May 15, 2020

COVID-19 AND 'CORONAVIRUS' UPDATES

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THE IMPACT ON OUR HEALTH SYSTEM

This is the 14th update for Regents regarding the SARS-CoV-2 virus pandemic and the impact on the University's health and academic enterprise.

COVID-19 BY THE NUMBERS

As of May 14, California reported 73,164 confirmed cases of COVID-19 with 3,032 fatalities, according to the California Department of Public Health (**CDPH**). Nationally, there are 1.38 million cases with 83,947 fatalities, an increase of more than 10,000 deaths since last week's report, according to the Centers for Disease Control and Prevention (**CDC**).

COUNTIES BEGIN RESUMING SOME SERVICES

On May 12, the Governor announced that more than one million tests had been conducted in California thus far and that the daily testing average in California now exceeds 35,000.

UC Health is proud to be part of this effort and we have completed testing on more than 50,000 patients and thousands of others including health care workers, first responders, and vulnerable individuals such as those living in skilled nursing facilities and the homeless.

Eighteen counties are able to partially resume activities because local public health officials reported those areas met Governor Newsom's targets for testing, hospital preparedness for patient surges and have had no coronavirus deaths for 14 days.

On a statewide basis, some retail stores will be allowed to begin providing curbside pickup beginning next week. Los Angeles County will extend its stay-at-home order through the end of July. In the San Francisco Bay Area, the stay-at-home orders remain in effect.

FINANCIAL CHALLENGES OF COVID-19 HIT ACADEMIC HEALTH CENTERS

COVID-19 has been an unprecedented financial stress test for organizations across the globe, including higher education and health care. Hospitals in the U.S. have faced significant challenges related to both the high costs of preparing facilities and staff to treat COVID-19 patients and the nationwide restrictions on non-essential procedures, which were undertaken to prevent infection, create capacity, and to protect patients and health care workers alike.

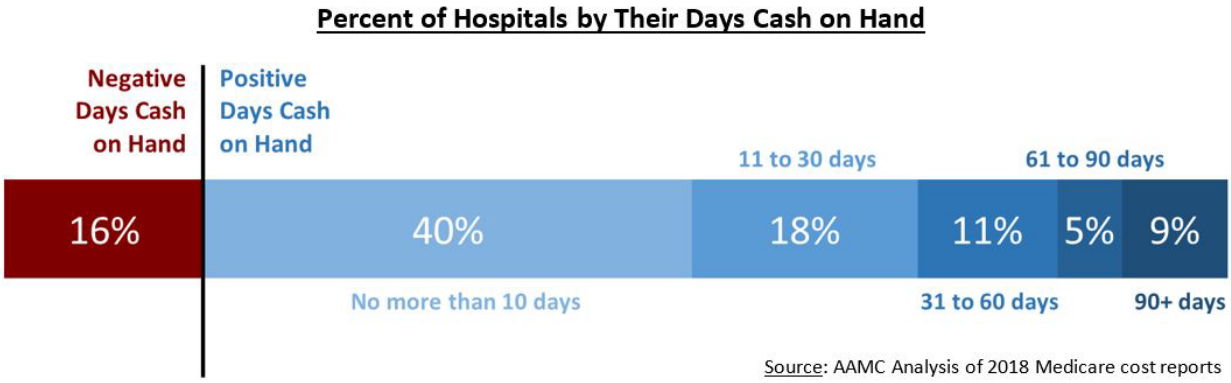
This update includes several articles that describe how extraordinary increases in costs coupled with the sharp drops in volume have weakened the finances of all hospitals nationally.

At UC Health we faced the same two challenges common to all hospital systems and documented as of April 30, $137 million in extraordinary expenses and $632 million in lost revenue due to deferred care for a total impact of $769 million.

In addition to these financial realities, Academic Health Centers (**AHCs**) like UC Health face additional challenges that are related to our academic mission.

The COVID-19 pandemic has made more visible and exacerbated the long-recognized financial stresses of AHCs. Recognizing that the pandemic may destabilize the financial health of AHCs, bond credit rating agencies, including Moody's Investors Service downgraded the financial outlook of most not for profit and public hospitals from stable to negative in March 2020. Fortunately, UC's health centers underwent a rating evaluation by Moody's in February 2020 which upgraded us from stable to **positive**. We have been able to retain the positive rating after the downgrades that occurred in March because of the financial strength of the institution and our liquidity.

