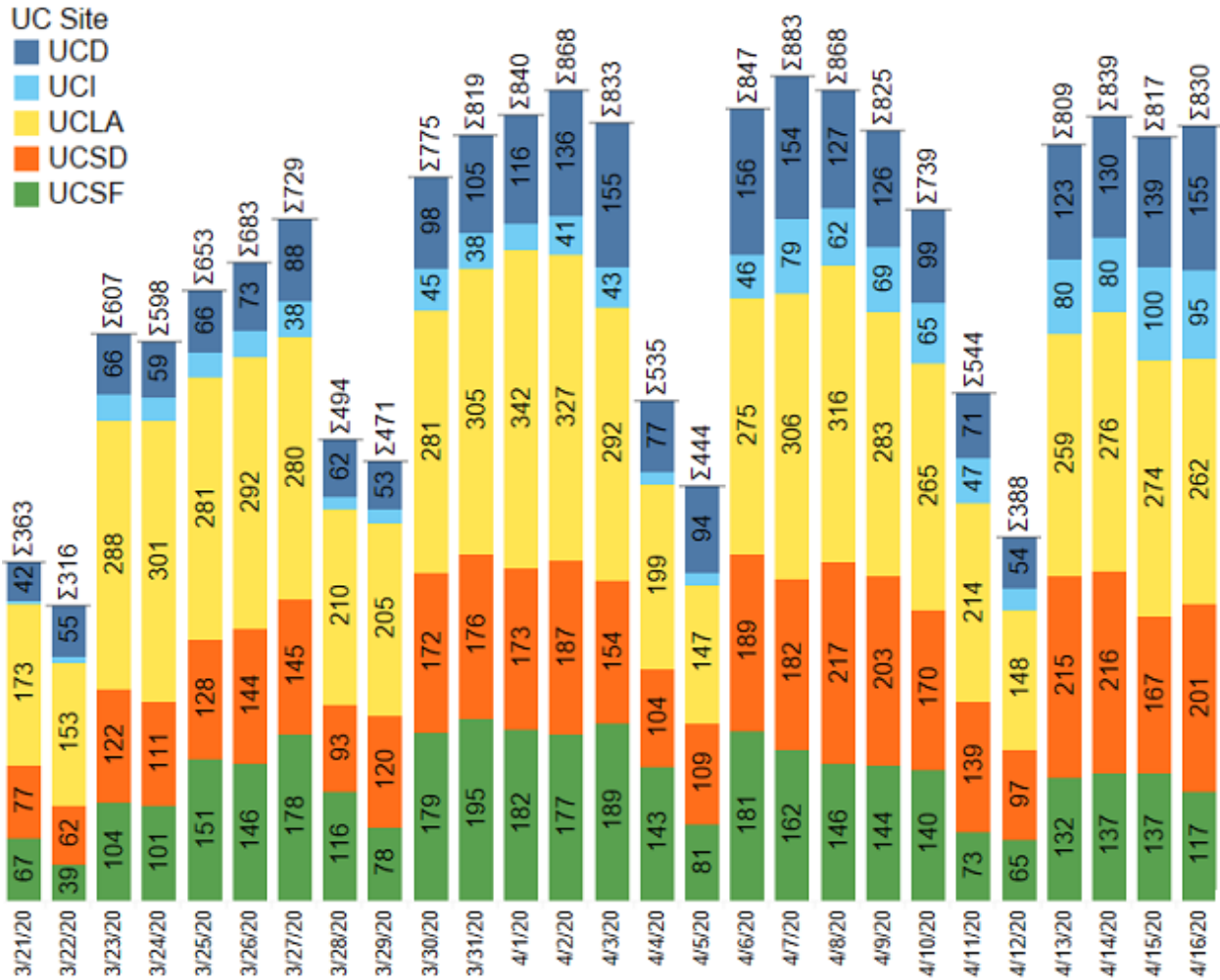
We are so grateful to the donor who passed along a gift of life and the transplant team who knew they needed to act while in the midst of surge preparations. We are mindful that for many people, delayed procedures have profound physical and emotional impacts. In collaboration with local public health officials and state guidance, we hope to slowly resume procedures beginning with the most the most critical needs.



