

The Regents of the University of California

HEALTH SERVICES COMMITTEE

April 15, 2020

The Health Services Committee met on the above date by teleconference meeting conducted in accordance with Paragraph 3 of Governor Newsom's Executive Order N-29-20.

Members present: Regents Blum, Guber, Lansing, Makarechian, Park, Sherman, and Zettel; Ex officio members Napolitano and Pérez; Executive Vice President Byington; Chancellors Block, Hawgood, and Khosla; Advisory members Hernandez, Hetts, and Spahlinger

In attendance: Regents Butler, Reilly, Sures, Um, and Weddle, Regents-designate Muwwakkil and Stegura, Secretary and Chief of Staff Shaw, General Counsel Robinson, Interim Executive Vice President and Chief Financial Officer Jenny, Vice President Nation, Acting Vice President Lloyd, Chancellors Gillman, May, and Wilcox, and Recording Secretary Johns

The meeting convened at 10:05 a.m. with Committee Chair Lansing presiding.

1. **PUBLIC COMMENT**

There were no speakers wishing to address the Committee.

2. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of February 12, 2020 were approved, Regents Blum, Guber, Lansing, Makarechian, Napolitano, Park, Pérez, Sherman, and Zettel voting "aye."¹

Committee Chair Lansing commented that these were extraordinary times. Never had one seen so clearly the importance of the University's hospitals and medical centers. She expressed the Regents' gratitude to people of the UC Health enterprise. California had been a model in addressing the COVID-19 crisis, and the dedication and courage of UC Health doctors, nurses, faculty, and staff had been a model and an inspiration.

3. **THE RESPONSE OF THE UC HEALTH SYSTEM TO THE COVID-19 PANDEMIC**

[Background material was provided to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

¹ Roll call vote required by the Bagley-Keene Open Meeting Act [Government Code § 11123(b)(1)(D)] for all meetings held by teleconference.

President Napolitano began the discussion with the observation that the COVID-19 pandemic might prove to be one of the most unpredictable global crises of this era. The pandemic presented unprecedented challenges to the operations of the University of California and its campuses, medical centers, laboratories, and investment portfolio. The financial and operational impact of the pandemic was profound. It was a testament to the resilience of the University that it had met and was meeting the challenge on a number of fronts. At campuses, medical centers, and laboratories, employees and students had quickly recognized the scope of the crisis and jumped into action, with UC clinicians treating patients, researchers working to understand the virus and develop treatments, and faculty setting up distance learning and teaching remotely. UC hospitals were among the first in California to treat COVID-19 patients and had now treated more than 1,000 such patients. At the five academic medical centers, more than 9,000 faculty physicians and 14,000 nurses have demonstrated a deep commitment to serving patients and protecting public health, preparing for a surge of COVID-19 cases, providing excellent clinical care, developing in-house testing, and working to find innovative treatments and potential cures. Working together as UC Health, UC's medical centers were aligned in their work as never before. All members of the UC community could take pride in the people working every day across UC Health to deliver care in this uniquely challenging time, including health professionals and employees who sanitize health facilities and provide food services. As a university, UC was doing all it could to keep these employees safe and protected as they perform these essential services. President Napolitano expressed deep gratitude to UC faculty, researchers, physician scientists, and students who were working to develop and test new ways to halt the spread of the coronavirus. Across the UC system, there were approximately 300 or more research projects under way, all focused on COVID-19. In conducting clinical trials, using three-dimensional printing to produce personal protective equipment and replacement parts for ventilators, and launching public-facing digital applications to help track emerging "hot spots" of the virus, the University was continuing to generate essential insights to combat the virus in California and elsewhere. UC employees were living up to the highest ideals of research, teaching, and public service and making contributions that would last beyond the pandemic. The University had worked for the benefit of California since its founding more than 150 years ago. It was now necessary to work to ensure that UC emerges stronger than ever after this crisis. There was much work to be done.

Executive Vice President Byington observed that this day, April 15, was the predicted peak for resource use related to the coronavirus pandemic in California. A great deal had happened since the last Committee meeting on February 12. On February 12, there were 12 COVID-19 cases reported in the United States, and no deaths. UC Health had cared for some of the first cases in the U.S. There were now more than two million cases reported worldwide, with 609,000 cases and 26,000 deaths in the U.S. The pandemic had reached virtually all countries on earth. The novel coronavirus now known as SARS-CoV-2 was announced on December 31, 2019. UC Health began working on a response to the pandemic in early January 2020. Science and medical knowledge about the coronavirus have advanced extraordinarily quickly. The genome of the virus was released on January 11. This prompted a worldwide search for vaccines and therapeutics which was ongoing.

The pace of the pandemic in the U.S. changed dramatically on February 26, when the first case of COVID-19 from community transmission, not linked to travel, was described in the U.S. This case was discovered by astute clinicians at UC Davis. Their discovery had an immediate impact on changing U.S. criteria for evaluating patients with potential COVID-19 infection. The UC Health system had learned much during the past 100 days. UC was working to “bend the curve” of the pandemic to protect the capacity of its healthcare system. Without the precautionary measures that had been taken, such as social distancing, a flood of cases would have overwhelmed UC Health’s capacity. UC Health had also taken measures to increase its capacity.

Dr. Byington presented a chart illustrating the infection rate that can result over time from one infected person without social distancing. Under normal exposure conditions, the number of infected individuals could increase from one to 406 people in 30 days. When that exposure is decreased by 50 percent and 75 percent, the number of people infected in 30 days is reduced to 15 and 2.5 individuals, respectively. Based on cell phone records, it was believed that California had reduced person-to-person exposure by 50 percent, resulting in a dramatic difference in the number of cases.

Some of the recommendations for flattening the curve, increasing capacity, and social distancing had been developed by UC Health’s systemwide public health group, led by Dr. Bradley Pollock at UC Davis, and by the systemwide infection prevention group, led by Dr. Susan Huang at UC Irvine. These recommendations had proved very important for the management and operation of UC campuses and medical centers. These recommendations were also heard by California leaders, including Governor Newsom, whose strong and decisive action in March had resulted in a flattened pandemic curve in California. Dr. Byington presented a chart showing the number of reported cases per 100,000 residents in New York, New Jersey, Louisiana, and California for the period of February 29 to April 13. The numbers in California were far lower than in the three other states, where the response to the coronavirus had been different.