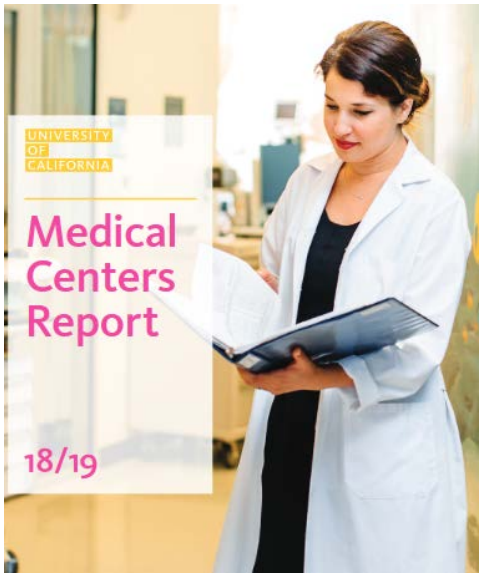
Nearly 75% of hospitals nationally, including AHCs, have 30 days or less of cash on hand and 16% have negative days. UC's health systems entered the COVID -19 pandemic on more stable financial footing with each health center reporting 43-198 days of cash on hand. We will need this strength and liquidity as the pandemic progresses and we face additional challenges.



First, our facilities as centers of excellence and research hubs were amongst the most prepared to deal with the demands of a new and life-threatening infection such as COVID-19. We employ internationally known experts across the system including those in emergency medicine, critical care, infectious diseases, infection prevention, laboratory, and pulmonary medicine, all specialties that were called upon to deliver expertise for our system and the state early in the pandemic. For these reasons, our facilities cared for a disproportionate share of COVID-19 patients, especially early in the pandemic when risks and costs were highest because of the unknowns. We also made significant expenditures to create and ramp-up in-house testing capacity, and we launched numerous clinical trials and COVID-19 research projects. We anticipate that our health centers will continue to play this role as the pandemic progresses.

Second, we have a public service mission. We care for all patients regardless of their ability to pay. We are safety net hospitals for the uninsured and for those with public insurance such as Medi-Cal and Medicare. For hospitalized patients, our inpatient days are 35% Medi-Cal and 34% Medicare. Neither of these payors reimburse hospitals fully for costs or at rates comparable to commercial payors even prior to the pandemic. We anticipate that as the state and nation face unprecedented rates of unemployment, our payor mix will continue to evolve with increasing proportions of Medi-Cal over commercial coverage.

As we better understand the high costs associated with caring for patients with COVID-19, including long hospital stays, the need for intensive care, and costly personal protective equipment (**PPE**), we are advocating for better models for reimbursement. The Federal CARES act increased Medicare payments by 20% for patients with COVID-19. However, provisions for Medicaid/Medi-Cal providers were not implemented. Additional advocacy is needed to raise Medicare's direct and indirect graduate medical education (**GME**) payments to help offset AHCs' contributions to GME and increasing Medicare and Medicaid disproportionate share payments (**DSH**) to teaching hospitals. We are working with federal government relations to advocate for support to enable recently unemployed workers to maintain commercial insurance coverage through COBRA, as well as improved support for hospitals that care for the Medicaid/Medi-Cal population.



Finally, the finances of our AHCs are linked with our health professional schools and the university campuses. The margins generated by the hospitals support the academic mission of the health professional schools and the campuses. This support includes faculty salaries, research infrastructure, support for undergraduate and graduate medical education, and other resources that enhance the teaching and research environment for faculty, students and trainees. The health centers provided $606 million in health system support to the academic enterprise in the most recent fiscal year (see page 56 of FY18/19 medical centers annual report). The financial pressures on the campuses and the medical centers are intertwined as we strive to meet the academic and public service mission.

We will present a full overview of the finances at the upcoming May Board of Regents meeting and will continue to provide updates to the Regents through the Governance and Finance and Health Services Committees of the Board.

MAY REVISE OF STATE BUDGET

On Thursday May 14, Governor Newsom released the May revision to the budget outlined in January. The state's 22% reduction in revenue has created a combined budget shortfall of $54.3 billion for fiscal years (**FY**) 2020 and 2021. For the University of California, the May Revision decreases the general fund appropriation for FY21 to $3.37 billion, a 9.8% reduction.