Image: 17-year-old Alex Gonzalez received a kidney transplant from a deceased donor, one of the few types of non-emergency procedures that are continuing at UC medical centers while surge precautions are in place. A large number of badly needed procedures have been delayed.

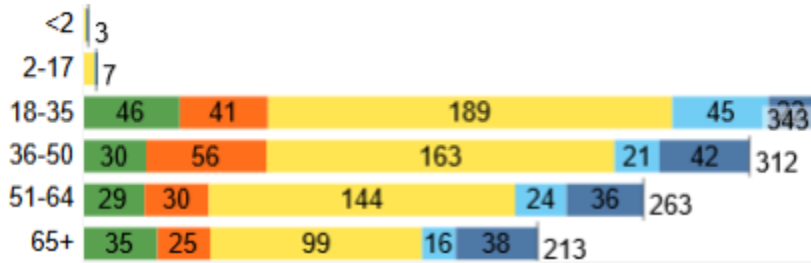
Source: Sacramento Bee

DAILY DASHBOARD SHOWS COVID-19 TESTING, ICU AND VENTILATOR USE

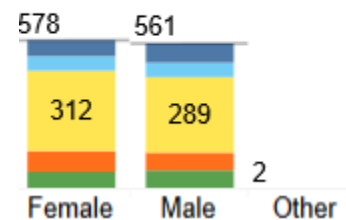


Testing volume for UC Health patients now exceeds 800 each weekday. A total **20,503 tests** have been run since testing began in mid-March. Of those, 352 tests are pending results. Of completed tests, 1,141 are positive for an overall positive rate of **5.7 percent**. Patients with tests on two days are counted on each date. Patients with two specimens on two different kinds of test on one day are counted twice on that date. This is showing test counts and may not match local dashboards which are counting patients. Source: UC Health Data Warehouse