The UC system had rallied its resources to combat the pandemic with great speed. For Dr. Byington, the first order of business was to ensure that the UC medical centers were prepared. The frequency of conference calls with vice chancellors and chief executive officers was increased from once a week to three times a week, and sometimes more, early in the pandemic. The medical centers shared best practices, and it became apparent early on that UC Health was entering an unprecedented event and that it could better address many pandemic issues by working together as a system. All the medical centers had surge plans and had opened incident command centers to address myriad issues related to operational changes needed for the care of patients with COVID-19 and to protect UC healthcare workers.

One of the first actions taken by UC Health to protect capacity, and on the order of public health officials, was to eliminate all non-essential procedures and admissions, which resulted in many open beds across the UC system. UC Health was challenged by Governor Newsom to increase bed capacity by 40 percent to prepare for the expected surge. UC Irvine Health System Interim Chief Executive Officer Larry Anstine was leading this

systemwide effort in coordination with the Governor's task force on rapid response. The University had responded to this challenge and added almost 1,500 beds, a remarkable increase in its capacity.

UC Health's Center for Data-Driven Insights and Innovation, led by Dr. Atul Butte, was working to develop systemwide dashboards that provide an unprecedented view of capacity across the system. As an example, Dr. Byington presented a chart showing percentages of COVID-19 patients in the intensive care units of each medical center. These dashboards also allow UC Health to track personal protective equipment, laboratory supplies, total patient beds, personnel, and ventilators. UC Health has used these tools to identify shortages of personal protective equipment and to reallocate and share resources so that all the medical centers can be better prepared. After the pandemic, these tools would continue to help UC deliver care.

The spirit of collaboration and dedication across the UC Health workforce was impressive. UC cared for some of the first COVID-19 patients in California, before much was known about the coronavirus. UC Health staff stepped forward early and eagerly to receive the most severe cases from other health systems. UC Health staff worked together to develop training on use of personal protective equipment and on caring for patients with a disease that no one had seen before. UC Health has shared information across the UC system and with colleagues in New York, Italy, and China.

UCLA Health President Johnese Spisso appeared on "Meet the Press," the nationally syndicated television news and public affairs program, to share information on UC's response to COVID-19. UC Health leaders and faculty were serving as experts at the national level. Dr. Byington praised the staff members at UC medical centers as healthcare heroes. She thanked UC's doctors, nurses, and respiratory therapists, who manage the ventilators of very ill patients. Twenty physicians and nurses from UCSF, who saw the distress of their colleagues in New York City and the capacity of their own institution, volunteered to serve at New York-Presbyterian Hospital over the next month to provide much-needed care in a state which had been much harder hit by COVID-19 than California. Over 200 individuals volunteered for this team of 20.

Diagnostic testing was an early concern, and the UC system rose to meet the challenge. A systemwide laboratory working group, led by Dr. Steven Gonias, Professor of Pathology at UC San Diego, was instrumental in preparing the UC medical centers. All five UC medical centers have Clinical Laboratory Improvement Amendments (CLIA)-certified laboratories. As soon as the U.S. Food and Drug Administration (FDA) issued approval for CLIA-certified laboratories to pursue laboratory-developed tests and commercial tests with emergency use authorizations, UC medical centers began working on developing tests as a system, sharing reagents, RNA, and expertise so that all medical centers have the required testing capacity. UC also worked as a system to engage with major companies such as Roche and Abbott to ensure testing capacity. UC began in-house testing on March 9. Testing quickly increased from 200 to 2,000 tests a day.

Graduate students in the health sciences have stepped up to help in any way they can, as their own research projects have been put aside in favor of an “all hands on deck” approach to COVID-19.

The UC system now had additional testing capacity, up to perhaps 5,000 tests per day, more than its internal need. UC was offering its services to others in need, including public health departments, nursing homes, skilled nursing facilities, and cruise and hospital ships.

UC has developed additional dashboards which track testing. These reports are shared across the UC system, the state, and through social media to better inform the public and those engaged in modeling efforts. The dashboards include information on number of patients treated and location. Because of its awareness of the effect of health disparities, UC Health was also tracking the race and ethnicity of patients. The African American and Latino communities appeared to be overrepresented among patients with severe cases of COVID-19. UC Health was carrying out testing of all racial and ethnic groups. Among those tested, UC Health found an overrepresentation of African American and Asian American patients, and was working to understand the reasons for this.

During the month of February, it became clear that UC was responding to the pandemic as a system. In March, Dr. Byington asked President Napolitano and the chancellors for the establishment of a new committee focused on coordinating the medical centers’ response to COVID-19. On March 18, the UC Health Coordinating Committee was formed. This Committee is part of the Office of the President’s (UCOP) Management Response Team. The medical center chief executive officers provide input to the Committee. The Committee includes an Executive Group with representatives of UCOP. The charge of the UC Health Coordinating Committee was to field questions from UC Health leaders and to offer expert advice through the incident command structure, to facilitate collaboration among internal stakeholders, and to coordinate with external stakeholders, including federal and State public health officials, other health systems, and relevant professional organizations.

There were a number of subject matter expert working groups under the umbrella of the UC Health Coordinating Committee: the Public Health group, led by Dr. Pollock; the Infectious Disease group, led by Dr. Huang; the Laboratory group, led by Dr. Gonias; the Education group, led by Vice President Nation and UC Davis Professor Heather Young; the Telehealth group, led by Dr. Thomas Nesbitt of UC Davis; the Clinical Research group, led by Dr. Dan Cooper of UC Irvine; and the Bioethics group, led by Dr. Rochelle Dicker of UCLA. Five of these working groups had been selected to collaborate with California State government working groups of a similar scope and interest. More working groups might be added as the pandemic progressed. Another group under the UC Health Coordinating Committee, led by Mr. Anstine, was focused on the resumption of conventional care in UC hospitals. It was important that this resumption and the filling of empty beds proceed in a safe manner during the time of COVID-19.