Governor Newsom stated "COVID-19 has caused California and economies across the country to confront a steep and unprecedented economic crisis – facing massive job losses and revenue shortfalls. Our budget today reflects that emergency. We are proposing a budget to fund our most essential priorities – public health, public safety and public education – and to support workers and small businesses as we restart our economy. But difficult decisions lie ahead. With shared

sacrifice and the resilient spirit that makes California great, I am confident we will emerge stronger from this crisis in the years ahead."

President Napolitano released the following statement in response to the Governor's May revise:

"*The University of California recognizes the unprecedented challenges California is facing in the wake of COVID-19 and regrets that Gov. Newsom was put into a position to steeply reduce the University's budget in response to the State's dramatically diminished revenues. Regardless, UC stands with the governor and the legislature to help lift the State out of this economic crisis.*

In spite of these budget revisions, our focus will remain on our students, our employees and the UC community. We are committed to continuing our mission of teaching, research and public service — including the crucial patient care provided by our medical centers in the midst of this pandemic — that benefits California and the world. We will continue to work with the legislature to secure additional sources of funding to see us through this difficult time.

UC appreciates the governor's support of public higher education and looks forward to working in continued partnership to overcome the challenges ahead."

Governor Newsom also urged the U.S. Senate to take up the Health and Economic Recovery Omnibus Emergency Solutions (**HEROES**) Act proposed by the U.S. House. It is a $3 trillion package that would substantially ease the state's fiscal position and address some of the requests we have made to California's congressional delegation. While many of bill's provisions have been sought by UC FGR and UC Health, there is broad recognition that the final language of future relief legislation will look substantially different from the HEROES Act.

As you know, our health centers receive very little direct state funding. Instead, they rely on reimbursements for clinical services provided. The Governor projected the state's unemployment figure would reach 24.5% later this year. About half of workers receive health benefits through their employer. We expect our patients will increasingly rely on Medi-Cal coverage or will lose coverage entirely if the federal government does not intervene.

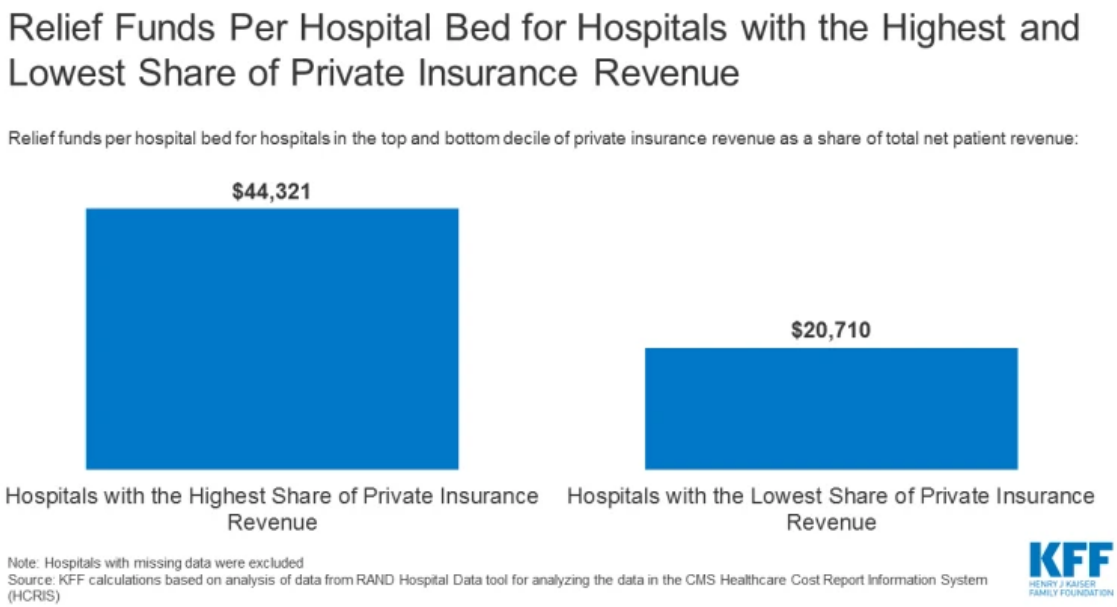
NEXT DISTRIBUTION OF CARES ACT FUNDING TO OCCUR SOON

The Department of Health and Human Services (**HHS**) is poised to distribute another round of federal stimulus funding allocated under the Coronavirus Aid, Relief, and Economic Security (**CARES**) Act and the Paycheck Protection Program and Health Care Enhancement Act.