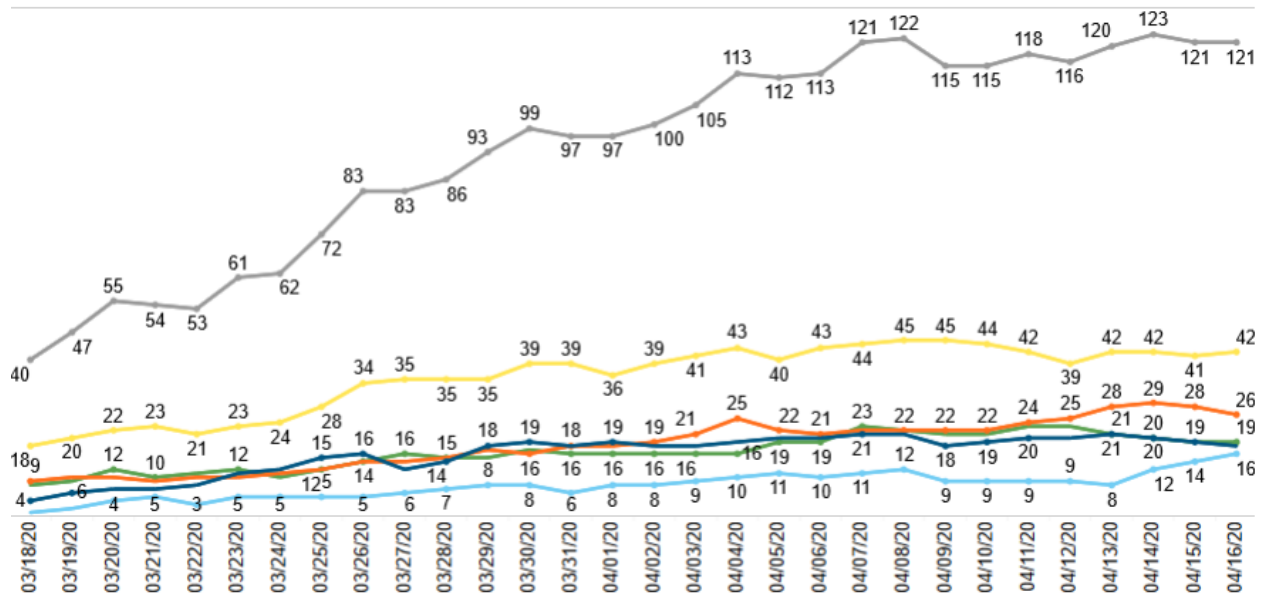
Confirmed Cases by Age



Confirmed Cases by Sex

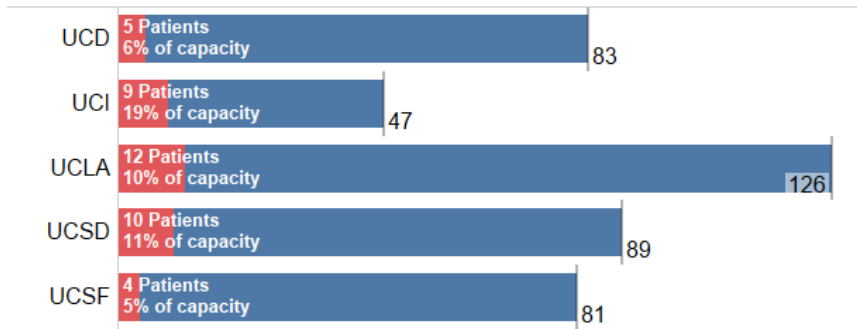


COVID-19 inpatients seen during each day
Patients are counted if present in an inpatient stay at any point during a day

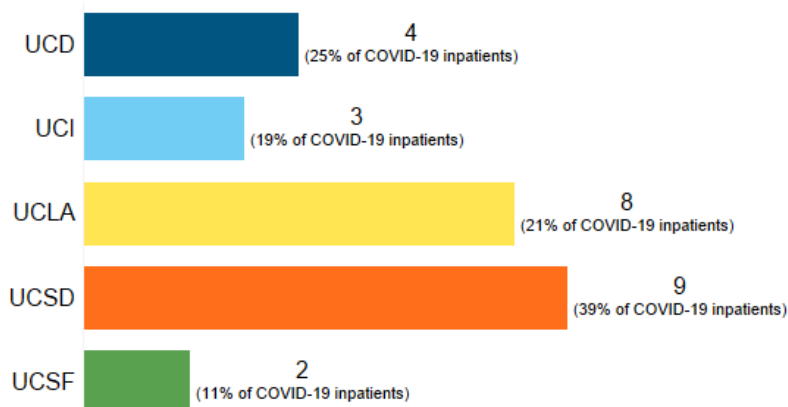


COVID-19 Patients in ICU

ICU status is driven by unit name and may not match with local dashboards. Total site ICU capacity indicated by blue bar and may be occupied by persons under investigation(PUI) and non-COVID-19 cases



COVID-19 Patients on Ventilator



INPATIENT METRICS

As of April 16, UC hospitals had 121 inpatients with a confirmed COVID-19 diagnosis.

UC Health has more than 500 ICU beds across the system. Patients with a COVID-19 diagnosis currently occupy 40 ICU beds.

UC Health has more than 700 ventilators across the system.

Twenty-six patients with a COVID-19 diagnosis are on ventilators.