With regard to telehealth, UC Health had already been working to develop a UC-wide telehealth collaborative which would focus on student mental health, and this had been

reported to the Health Services Committee at previous meetings. A great deal of progress had been made on developing an infrastructure to provide student mental health services on all the campuses. UC Health was now making efforts to increase the use of telehealth across the UC medical centers. UC was focusing on ambulatory care and on primary care visits for chronic diseases such as diabetes, asthma, and heart disease. These patients needed to be seen during the pandemic, but UC Health wished them to avoid settings where they might be exposed to COVID-19.

Dr. Byington presented a chart showing numbers of ambulatory care visits and telehealth visits from February 3 to April 5, 2020. UC medical centers were receiving about 35,000 ambulatory visits per week. This number dropped dramatically with the implementation of “shelter in place” guidelines. In the short period since that implementation, there had been a dramatic increase in telehealth visits. This involved a significant effort across the UC system to train providers to use telehealth, to set up billing and coding, and to ensure that the equipment and infrastructure used to see patients was in compliance with the Health Insurance Portability and Accountability Act (HIPAA). Currently, UC Health was delivering about 10,000 telehealth visits per week, with 15,000 expected for the coming week. UC Health was also using telehealth capabilities to support intensive care across UC in areas such as ventilator management, and to share expertise with affiliates and partners across the state.

UC Health believed that the telehealth infrastructure and expertise would outlast the pandemic. Currently, UC Health was seeing about 50 percent of its patients in person and 50 percent via telehealth. Dr. Byington anticipated that these percentages might continue after the pandemic, as physicians and patients appreciated this form of patient visit. Work needed to be done to gain new market share through telehealth. Through liberalization of policies at the State level, UC might experience increased competition for the telehealth market.

The COVID-19 pandemic had also affected UC Health professional students’ education, ability to graduate, and licensure. UC Health has asked training waivers and licensure requirements during the pandemic. UC Health had requested waivers to allow individuals to graduate and enter the workforce and waivers of some licensure requirements during the pandemic. UC Health had conducted a match day via videoconference. Match day is the day when medical students learn where they will complete their residency training, an important day in their careers. This year, for the first time, match day was conducted remotely.

California was fortunate in having outstanding researchers, and many of these were on UC campuses. UC Health faculty had been recognized in the news media for their role in combating COVID-19. UC was fortunate in having five Clinical and Translational Science Award centers. These centers provide an infrastructure for clinical trials. All these centers had been engaged immediately in trials for coronavirus therapeutics. All five UC medical centers were participating in trials of Remdesivir, the first antiviral drug being tested for use against COVID-19. Enrollment for the trial had been completed about ten days prior.

The trial was now in the analysis phase, and researchers hoped to understand soon whether or not this drug would be effective.

UC Health would be engaging in subsequent trials at the national level for convalescent plasma, which comes from patients who recover from COVID-19. UC Health hoped to engage in these trials at all the medical centers to determine if this is an effective treatment option or can be used as a prophylaxis. If this proved effective, small doses of plasma could be used to treat the healthcare workforce to give them antibodies to protect them until a vaccine is ready. UC was fortunate in having impressive blood banking resources. UCLA Health had begun collecting this plasma the previous week.

Dr. Byington stated that the support expressed by the community for UC Health had been gratifying. Campus communities had gathered supplies from basic science laboratories and redirected them to UC health professionals and had sewn masks for patients, visitors, and healthcare workers. Local businesses had donated food and other resources. People living near UC medical centers were coming out in the evening at change of shift, to bang pots, ring bells, clap, and cheer for UC's health professionals. While the report to be presented in the second discussion item, *Community Benefit and Impact, UC Health*, had been prepared before the coronavirus outbreak, Dr. Byington assured the Committee that UC Health was engaged in numerous, ongoing activities to help homeless people, immigrant populations, and public health facilities, to ensure that all California communities have access to COVID-19 testing, personal protective equipment, hygiene supplies, and care.

Dr. Byington took a moment to draw attention to a sad loss for the University. Dr. John F. Murray, UCSF Professor Emeritus of Medicine, had died from COVID-19 on March 24. Dr. Murray was a legend in the field of critical care and lung disease research, in particular on acute respiratory distress syndrome (ARDS). Dr. Murray spent years studying ARDS, and this was the condition that took his life. There had been many expressions of grief following Dr. Murray's death, and UC Health was honored that he had been a faculty member.

The model used most widely to predict the surge in the use of resources had projected that this day, April 15, would be the peak day for use of resources in combating COVID-19 in California. Dr. Byington and her colleagues hoped that the number of cases would decline over the coming weeks, based on the fact that there had been a flattening of the pandemic curve and a steady number of cases over the last four days without an increase. This statistical model would need more data in place for further projections. UC Health did not know what the future would hold but was optimistic that it had the knowledge and strength to carry out the work that would allow Californians to return to life with normal interactions or less restricted interactions by the summer or fall.

Committee Chair Lansing underscored her admiration for the work done by UC Health.

Regent Zettel noted that UC Health was not only collecting data on the gender, age, and ethnicity of patients, but also on previous health histories. She asked if this would help in the understanding of co-morbidity factors. Dr. Byington responded that the UC Health

infrastructure and the Center for Data-Driven Insights and Innovation platform would allow UC to link COVID-19 patients to their health records. This would be valuable in trying to understand who is at risk and how they can best be protected. Dr. Butte confirmed that UC Health was tracking patients and linking them to their previous records. UC was beginning to see how patients with certain conditions such as diabetes might be more likely to test positive for COVID-19. This research was currently ongoing.

Regent Sures asked if the predictive model foresaw a massive increase in cases when the “shelter in place” restrictions were lifted in California. Dr. Byington responded in the affirmative. A number of models predicted this because few people in the U.S. were immune at this moment. In California, less than one percent of the population was believed to be immune, and the virus had not disappeared. The models predicted that, if California were to return to pre-pandemic business as usual, a similar surge would occur in a period of weeks.