The money can be used to offset costs related to treating patients with COVID-19 or to reimburse for lost revenue caused by the pandemic. The distribution includes all providers who treated Medicare patients in 2019; however, the use of a total net patient revenue approach tends to favor hospitals with a more favorable payor mix.

Hospitals with a higher mix of commercially insured patients will receive a larger amount than hospitals with a higher Medicaid mix. Subsequent disbursements may use a different formula.

We will provide an update on the distribution to UC hospitals in a subsequent issue. Systemwide, only 30% of our inpatient days are for commercially insured patients. The Kaiser Family Foundation provides a comprehensive summary here.



AHA ESTIMATES $202 BILLION FINANCIAL IMPACT IN JUST FOUR MONTHS

The American Hospital Association (**AHA**) has issued a report estimating COVID-19 will cost hospitals $202.6 billion in lost revenues and increased expenses between March 1 and June 30, 2020. The Association, which represents nearly 5,000 hospitals, developed its estimate by looking at four elements:

- The net financial impact of COVID-19 on hospital costs;
- Total revenue losses from cancelled surgeries and other procedures;
- Additional costs associated with purchasing PPE; and,
- Additional costs of support some hospitals are providing to workers.

American Hospital Association™
Advancing Health in America

Of the total impact, the largest amount, $161 billion, is revenue lost from cancelled hospital services, including reduced utilization of emergency departments. Another $36 billion is attributed to costs of care for COVID-19 exceeding expected reimbursements, and another $2.4 billion and $2.2 billion attributed to increased costs for purchases of PPE and frontline support to workers, respectively.

NATIONALLY, THE NUMBER OF PATIENTS DROPS BY MORE THAN HALF

A report that tracks the number of unique patient visits found an average decrease of 54.5%, based on a survey of 228 hospitals. The decrease was present across all service lines and every region of the country, including hospitals that are not located in regions considered 'hot spots' of COVID-19 cases. The biggest drop was in 'elective procedures,' but it also noted substantial drops in visits for chronic conditions and even life-threatening emergencies. We have observed similar trends across UC Health.

Changes in Procedure Volume Nationally Comparing two-week periods in March 2019 and March 2020			
Hip replacements	-79%	Congestive heart failure	-55%
Knee replacements	-99%	Heart attacks	-57%
Spinal fusions	-81%	Stroke	-56%
Repair of fractures	-38%	Cancer visits	-37%
Coronary stents	-44%	Mechanical ventilation	+24%

The longer chronic that conditions go untreated, the worse the potential outcome. It is extremely concerning that people having heart attacks, congestive heart failure and stroke are not seeking emergency medical attention. We are reaching out across the health system to reassure our patients that our health professionals are prepared to treat them safely in our facilities.

We encourage our patients to continue to seek necessary care during the pandemic, and we are prepared to deliver that care safely.

UC CITRIS AND BANATAO INSTITUTE ISSUE SEED FUNDING TO 25 TEAMS

Twenty-five teams were awarded seed funding from The Center for Information Technology Research in the Interest of Society (CITRIS) and the Banatao Institute to support technology-driven diagnostics, therapeutics and mitigations related to COVID-19 across four campuses including UC Berkely, Davis, Merced and Santa Cruz. Projects are designed to show research results within three to six months.

The seed funding was enhanced by a $1.6 million matching grant from an anonymous donor, which allowed for an expanded grant pool. The 'game changing' innovations include rapid-cycle ventilators, next-generation face masks, new algorithms for contact tracing and advance prediction, a genome browser to integrate molecular-level genetic information to accelerate research, and a portable, point-of-care rapid-testing device the size of a credit card. The full list of grant recipients can be seen here.