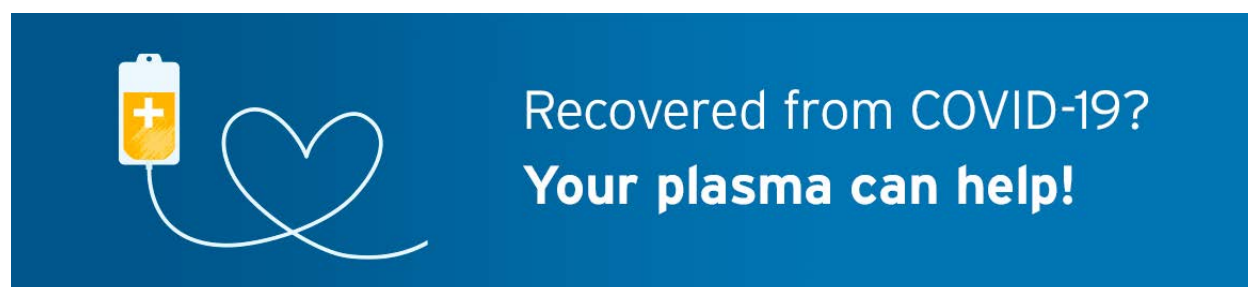
Source: UC Health Data Warehouse

UCLA SEEKS BLOOD DONATIONS FROM PATIENTS WHO HAVE RECOVERED

In my update of April 3, I noted that convalescent plasma is one way to potentially create short-term resistance to the virus among high-risk populations and as a treatment to help ill patients recover more quickly. Key to that effort is obtaining plasma from the blood of patients who have fully recovered from COVID-19 in order to use their antibodies.

UCLA Health, is the first of the UC academic health centers, to launch a plasma donation center. Donated plasma may be used as part of a scientific trial to determine if this treatment works, for compassionate treatment of ill patients, or to support the development of diagnostic tests for immunity to the virus. In a plasma donation, blood is drawn and filtered to remove the plasma. Then the red cells and platelets are returned back to the donor.

Donors must have recovered from a COVID-19 and been symptom-free for at least 14 days. Persons interested in donating should review the criteria and [complete the online form here](#).



STUDY DOCUMENTS PREVALENCE OF COVID-19 IN SANTA CLARA COUNTY

People are familiar with the nasal swab tests for SARS-CoV-2 that detects the virus itself. Once the person has recovered, however, the virus may no longer be detectable. Seroprevalence testing looks for antibodies created by a person's immune system. If you do widespread seroprevalence testing, you get an indication of the extent of infection to date. The first such study was conducted in Santa Clara in early April and involved 3,300 people from across the county.

Based on this survey, the prevalence of past COVID-19 infection in the population was estimated to be between 2.49% and 4.16%, indicating that between 48,000 and 81,000 people were infected in Santa Clara County as of early April. This is 50-85 times greater than the number of confirmed cases, which typically represent testing done on people meeting specific clinical criteria such as exhibiting fever, cough, or shortness of breath. Population prevalence estimates can now be used to calibrate epidemic and mortality projections.

13 CLINICAL TRIALS UNDERWAY WITH MORE IN THE APPROVAL PROCESS

UC's response to the pandemic includes a rapidly expanding set of Clinical Trials to assess the effectiveness of existing drugs in treating COVID-19. In last week's update there were eight clinical trials – this week there are 13. Additional trials are pending approval.

Active Clinical Trials at All Five Medical Centers	Active Clinical Trials at One or More Medical Centers
Remdesivir (NCT04280705)	Sarilumab - Davis and UCLA (NCT04315298) DAS181 - UCLA and UCSD (NCT03808922) Tocilizumab – UCLA and UCSD (NCT04320615)

<p>Some recently launched trials are not yet listed on ClinicalTrials.gov at the time of this publication.</p>	<p>Azythromycin - UCSF (NCT04332107)</p> <p>Mesenchymal stem cells - UCSF (NCT03818854)</p> <p>Hydroxychloroquine - UCLA, Davis, UCSF (NCT04332991)</p> <p>Aviptadil - Irvine (NCT0431697)</p> <p>Acetaminophen and Ascorbate – UCSF (NCT04291508)</p> <p>Colchicine – UCSF (NCT04322682)</p> <p>PUL-042 – Irvine (NCT04313023)</p> <p>PUL-042 – Irvine (NCT04312997)</p>
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SMOKERS AND VAPERS AT GREATER RISK OF SIGNIFICANT COMPLICATIONS

According to the UC Merced Nicotine and Cannabis Policy Center (**NCPC**), smokers and those who ‘vape’ are not only more susceptible to a SARS-CoV-2 infection, they are at greater risk of severe symptoms. The analysis was based on a review of a growing body of scientific literature about COVID-19.

Smoking and exposure to nicotine weakens the immune system and appears to increase the ACE2 enzyme that the virus binds with to cause COVID-19. The effect is so pronounced that those who are exposed to secondhand smoke also become more vulnerable.