Regent Sures recalled that there had been theories that the coronavirus would not fare as well in warm temperatures. Nevertheless, in Louisiana, where there was warm weather, there were coronavirus “hot spots” and the virus was very active. He asked if this was a distressing fact. Dr. Byington responded that it was distressing to observe this. Many people had hoped that there would be a pause of the coronavirus in summer. Human coronaviruses which have existed for a long time and cause mild conditions, like colds, are seasonal; they almost disappear in summer. These viruses have evolved along with human beings over time. This was a new virus, and it would take some time for it to move into a seasonal pattern, if it does so. Health professionals had already been concerned about data from Asia about transmission in warm weather. Transmission was now occurring in Louisiana and Texas, where temperatures were routinely around 80 degrees Fahrenheit. This discouraged hopes for a seasonal pause this year.

Committee Chair Lansing stated her understanding that it was not yet known whether antibodies would guarantee immunity. Dr. Byington responded in the affirmative. Antibody testing was just now becoming available. UC Health was implementing antibody testing this week and all UC medical centers would be testing within a few weeks. It would take some time and study to determine if the antibody is protective and how long this protection lasts. UC was fortunate in having experts in seroepidemiology. Committee Chair Lansing asked if the antibody test was a blood or a swab test. Dr. Byington responded that the antibody test is a blood test that uses a small sample.

Regent Um asked when widespread antibody testing might be available. There was mixed reporting in the news media on the efficacy of tests. Certain clinics in Southern California were offering antibody tests for \$75. He asked for Dr. Byington’s thoughts on this, noting that there would be a great deal of misinformation in circulation. Dr. Byington responded that antibody testing is challenging in general. Tests need to be vetted quite carefully. She expressed skepticism about tests advertised on the internet or offered by “pop-up shops.” Dr. Gonias reported that, the previous day, UC San Diego had begun using a centralized immunoglobulin G (IgG) and immunoglobulin M (IgM) detection test. The campus had the capacity for 800 tests a day. UC laboratories, like other high-complexity, CLIA-

certified laboratories, perform extensive validation of tests to be used with patients. The test put into place at UCSD appeared to be very effective, and UC Irvine and UCSF were following up with the same platform. All five campuses would offer this serology testing by early May. There were reports that day that the FDA had clamped down on a number of companies offering non-compliant antibody detection tests to be used at home. There was spectrum of activities ongoing in this regard. The University was cautious in developing these tests but saw value in this activity. While between ten and 20 percent of the population of New York City might be IgG-positive at this time, it was calculated that less than one percent of the population in California had the IgG antibody. If an individual with the IgG antibody became re-infected, Dr. Gonias expected that the infection would be much milder. It was assumed that individuals who test negative on a polymerase chain reaction (PCR) test, without the virus, and who have the IgG antibody would have some level of immunity and protection.

Regent Pérez asked about April 15 as a peak date, asking if the numbers had changed and if the peak date was predicated to be April 28. Dr. Byington responded that the projected peak date depended on the model being used. The model she had presented had been developed at the University of Washington; there were other models which identified the peak date later due to the “shelter in place” precautions. The results of the next four weeks would be closely followed. UC Health and other health systems were observing a flattening of the pandemic curve, and now there needed to be a decrease in the case numbers. UC Health would like to see 14 days in a row of decreasing numbers; this would provide a sense that one had passed the peak. This could really only be known retrospectively.

Regent Pérez asked if the demographic patterns of COVID-19 patients in UC hospitals were similar to those in other California hospitals. Dr. Byington responded that this was something the University wished to learn. For this reason, UC was sharing its data with State entities. UC Health would like to see all the State data, but these were not yet available. Although the UC Health system was large, it represented only six percent of patient beds in California.

Committee Chair Lansing asked what would be necessary to avoid another coronavirus surge. Dr. Byington responded that this was a subject of active discussions within UC Health and with the Governor’s task force. The previous day, Governor Newsom had presented a six-point plan, and UC Health supports this plan. California could not simply return to life as it was before the pandemic, or there would be a resurgence. This might be less the case in New York, where more people might have acquired immunity, but there were still not enough immune people in California. In this case of this virus, the way health professionals determine the number of people who need to be immune depends on the R nought or basic reproduction number. If the reproduction number is two, about 55 percent of the population needs to be immune to stop transmission. The R nought might be higher than anticipated. A recent study based on data from Wuhan, the original epicenter of the virus, found that the R nought was closer to 5.7. In that case, 80 to 85 percent of the population would need to be immune before normal life could resume. The state and the nation would have to follow a series of restrictions. There would have to be a societal discussion of the restrictions that are possible and the liberties that people will trade for

security. In response to another comment by Committee Chair Lansing, Dr. Byington confirmed that the actual level of immunity in the population was not yet known.

Regent Park referred to information in the background materials from the California Department of Public Health which indicated the percentage of deaths among COVID-19 patients as 3.07 percent. She asked if this was in fact not a reliable statistic, since the actual number of infected people was not known. Dr. Byington responded in the affirmative. In order to reach a definitive number, one needs to know how many cases there really are. This number was changing daily and depended on testing.

Regent Park asked where the additional capacity of 1,500 beds in UC medical centers had come from and what had been repurposed in order to create this capacity. Dr. Byington responded that many other spaces had been repurposed. UCLA Health Sciences Vice Chancellor John Mazziotta reported that UCLA was using procedure and operating rooms as hospital rooms and placing more than one bed in a room that is typically a single patient room. UCSF Health Chief Executive Officer Mark Laret added that UCSF had reopened the Mount Zion hospital and worked with other hospitals in the community to add beds. He noted that, although New York-Presbyterian Hospital had 450 intensive care unit (ICU) beds, it had in excess of 1,200 ICU patients. In one New York-Presbyterian facility, a cafeteria had been converted into a bed unit. In a crisis like this, the focus was less on the number of beds and more on the question of space to accommodate patients.