One of the grants includes a principal investigator from UC Davis and is focused on telehealth, which has proven to be a vital resource for providing care during the pandemic. The project focuses on federally qualified health centers (**FQHCs**), which care for low-income Californians, to transition from face-to-face visits to telehealth encounters for chronic care management. The project builds a multi-campus research data infrastructure for tracking telehealth utilization among California's FQHCs and integrates these data with electronic health record data to examine the impact of telehealth implementation on clinical outcomes. The resulting integrated dataset will serve as the foundation for examining the impact of COVID-19 and the transition to telehealth utilization on health outcomes for low-income Californians with chronic conditions.

"**We are all united in the vision that innovation can steer us not back to where we were, but to a stronger, more resilient health care system going forward,"** said CITRIS Health Faculty Director Tom Nesbitt, senior advisor to UC Davis Health executive leadership and co-director of the Healthy Aging in a Digital World Initiative. Nesbitt is also a member of the University of California Health COVID-19 Coordinating Committee and oversees our work in telehealth.

FOUR HEALTH CAMPUSES USING CONVALESCENT PLASMA

Four UC campuses – UC Irvine, UCLA, UC San Diego and UCSF- are participating in randomized clinical trials (**RCTs**) using convalescent plasma. The clinical trials are registered through the Expanded Access Protocol (**EAP**) housed at the Mayo Clinic. While not a placebo-controlled trial, outcomes will be analyzed for safety and efficacy.

You may recall that in my update of April 3, I addressed the potential of collecting blood donations from recovered patients, and transfusing the plasma into patients with active COVID-19 to speed recovery and potentially to instill some level of immunity in front line workers or persons with co-morbidities.

Thanks to the hard work of UC physicians, we now have 31 COVID-19 clinical trials underway or pending. All of our medical centers participated in the randomized controlled trial of the intravenous drug, remdesivir, which was recently given emergency use authorization by the FDA for treatment of COVID-19.

Active Clinical Trials at All Five Medical Centers	Pending and Active Clinical Trials at One or More Medical Centers
Remdesivir (NCT04280705) Some recently launched trials are not yet listed on ClinicalTrials.gov at the time of this publication.	Sarilumab – Davis and UCLA (NCT04315298) DAS181– UCLA and UCSD (NCT03808922) Tocilizumab – UCLA and UCSD (NCT04320615) Azythromycin – UCSF (NCT04332107) Mesenchymal stem cells – UCSF (NCT03818854) HCQ (prevention) – Davis, UCLA, and UCSF (NCT04332991) HCQ (treatment) – UCLA (NCT04328961) Acetaminophen and Ascorbate – UCSF (NCT04291508) Colchicine – UCSF (NCT04322682) Colchicine – UCLA (NCT04355143) Aviptadil – Irvine (NCT0431697) PUL-042 – Irvine (NCT04313023) PUL-042 – Irvine (NCT04312997) Azithromycin/HCQ- UCSF VA (NCT04363203) Azithromycin/HCQ- UCSF (NCT04358081) Azithromycin/HCQ- UCSD (NCT04358068) Leronlimab – UCLA (NCT04347239) Leronlimab – UCLA (NCT04343651) Canakinumab – UCSF (NCT04334980) Selinexor – Davis and UCLA (NCT04349098) Gimsilumab – UCLA (NCT04351243) Mavrilimumab – UCLA (NCT# Pending) Hyperbaric Oxygen – UCSD (NCT04327505) Oral Vaccine - UCSD (NCT04334980) Ramparil – UCSD (NCT04366050) TAK-981– UCSD (NCT03648372) Convalescent Plasma - UCSF (NCT #pending) Convalescent Plasma - UCSD, UCLA, UCI (NCT# pending) Convalescent Plasma - UCLA (NCT# pending) Positional Practice- UCSF (NCT03896763)