The NCPC report is titled "[Tobacco Control Is a Critical Component to COVID-19 Management](#)" and was developed to help public health departments. Among the report's recommendations are strengthening secondhand smoke exposure policies in public areas and multi-unit housing, increasing quarantine recommendations for current and former smokers, and specifying resource allocation for smoking/vaping cessation as part of the public health response.

COVID-19 TESTING BOOTH NEARLY READY

UCLA Health's Innovations team has developed a customized testing booth, based on a model from Brigham and Women's Hospital in Boston, which enables a health care worker to safely obtain swab a patient for COVID-19 testing, while minimizing use of Personal Protective Equipment (**PPE**). The external glove surfaces are disinfected in between patients to maintain appropriate infection prevention practices.

The first booth will be used in the Emergency Department at UCLA Santa Monica and a second unit will be deployed at UCLA Ronald Regan Medical Center.

UCLA Health will share information about how to obtain licensing approvals, [upon request \(email\)](#).



FIAT LUX: HONORING THE HEROES OF COVID-19



On April 13, the California capital was bathed in blue light to honor health care workers.
#StayHomeSaveLives



UC Davis Health celebrates the discharge of Vincent Carter, who recovered from COVID-19 after two weeks as an inpatient.



Eager to help in the epicenter, 20 UCSF doctors and nurses head to New York to help colleagues at New York-Presbyterian Queens Hospital.



Firefighters, police and public safety hold a rolling 'thank you' for UCI Health's emergency department.



Physical distancing is one of the ways we break the line of transmission. Messages in chalk in LA. Play your part, stay apart.



San Diego-based The Conrad Prebys Foundation awarded a \$350,000 challenge grant to support front-line health care.

DISTRIBUTION OF FEDERAL RELIEF FUNDS FOR PROVIDERS HAS BEGUN

The Department of Health and Human Services (HHS) has begun distributing relief funding to providers. The initial distribution included \$177 million in support for UC medical centers. The funding is part of a \$100 billion provider relief fund provided for in the Coronavirus Aid, Relief, and Economic Security (CARES) Act recently passed by Congress and signed by President Trump. Providers received a portion of the initial \$30 billion [based on their share of total Medicare FFS reimbursements in 2019](#).

Funding will be used to support healthcare-related expenses or lost revenue attributable to coronavirus and to ensure uninsured Americans can get the testing and treatment they need without receiving a surprise bill from a provider.

FINANCIAL IMPACT OF COVID-19 ON HEALTH ENTERPRISE

Although the full financial impact of COVID-19 is not yet known, it clearly will be significant due to the costs of preparation and revenue lost from cancelled procedures.

President Napolitano issued a letter April 9 to the California congressional delegation to outline UC's requests as congress considers a fourth federal relief effort.

The letter outlines requests in health and clinical affairs, education, technology, research, and tax and financing mechanisms. Examples include:

- Preventing implementation of the Medicaid Fiscal Accountability proposed rule (MFAR) to promote stability for safety net providers;
- Acting now to bolster the \$100 billion provider relief fund created in the CARES Act, because mounting costs from health systems across the country are likely to exceed the original allocation;
- Lifting the Medicare Graduate Medical Education (GME) cap, which limits the number of residency positions supported by Medicare at long-established programs and limits the ability to add licensed physicians to the workforce;
- Providing support to students and institutions by increasing higher education's share of the state stabilization fund by \$48 billion;
- Creating a technology fund for higher education to ensure that all students are able to participate in remote learning;
- Providing supplemental funding for automatic extensions for grants because nearly all labs have shut down or pivoted to COVID-19-related research and to cover costs associated with winding research down and eventually ramping it back up; and,
- Including interest-free loans to hospitals for capital projects related to expanding the number of beds, deferred maintenance or life safety construction for existing beds to keep them in service.