Regent Park referred to a chart in the background materials showing the number of patients tested for COVID-19 at UC medical centers from March 24 to April 11. She asked how this pattern of testing might change over the coming months, as testing becomes an important tool for determining how to reopen the economy. Dr. Byington responded that testing by UC would need to increase. She noted that the chart reported only testing of UC patients, while UC was also engaged in testing for external partners. The State wished to develop regional testing and to achieve much broader testing of the California population. Dr. Gonias was participating on the State COVID-19 testing task force, as was Professor Nam Tran of UC Davis. Dr. Byington anticipated that, as UC Health increases testing, the foremost issue of concern would be ensuring a reliable supply chain for swabs, kits, and reagents. Commercial manufacturers' ability to produce and distribute kits would improve, but this was still a challenge. Dr. Gonias added that Governor Newsom and the State had become very much aware of the power of the UC system to contribute to the State's goal of broader testing. Currently, UC had a capacity for more than 6,000 tests a day, and UC could increase capacity in response to State needs.

Regent Park asked if UC expected doubling or tripling of testing. Dr. Byington responded that she expected an increase of that magnitude because, as UC moves toward opening more space in its hospitals for conventional care, it would need to test more patients. The following day, UCLA would begin universal testing for all patients who come into the hospital, and this would likely be done at all UC medical centers. UC would also have to move in the direction of universal testing of its healthcare workers. If antibodies were shown to offer protection, UC would want to know the antibody status of healthcare workers. These questions were also relevant for the campuses. How should the University

reopen a campus for normal operations? The University would probably wish to know the antibody and PCR status of individuals on that campus. UC Health would have to increase testing capacity dramatically just to serve the needs of UC hospitals. What services UC Health would provide outside its region was a matter for discussion. Dr. Byington believed that UC was capable of this task with the laboratories that it had. UC might need more machines and personnel, and it definitely needed a reliable supply chain for reagents and testing material. UC San Diego Health Chief Executive Officer Patricia Maysent commented on the complexity of testing. UCSD had capacity for both serology and PCR testing for its healthcare workers, but a clinical worker who tested negative today might test positive a few days later. UCSD had about 5,000 employees in the clinical environment. There was a question of how often these employees should be tested to ensure safety. This number would have to be multiplied five or six times for the entire UC Health system, and all the medical centers were working on this problem.

President Napolitano stated that testing would be a key factor in the University's decisions about when it would be safe to restore even semi-normal operations on the campuses. There would be calculations of testing capacity and the number of students and employees. Reopening the campuses would be a long-term process, and this would be a topic of discussion at the May meeting.

Regent Park asked about the reliability of temperature checks for detecting the spread of the coronavirus, given that individuals might be asymptomatic but carry the virus. Dr. Byington responded that temperature checks were an important part of containment efforts. UC would not allow an individual with a high temperature to come into the workplace; however, temperature checks could not be the only measure taken. The percentage of people with the virus who were asymptomatic was not yet known. It was becoming clear that there is a pre-symptomatic phase, which might last for two to three days, while the virus was in the nose and throat. It would not be unrealistic to project that UC employees would have a symptom diary, a daily temperature check, an antibody and PCR test once a week or even more frequently, if UC could support that level of testing. In response to a question by Committee Chair Lansing, Dr. Byington explained that the PCR test is a nucleic acid test, but without a swab.

Regent Reilly recalled that one of the six points mentioned by Governor Newsom that must be addressed in order to lift current restrictions and social distancing precautions was widespread testing. She asked how widespread testing might be carried out; for example, if testing would be done at local fire stations and drugstores. Dr. Byington responded that this would be a likely scenario. Individuals working at their workplace, not telecommuting from home, would likely have to undergo the same tests that were now being applied for healthcare workers, such as symptom checks and fever checks. She believed that everyone would have an antibody test at some point. People might wear bracelets stating their antibody status. This would be a different way of life and working. In California, one would have to be able to reliably carry out 250,000 tests a day, or perhaps even more. The number of tests needed in the entire U.S. was staggering. Dr. Byington expressed support for all the measures put forward by Governor Newsom. Besides testing, another important activity included in the Governor's plan would be contact tracing. When the pandemic curve begins

to come down, most of the known infections would have been contained, although the coronavirus would not be gone. At that point, contact tracing would be necessary in order to avoid seeding a new epidemic. It was estimated that 40,000 people would be needed to do contact tracing work in California. UC Health was determining if it could train that workforce. President Napolitano noted that UC was considering training students to do contact tracing, perhaps through a certificate program. Dr. Mazziotta added that Chinese medical colleagues had reported that, in Wuhan, every infected patient and every contact was identified and placed in a State-run quarantine facility with guards.

Regent Reilly stated that normal life could not resume until a vaccine was available and asked when this might happen. Dr. Byington responded that five vaccines were in a Phase 1 trial in the U.S. and in China. This was remarkably quick progress when one recalled that this virus had been unknown until December 31, 2019. One could hope that one or more of these vaccines would be effective in the Phase 1 trial, and move to the Phase 2 trial. In six months, one or two vaccines might have completed the Phase 2 trial. The Phase 3 trial would take some time. In Dr. Byington's view, in the best-case scenario, a vaccine would be developed in 18 months to two years. The speed with which scientific research on COVID-19 was moving had not been seen before. The collaboration across laboratories and borders had been unprecedented. No one was trying to hold on to intellectual property or keeping data for themselves. Everyone was sharing data because they understood that the lives of everyone on the planet depended on developing a vaccine.

In response to another question by Regent Reilly, Dr. Byington stated that no such trials were yet taking place at UC Health facilities. The Phase 1 trials were small, enrolling 25 to 40 people. UC Health would be ready to join the Phase 2 trials. The Remdesivir trial required enrollment of 400 patients, and this enrollment was reached in nine or ten days. Enrollment for clinical trials was usually quite difficult, but, in this case, people were enrolling very quickly.