DISTRIBUTION PLANS FOR REMDESIVIR CLARIFIED

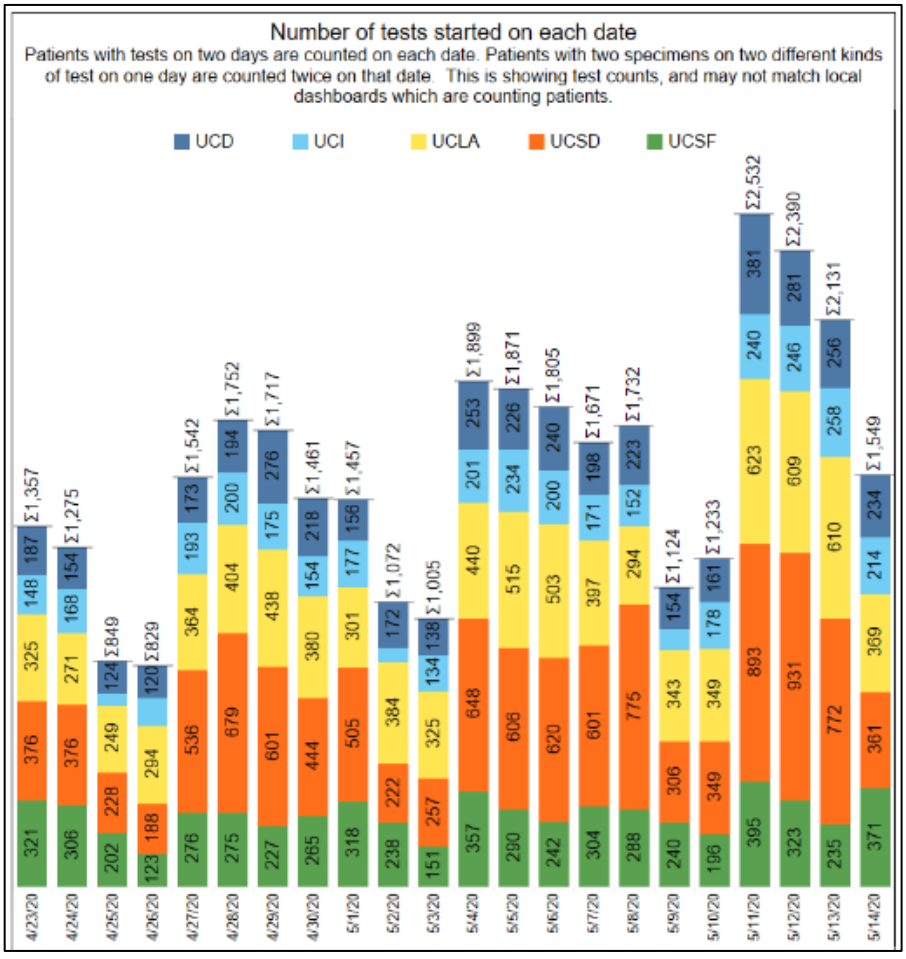
Following the May 1 emergency use approval of remdesivir by the Food & Drug Administration, Gilead Sciences the drug maker, announced it is donating its stockpile of the medication to the federal government. Of the 1.5 million vials donated, 607,000 will be allocated to the U.S, enough to treat 78,000 hospitalized patients with a 10-day course of treatment.

The U.S. Department of Health and Human Services (**HHS**) announced an initial distribution plan for remdesivir that excluded a number of hospitals that had participated in the randomized clinical trials of the drug, including all of the UC Health hospitals.

UC Federal and State government relations, in coordination with UC Health, were able to bring attention to the distribution issue which resulted in updates to the distribution process. Based on HHS analysis of the total burden of disease in the state, state health departments will begin receiving weekly distributions based on the number of COVID-19 patients in hospitals and ICUs. The shipments will go to state health departments, which will allocate the supply to hospitals.

We are pleased that our hospitals will soon be able to provide remdesivir to seriously ill patients outside of the clinical trial. We are working with our UC Health COVID-19 Coordinating Committee on the ethical allocation of this scare resource for our patients.

UPDATE ON UC HEALTH TESTING AND INPATIENTS WITH COVID-19



As of May 14, we have performed more **52,738 tests** for UC Health patients. Of those, 1,702, or **3.3%,** were positive.

Our UC-wide test-positive doubling time is now greater than 4 weeks.