LOSS OF TASTE AND SMELL CONFIRMED AS AN INDICATOR OF COVID-19

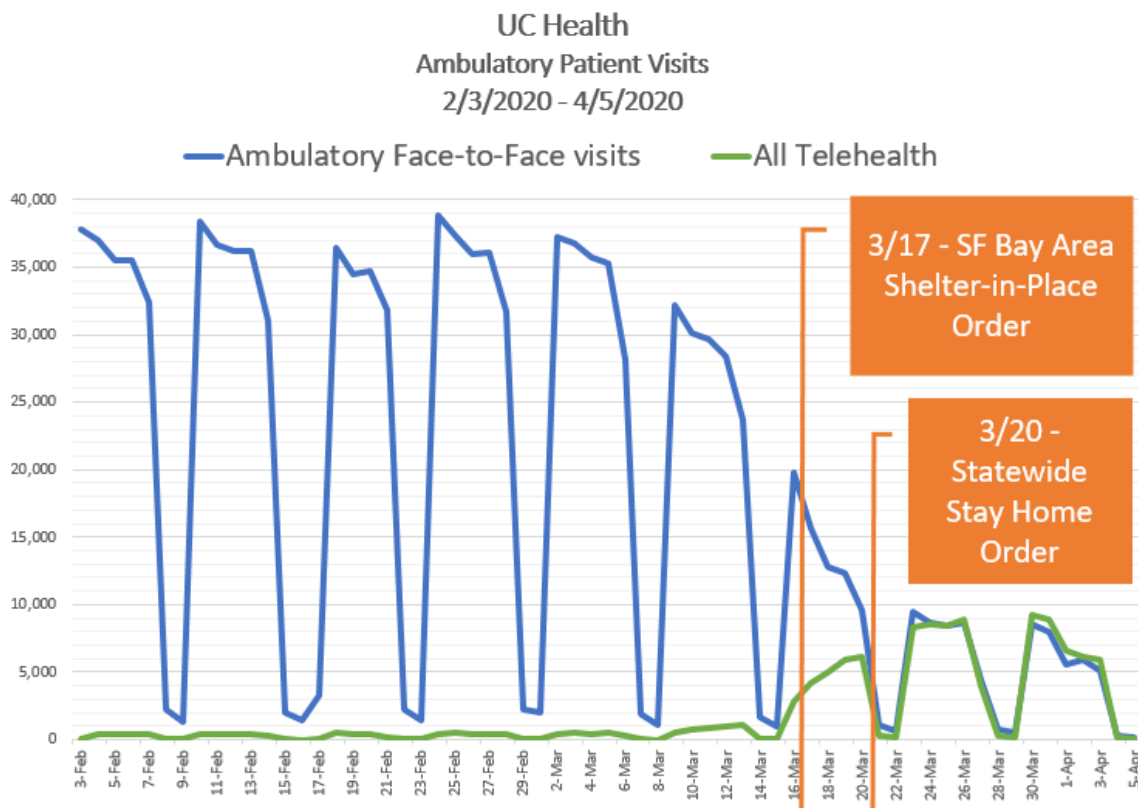
Patients are always teaching us about their conditions. A few weeks ago we heard that people who were SARS-CoV-2 positive reported a loss of taste and smell. [UC San Diego Health has now confirmed that this is a sign of infection.](#) "Based on our study, if you have smell and taste loss, you are more than 10 times more likely to have COVID-19 infection than other causes of infection. The most common first sign of a COVID-19 infection remains fever, but fatigue and loss of smell and taste follow as other very common initial symptoms," said Carol Yan, MD, from UC San Diego Health.

Yan and colleagues surveyed 1,480 patients with flu-like symptoms and concerns who underwent SARS-CoV-2 testing at UC San Diego Health. Of those who reported a loss of smell and taste, the symptoms were profound. As a result, UC San Diego Health now includes loss of smell and taste as a screening requirement for visitors and staff.

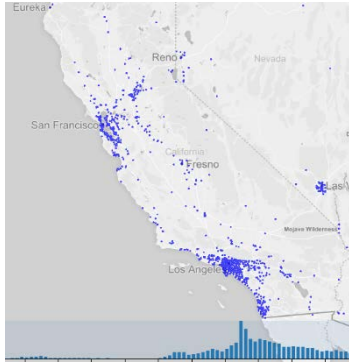
THE CAPABILITIES OF TELEHEALTH BECOME CLEAR

People ask what life will be like after the pandemic. Cultural changes, such as social distancing and wearing of face coverings may be two of the most visible results. However, one less visible change is in the adoption of telehealth. As in-person appointments became problematic, the potential of virtual face-to-face consultations became more apparent to all.