Committee Chair Lansing asked how long it might take to reach an adequate level of testing. Dr. Byington responded that this would depend on the plan of the State task force and how much the State would invest in this effort. It would not be a small task to train 40,000 people for contact tracing work. The task of ensuring a reliable supply chain was often beyond one's control. Dr. Byington expressed her wish that reagents be reliably mass produced in the United States. It was unlikely that all of this could be accomplished quickly. The process of having people return to the community would have to be staggered in some way, with certain priorities, in order to avoid returning to the same pandemic cycle and overwhelming the capacity of the healthcare system. There might be eight to ten weeks of sheltering in place, and people would not want to have to repeat this.

Regent Leib asked about anecdotal information according to which young people were less affected by the coronavirus. Dr. Byington responded that data from around the world indicated that COVID-19 did not spare any age group. Young people could suffer severe forms of the disease. California might have benefited from having fewer infections overall, with fewer opportunities for manifesting a severe form of the disease, which occurs in about five percent of cases. California had been fortunate, but this disease did not spare a

group uniformly. The first study of pediatric patients had been published the previous week. At this time, 2,500 children in the U.S. who had been infected with COVID-19 were ill enough to receive medical attention. Some of those children had been hospitalized and three had died. No one was immune. Researchers were trying to understand why children in general fared better than adults.

Regent Makarechian referred to a California case summary table in the background materials. He asked why there appeared to be almost twice the number of COVID-19 cases in the 18 to 49 age group than among people aged 50 to 64. If 80 percent of the population needed to have immunity in order to allow a return to normal life, he asked if this meant that 80 percent of the population had to become infected and survive. He asked if the University was creating guidelines for how dormitories, cafeterias, classroom, and lecture hall spaces would be used as it began reopening the campuses. Campuses would need to reserve some cash flow to address negative impacts on their finances. Dr. Byington responded that finding a large proportion of infections in the 18 to 49 age group was not unexpected. These people were not initially believed to be at high risk and many continued working. Many people 55 years and older began to take precautions earlier. Fatalities were occurring in the 18 to 49 age group. Regent Makarechian's second question referred to herd immunity; a preferred term for this was now "community immunity." If 85 to 90 percent of the population needed to be immune to stop transmission and infection, there were only two ways this could occur; either people became infected, survived, and had immunity, or they were vaccinated. Under the first scenario, 85 percent of people in the U.S. would have to become infected, and this would be a catastrophe for health systems and lead to many deaths. No one has underlying immunity in a pandemic; everyone is vulnerable. Eighty percent of people who are infected would have a mild form of the disease and recover from the infection, 20 percent would be hospitalized, five percent would be in the ICU, and a certain percentage of patients, not yet known, would die. The 1918 influenza pandemic had a case fatality rate estimated at three percent, and it was believed to have killed between 60 million and 100 million people around the world.

Regent Makarechian asked if isolation and social distancing measures would be necessary for two years until a vaccine was developed. Dr. Byington responded that people would not be able to return to their normal routines as they were before the pandemic. If one were to do this, there would be a new rise in the pandemic curve. The United States needed to take actions based on science that would allow people more freedom than they currently had and to interact and engage in economic and educational activities. This had to be done in a way that would protect the most vulnerable and slow the rate of infection. While 80 percent of populations across the world appear to survive infection, one wants to avoid a situation in which 80 percent of people are infected at the same time.

Regent Makarechian reiterated his question about UC guidelines for reopening campuses and dormitories. Dr. Byington responded that these questions were now being addressed in the medical centers in order to ensure a safe environment for employees and to be able to bring non-COVID-19 patients back into hospitals. Many of these procedures and lessons used to guide these efforts would also be used to guide campus efforts. President Napolitano was assembling a working group to determine how the University would

operate in the fall semester. These issues would be considered for the spring semester and continue over the next two-year period. New developments during this period, such as an antiviral medication, might help UC to adjust and loosen restrictions. There would be more testing and better understanding of the antibodies. However, until there was immunity in the population, desirably through a vaccine, it would be difficult to return to operations as they were before the pandemic.

Regent Makarechian asked if it would be possible for students to return to living in dormitories in the current year. Dr. Byington responded that dormitories were unlikely to return to a situation with multiple people in one dormitory room. The University would have to review the size of dormitory rooms and bathroom facilities. UC should project having one occupant per room as the best-case scenario; two occupants per room was not feasible. In smaller, more crowded dormitories with shared bathrooms, there might have to be a limit on the number of people on a floor. These matters would be discussed in detail over the coming weeks. The chancellors were already engaged in these discussions and developing ideas based on the specific situations of the campuses.

Regent Makarechian asked if the same measures would be necessary for lecture halls. Dr. Byington responded in the affirmative. Regent Makarechian stated that, if dormitories were limited to one person per room, it would be almost impossible for campuses to reopen. He asked who was working on developing these guidelines and when the guidelines would be issued, so that the Regents understand the extent of these measures. Dr. Byington responded that she had discussed with chancellors these concerns about the dormitories. Some options might be more favorable. On some campuses, graduate student housing is in the form of single apartments. The chancellors had met twice to discuss this matter and had been drawing on campus expertise. UC Health had been asked to identify individuals with expertise in testing, infection prevention, and modeling in order to model dormitory capacity and transmissions that might occur in that setting. Dormitory life was one of the highest risk factors for transmission on a campus. Dr. Byington was not certain when guidelines might be issued. This was a campus decision. This was a pressing issue as students were currently being accepted for the fall term.

Chancellor Khosla reported that a number of task forces at UC San Diego were currently working on restarting the undergraduate campus, restarting the research program, and on the student experience during the resumption of campus activities. The fall of 2020 would be different from fall 2019 in terms of physical presence. The campus, with the agreement of the Academic Senate, would keep working remotely. A testing regime for testing all students had not yet been developed, but this work was ongoing.

Chancellor Block suggested that one possibility would be time sharing on campus, so that students would be on campus one quarter during the year, with lower density in the dormitories and classrooms. The University would have to find creative solutions. In-residence education is hard to replace with remote education. There were many benefits to having students on campus. The coming year would be very unusual.

Chancellor Wilcox emphasized the complexity of the problem, including the need to know which courses students in the residence halls would be taking. This would require coordination with faculty members about which courses would be offered at what times. Having some students on campus some of the time and others not would be very complicated, more complicated than simply spreading people out in the residence halls.