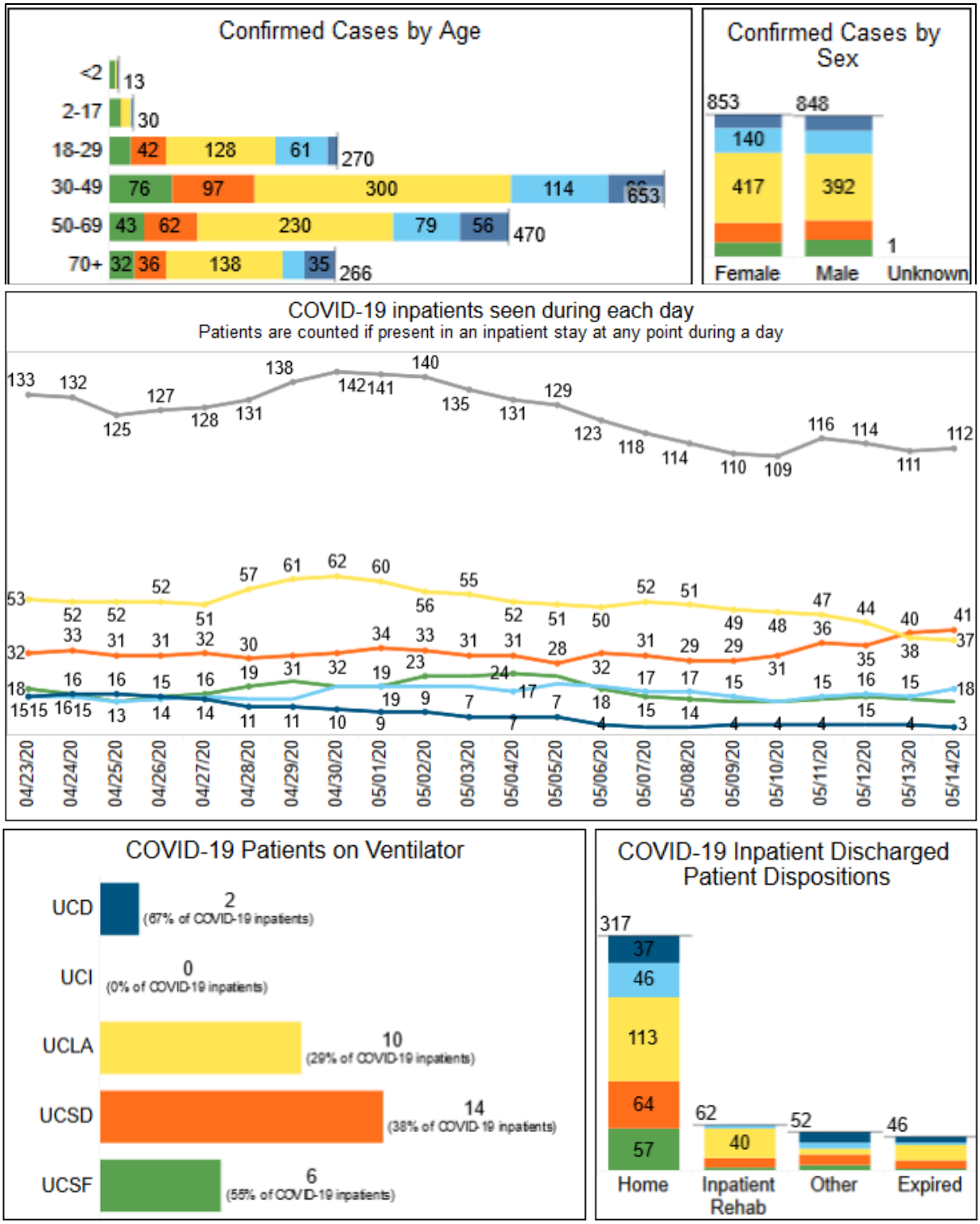
The greatest number of positive tests were from people 30-49 years of age.

Inpatient census from COVID-19 has trended downward, from a high of 142 to 112 currently.

However, we are seeing a spike in admissions at UC San Diego as cases continue to increase in the Southern California counties. Today, UC San Diego, for the first time, had more inpatients than UCLA, a much larger

health system. Importantly, 41% of the patients with COVID-19 at UCSD today are on ventilators. This is a reflection of the vital resource UCSD represents for critical care in Southern California.

To date, UC Health has cared for nearly 600 inpatients with COVID-19. Of those, the majority have been discharged home.



UCLA INITIATIVE BEGINS TESTING FRONTLINE HEALTH CARE WORKERS IN LA

The UCLA Fielding School of Public Health and David Geffen School of Medicine have launched a study to provide regular testing, antibody screening and mental health support for 12,000 health care workers and first responders across the County of Los Angeles, including 4,000 at UCLA Health.