Practicing medicine post COVID-19 will change due to the widespread use of telehealth during the pandemic. Based on patient and provider-driven demand, we expect 20-30 percent of outpatient visits may remain virtual. While there will be many post-COVID-19 opportunities, there will continue to be challenges on the regulatory and financial front. However, this shift in our ability to provide care in-person and virtually is long overdue.



CORONAVIRUS TWITTER MAP DEVELOPED AT UCI



To give the public a sense of how social media conversations about COVID-19 are happening in real time, UCI computer scientists have developed and launched a [dynamic coronavirus conversations Twitter map](#).

The tool gives people a way to locate discussions about the coronavirus within a region and in a time window to gain insights on public discussions about this fast-evolving crisis, which can help government agencies and researchers in various domains, such as public health.

THE IMPACT ON THE ACADEMIC ENTERPRISE

- The UC Center Sacramento has tentatively planned to offer its summer 2020 program remotely.
- Given where we are now, with significant measures for social distancing in place throughout the country, and with no certainty about containment of the virus, UC Provost Brown announced suspension of the summer 2020 residential UC Washington Program (UCDC). While predictions on how COVID-19 will affect the Washington, DC, area vary, one recent study projects a peak of the virus in July. UCDC does not offer summer courses and is working to offer internships remotely; therefore, some students will still be able to receive academic credit for those internships if they so desire.

KEEPING PEOPLE INFORMED THROUGH PUBLISHED MATERIALS

UC campuses and OP are publishing informational and educational materials for the public, our students and staff. UCOP is distributing guidance to facilitate smooth operations, including:

- [President's Letter to Governor Senate President pro Tem and Assembly Speaker-NEW](#)
- [President's Letter to UC Community Announcing No COVID-19 Related Layoffs](#)
- [UCOP Innovation & Entrepreneurship Research Collaborations](#)
- [Equity and Inclusion in the Face of COVID-19](#)
- [Novel Coronavirus 2019 \(COVID-19\) Paid Leave and Remote Work Provisions -](#)
- [President's Letter to the UC Community](#)
- [President's Directive on Travel to Level 2/3 Countries; MRT Emergency Powers](#)
- [How UC is Responding to the Coronavirus \(COVID-19\)](#)
- [Guidance for UC Locations](#)
- [President's Directive on Travel to China](#)
- [President's Directive on Travel to Korea and other Warning - Level 3 Countries](#)
- [Information for Parents and Students](#)
- [A Summary of UC's System Involvement in COVID-19 Patient Care and Research](#)

You can also find the latest travel information on the CDC website - [Information for Travel](#).

IN CLOSING

Although it feels like a lifetime ago, the world only became aware of the SARS-CoV-2 virus on December 31, 2019. Since that time, health care organizations around the world began racing

toward a state of heightened readiness. We witnessed patient surges that overwhelmed extremely capable health care organizations around the world and here in the U.S.

At UC Health, we are prepared to the maximum extent possible. We developed and deployed in-house testing, expanded our surge capacity by 40%, learned from the experiences of others, and have taken extraordinary steps to obtain Personal Protective Equipment for our front-line clinicians and staff. We are – *to the degree humanly possible* – ready. This preparedness is only possible because thousands of people across UC rallied and refused to let their fellow Californians down.

Aspects of ordinary life also continue amidst the pandemic. On a personal note, I am so pleased to announce my appointment as a Professor at UCSF. This marks a sentimental milestone in my life, as I was a Fellow in Pediatric Infectious Diseases at UCSF 1993-1995.

I will continue to provide updates weekly. Please follow me on Twitter [@carrie_byington](https://twitter.com/carrie_byington), where I provide links to important information in real-time.

Together we are protecting the health of our students, employees, and all Californians. Fiat Lux.

Sincerely,
Carrie L. Byington, MD
Executive Vice President
UC Health

-----Full circle from fellow to faculty-----



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