Regent Guber expressed concern that without ordinary economic activity, including sports and entertainment, the State would not have necessary tax revenues. The economic engine of the state had been shut off, people were not being paid, and the government would not have the means to support them. In trying to achieve a balance in this situation, one must recognize that the government and the economy could not last if they were shut down for two years. There was still no vaccine for severe acute respiratory syndrome (SARS) or for the human immunodeficiency virus (HIV). One point that needed to be discussed was whether the “new normal” could even function economically. Dr. Byington agreed about the need to achieve a balance and stressed that this was an unprecedented challenge for the United States. Different societies would choose different approaches. She stated that Governor Newsom was well aware of the issues raised by Regent Guber and was building a team to try to reopen the state as safely as possible. This was a tradeoff, and there would be starts and stops over next two years.

Regent Sherman asked what kind of rules and limitations or “speed limits” would be necessary in the future to allow the state’s economic engine to restart and operate. Dr. Byington responded that, in her view, the “speed limit” would be the capacity of the hospitals. Across the country, hospitals had been building their surge capacity in order to try to avoid the chaos that New York City hospitals were experiencing. The state would try to operate within the bounds of what its health system can tolerate. The limits were in place. If health systems are overwhelmed, patients would die from COVID-19 and other health conditions. If California could manage within those limits, this would help achieve the desired balance. UC Health and others needed to be able to track the progression of COVID-19 to see when the state might be approaching another peak in order to take a step back, or to see what measures have been effective.

Regent Pérez stated that there would be a difference between the current circumstances and the transition back to business as usual. It was his understanding that the current circumstances were not projected to last two years. Based on data discussed by Dr. Byington, there would be relief efforts to restart different elements of the economy and society. The governors of California, Oregon, Washington, and the Northeastern states were considering sets of measures that would align with economic imperatives. The current status could not be sustained for two years. The deaths due to COVID-19, a spreading pandemic, could not be easily compared to the relatively flat death rates under normal circumstances for seasonal influenza or automobile accidents. The fact that the numbers of deaths and infections had been low in California was thanks to the fact that there had been good public health interventions, restrictions, and sheltering in place. He thanked Dr. Byington for her work and contributions during this crisis; she had been ahead of most people in foreseeing the direction of the pandemic and the necessary measures to respond to it.

Committee Chair Lansing observed that Governor Newsom had established goals, including widespread testing and monitoring the spread of COVID-19. She asked how long it might take to achieve all six or even just a few of the indicators or criteria presented by the Governor. This might take several months. Dr. Byington agreed that this process might take several months. She hoped that decisions about relaxation of restrictions would be based on the capacity of the healthcare system, and that hospitals would continue to build capacity. UC Health would be able to increase testing, but this would take time. The measures outlined by the Governor were the correct measures but not easy to accomplish.

UC Davis Human Health Sciences Vice Chancellor David Lubarsky drew attention to the fact that, even if there were not yet a vaccine, much work was also being done to develop effective therapies. If therapies could be developed that would decrease the progression from infection to pneumonia to requiring a ventilator, this would change the fatality rate and the need for additional hospital capacity. Dr. Lubarsky believed that effective therapies might be developed in the next few months. This would change the consequences of reopening economic and other activities. In a month or two, antibody tests should become much more accurate and this would allow resumption of activity by people performing essential services outside the healthcare field. He anticipated that, within three to four months, a combination of factors would change the current situation: decreased severity from contracting the disease, a firmer understanding of who is at risk, and a more sensitive and specific antibody test.

Student observer Noah Danesh thanked healthcare workers, staff, and University leadership for their work during this crisis. The benefits of telehealth for UC students were now more evident than ever. UC Health should use telehealth to facilitate solutions for students who are most at risk. He suggested sending out a survey on student mental health so that counselors could then reach out to students who needed help the most. By making telehealth counseling options easier to use and better known to students, UC Health could intervene for students facing difficult issues. The current public health crisis would have long-lasting effects on student mental health.

COVID-19 had magnified existing health disparities in California communities. Many students were making difficult decisions about how to allocate their resources. The University should ensure that health care was the least of these students' financial worries. It would be important to continue providing care and testing for students who need it even after the initial pandemic wave had passed. The University should also ensure that students on campuses without medical centers have the opportunity to receive the same kind of screening and treatment as students on campuses with medical centers. An important factor in the reopening of the campuses would be sustained testing of students. The sooner the University could finalize its guidelines for operations in the fall, the better, so that students could effectively plan for the coming academic year. Creative solutions would be necessary. Mr. Danesh thanked Dr. Byington and Dr. Butte for their public communications about COVID-19 made through social media channels.

This was a difficult time for students applying to UC graduate programs and medical schools, and it was good that certain entrance requirements had been relaxed. The

University should consider a reduction in application fees to help offset some of the economic difficulties students were facing. This would remove a burden from the stressful application cycle. As a final point, Mr. Danesh suggested that, even though the development of a COVID-19 vaccine might be two years away, UC should begin discussing how to make a future vaccine freely available to all UC students. Many students from underserved communities might not have any other means of accessing the vaccine. This would help protect those most at risk at UC and would allay students' concerns about returning to campuses.

Committee Chair Lansing agreed about the importance of mental health issues during the COVID-19 outbreak, not only for students, but for everyone. She expressed gratitude to Dr. Byington and to all UC Health doctors, nurses, and employees during this unprecedented time. Their hard work in fighting a disease that had hitherto been unknown was an inspiration to all.

4. **COMMUNITY BENEFIT AND IMPACT, UC HEALTH**

[Background material was provided to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Executive Vice President Byington explained that this community benefit report was the result of systemwide efforts by UC Health chief executive officers and chief financial officers. This was the first such report to be prepared and shared with the Regents in accordance with Internal Revenue Service (IRS) instructions for Form 990, Schedule H and nationally accepted guidelines in order to provide transparency on the significant amount of community benefits provided and facilitated by UC Health. The report also allows UC Health to benchmark itself against other tax-exempt medical centers. Dr. Byington underscored that this report covered the medical centers only; it did not include UC's 19 health professional schools. Future reports would include these schools as well, in order to show the full impact of UC Health.