L: Dr. Anne Rimoin

R: Dr. Grace Aldrovandi

The viral testing effort will include asymptomatic workers. Enrollment began April 13. Health care workers who opt-in will provide nasal, saliva and blood samples, complete a questionnaire about potential exposure sources and mental health status. Those who test positive will receive confirmatory testing and be connected to care support as needed.

The year-long effort is co-led by Dr. Anne Rimoin, director of the Center for Global and Immigrant Health and professor of epidemiology, and Dr. Grace Aldrovandi, chief of the Division of Infectious Diseases at UCLA Mattel Children's Hospital and a professor of pediatrics at the David Geffen School of Medicine of UCLA.

The initiative got a boost in visibility thanks to entertainers Tom Hanks and his wife Rita Wilson who cited the UCLA plasma donation program in their social media activity. The couple, who recovered from COVID-19 earlier in the year, also donated their convalescent plasma to help others.

"The attention they have brought to our program has been incredible," Rimoin said. "It's so important to let people know not only about our research but also the importance of what they can do. Having this kind of high-profile endorsement of what we're doing is impossible to put a value on."

Heroes of the Pandemic Images on Next Page

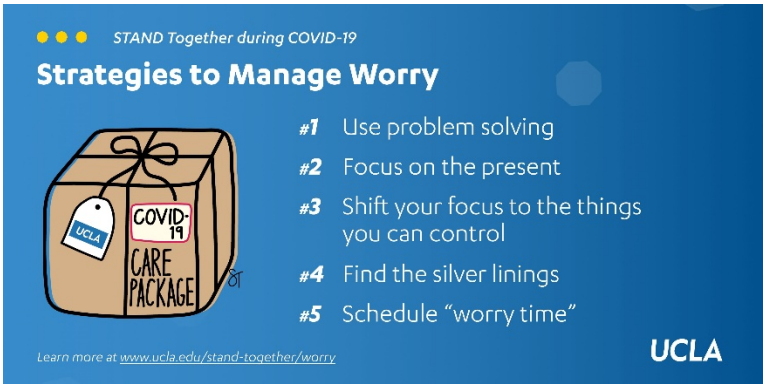
Top L: At UCSF, Merhawit has been cleaning rooms for #COVID19 patients.
Top M: At UCI, Dr. Edwin S. Monuki and Jeanie Garcia work to ramp up in-house testing.
Top R: At UCSF Benioff Children's Oakland, interpreter Adriana helps explain masks to kids.
2nd Row L: At UCLA Mattel Children's Hospital, Mattel brought free meals and Hot Wheels.
2nd Row R: At UC Berkeley, volunteers packed grocery bags for needy members of the campus.
3rd Row L: The team at UC San Diego is keeping the care environment safe for our patients.
3rd Row R: The clinical care team at UCSF remains ready to fight COVID-19.
4th Row L: UCPath takes a moment to say 'thank you' to our health care workers.
4th Row R: Santa Monica Firefighters pay respects and bring lunch from Wahlburgers.

SOME OF THE HEROES OF THE PANDEMIC

IN CLOSING

It has been almost five months since we first learned about SARS-CoV-2 and two months since the shelter in place began across California. Such a short time and yet, time enough to change everything.

As our lives have changed and we face the anxiety that comes from uncertainty, we have learned a great deal about ourselves, our leaders, and about the University of California.



UCLA's Stand Together program, in collaboration with Beyoncé's charity initiative, provide mental health resources and services for those affected by COVID-19.

We have also learned a great deal about the virus and what it will take to defeat it. The UC system is one of the most prepared organizations on the planet to combat COVID-19.

As this update outlines, there are significant costs associated with meeting the challenge of the COVID-19 pandemic. We must and will find a way. Like Governor Newsom and President Napolitano, I am committed to maintaining the values of UC Health, even as we navigate the financial realities of the pandemic.

There are challenges ahead. There are also opportunities. Opportunities to take what we have learned about collaboration, communication, preparedness, resilience, and service to become an even stronger organization.

The strength of the UC System and of UC Health lies in our people, our students, faculty, and staff. As a newcomer, I have watched the inspiring commitment of UC Health to lead with excellence and to serve our communities and our patients unconditionally.

The future may be uncertain and there will be more challenges, I know that we will face them together and that we will prevail. Fiat Lux.

With Gratitude,

Carrie L. Byington, MD
Executive Vice President
UC Health