The report shows how UC Health partners with or sponsors hundreds of community programs and events and how it invests its resources in the state. Like other tax-exempt institutions, UC Health needs to demonstrate its commitment and mission to support the people of California, who support the University with their taxes. UC Health devotes significant resources in order to provide access to care for low-income and underserved patients and helps to advance knowledge through education and research which benefit the public. In total, for the 2018–19 academic year, UC medical centers provided \$1.4 billion in net community benefit.

Dr. Byington provided a few examples of UC Health community benefit activities. The UC Davis Trauma Prevention Helmet Safety Program partners with schools and community centers in the Sacramento area to provide safety education and free bicycle helmets. Another UC Davis program, the Pediatric Acute Care Education Sessions (PACES) program, is a peer-to-peer program in which pediatric experts share their knowledge with community pediatricians and healthcare providers in the region. To date, in fiscal year

2019, PACES had provided training in 30 community hospitals and to over 125 providers to ensure that they are able to recognize and treat common pediatric conditions. UCLA Health had established the Operation Mend program over a decade earlier. This is a partnership with the U.S. military and the Department of Veterans Affairs to help heal individuals injured by war. Through this program, UCLA Health provides advanced surgical and medical treatment as well as comprehensive psychological support for post-9/11 era service members, veterans, and their families at no cost.

UC Davis Health Chief Financial Officer Tim Maurice explained that, to prepare this report, UC Health gathered information from its audited financial records and Medicare cost reports, both of which are independently reviewed and certified by the chief financial officers of the UC medical centers. UC follows the instructions and definitions from IRS nonprofit hospital tax returns specific to community benefit. The categories of community benefit expenses are clearly defined and identified by the IRS. Since this was UC's first effort to complete these schedules, the University engaged Verité Healthcare Consulting, whose principal officer, Keith Hearle, was instrumental in developing community benefit reporting standards now commonly used by tax-exempt health systems. Mr. Hearle conducted a series of webinars and reviewed source documents from each medical center to ensure that these reporting standards were followed.

The results for fiscal year 2019 showed direct expenses of \$4.2 billion, offset by \$2.8 billion in revenues, for a net community benefit expense of \$1.4 billion. In addition to IRS allowable expenses, UC Health also reported the net unreimbursed expense of serving Medicare patients, an additional \$1.4 billion. While the Medicare program is not a means-tested assistance program, it does represent a financial burden for tax-exempt medical centers that serve a high percentage of Medicare patients. Hospitals rely on high commercial health plan rates to offset the losses incurred in serving the Medicare population.

The net community benefit expense was about ten percent of the operating expenses for UC medical centers for fiscal year 2019. This was consistent with the benefit percentage of benchmarked academic medical centers available in public records. Including Medicare losses, the net community benefit expense for UC medical centers was about 20 percent of operating expenses.

UC Health identified several opportunities to improve this reporting in future years. In addition to increasing the survey of activities by faculty and staff, UC Health hoped to include community benefit originating from UC health professional schools in order to provide a more comprehensive representation of the total contribution UC Health makes to the community. The investments UC was now making to respond to COVID-19 would change the reporting for the next year.

Regent Makarechian referred to a chart in the background materials showing that the Medicaid expenses for UCSF amounted to \$444 million in fiscal year 2019 and requested clarification. Mr. Maurice responded that this chart indicated net community benefit expenses for UCSF of \$596 million before Medicare. When one added Medicare, there was

another \$596 million of net unreimbursed costs for serving the Medicare population. So the net community benefit of UCSF was 11.8 percent of operating expenses for the categories above, including financial assistance, Medicaid, education, research, and subsidized health services. An additional 11.8 percent of expenses was incurred by UCSF for a total of 23.6 percent of total expenses, the combined community benefit expense and unreimbursed cost of Medicare patients.

Regent Makarechian asked if the \$47 million in research expenses shown on the chart indicated that UCSF had spent \$47 million more than it was reimbursed. Mr. Maurice explained that the chart only showed the amount of research expenses subsidized by the medical centers. He believed that the categories of research and education were significantly underreported. UCSF had reported \$47.8 million of support to the health professional schools to fund research. This was in addition to the funding for those schools themselves.

Regent Makarechian asked about the amount of \$2.6 million shown for UCLA's cash and in-kind contributions. Mr. Maurice explained that the cash and in-kind contributions represented cash provided to community agencies. A few campuses reported zero in this category. This was largely because they had not included in their financial records the surveillance needed to document those contributions. Mr. Maurice anticipated that these numbers would be much higher in future years as reporting improves.

Regent Zettel asked how the challenges and expenses resulting from the University's response to COVID-19 would affect its community and charity care and if UC would have the resources to manage. Dr. Byington responded that this was a matter of great concern. Academic medical centers are an important part of California's safety net for vulnerable populations. UC needed to work with the State in order not to lose its ability to provide these services. UC was advocating at the federal level to protect funds flow and income so that it can continue to engage in these activities. If the University did not perform these services, no one else would. UC Federal Governmental Relations and State Governmental Relations offices were working to advocate on behalf of UC Health. Laws and regulations governing Medicare and Medicaid have a great impact on UC Health, since care for 70 percent of its patients is paid for either by Medi-Cal or Medicare.

UC San Diego Health Chief Executive Officer Patricia Maysent noted that the chart referred to earlier indicated an amount of zero dollars for research expenses at UCSD. The tracking of this category needed to be developed. The community benefit research expense for UCSD was in fact a large number.

Dr. Byington concluded the discussion by noting that the University was not required by law to produce this report. Nevertheless, she felt that it was important for UC Health to document and understand what it was contributing to its communities and to be transparent. This was the first such report. UC Health would refine its accounting procedures to be able to capture this information, much of which likely resided in the health professional schools. This was the first attempt, and UC Health had discovered much positive information.

The meeting adjourned at 12:30 p.m.

Attest:

Secretary and Chief of Staff