The Regents of the University of California

HEALTH SERVICES COMMITTEE
August 9, 2023

The Health Services Committee met on the above date at the UCLA Luskin Conference Center and by teleconference at 106 E. Babcock Street, Bozeman, Montana.

Members present: Regents Guber, Makarechian, Park, Pérez, Reilly, and Sherman; Interim Executive Vice President King; Chancellors Gillman and Hawgood; Advisory members Marks and Ramamoorthy

In attendance: Regents Ellis and Tesfai, Faculty Representatives Cochran and Steintrager, Secretary and Chief of Staff Lyall, Deputy General Counsel Nosowsky, and Recording Secretary Johns

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

1. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of June 14, 2023 were approved, Regents Guber, Makarechian, Park, Pérez, Reilly, and Sherman voting "aye."[1]

2. **PUBLIC COMMENT**

Committee Chair Pérez explained that the public comment period permitted members of the public an opportunity to address University-related matters. The following persons addressed the Committee concerning the items noted.

A. Daniel Mitchell, UCLA Professor Emeritus, expressed concern on behalf of the emeriti associations of UCLA, UC Santa Barbara, and UCSF about the cancellation of survivor health insurance under the UC retiree health plan. Survivors of UC retirees have been told that their survivor health insurance has inadvertently been cancelled and will be reinstated. He asked the Regents to contact the insurance carriers and instruct them not to cancel survivor plans.

B. Martha Torres, a UCLA employee for 23 years, spoke of how hard it was for her to pay rent and provide for her son and two grandchildren with her UC earnings. She asked the Regents to consider instituting a minimum wage of $25 per hour and, for employees currently earning $25 per hour, a five percent increase to address the high cost of living.

C. Carlos Tovar, a UCLA employee for 13 years, reported that his UC compensation was not sufficient to meet the high cost of rent, household expenses, and to provide

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

for his eight-year-old daughter, and that he had to take a second job. He demanded that UC offer the minimum wage of $25/hour and the five percent increase mentioned by Ms. Torres. The cost of living had risen following the COVID-19 pandemic.

D. Daisy Marquez addressed the Committee in Spanish. She was a senior custodian at UCLA and worked shifts of 12 hours a day five days a week, and sometimes seven days a week to cover her rent of $3,000. She was a single mother with four children. Her youngest child, a daughter aged 20, could not attend college because Ms. Marquez's pay from UCLA was not sufficient, and it was very hard to have to tell her daughter that this dream could not be fulfilled. She asked that UC provide a minimum wage of $25/hour and a five percent increase.

E. Patricia Rodriguez addressed the Committee in Spanish. She had been working at UCLA for seven years and believed that she was one of the lowest-paid employees, earning $20.80 an hour. She had lived ten miles from UCLA but had to move because she could not afford rent of $800. She now lived 30 miles from UCLA, drove two hours a day to get to work, with a higher expense for gas. She asked that UC provide a minimum wage of $25/hour and a five percent increase.

F. A man speaking on behalf of Enrique Rosas demanded that UC pay living wages and provide a minimum wage of $25/hour and a five percent increase.

G. Diana Hilbert, an internal medicine specialist who had practiced at St. Mary's Medical Center for 28 years, stated her and her colleagues' wish to keep existing programs and patient services at this hospital and their wish that the acquisition by UCSF be a successful venture. As a community hospital, St. Mary's was served by many independent physicians, who provided high-quality, personalized care at a lower cost to patients and who were not encumbered by significant bureaucratic pressures, unlike physicians at larger health systems. It would be critical for the community to retain the ability of independent physicians to provide care at St. Mary's. Dr. Hilbert stressed that any future plans for the hospital needed to include the network of independent physicians, whose contribution would be instrumental for success.

H. Charles Allison, a doctor who had practiced at St. Mary's Medical Center for 49 years, reported that patients had been expressing concern about the availability and cost of services after the acquisition by UCSF. Dr. Allison underscored the importance of services provided to the community through the Sister Mary Philippa Health Center and of the residency program at the hospital. Physicians at St. Mary's hoped to participate in the integration process with UCSF and to be formally involved, which would contribute to the success of the venture.

I. Dayna Isaacs, internal medicine resident physician at UCLA and representative of the Committee of Interns and Residents of the Service Employees International Union (CIR/SEIU), asked that the Regents enforce a fair licensing policy across

UC hospitals that would allow residents and fellows to continue working when the Medical Board of California was not able to process licensing applications in a timely manner. The Medical Board's long processing time was causing residents and fellows to be removed from patient care, lose pay, and face termination. This was outside the control of residents and fellows, and it was a public health issue. When one doctor is not working, more than 20 patients per day are affected negatively.

J. Puja Takiar, a graduate in internal medicine at UC San Diego and CIR/SEIU member, described personal hardships and an unintended lapse in licensure that prevented her from beginning a pulmonary and critical care fellowship at UC Davis and reported that she was being terminated without any discussion of alternatives. She asked that the Regents enforce a fair licensing policy across UC hospitals that would allow residents and fellows to continue working when the Medical Board of California fails to process licensing applications in a timely manner.

K. Katherine Tygart, pediatrician, recent graduate of UCSD, and CIR/SEIU member, reported that she had finished her residency in June and had applied for a full medical license on time, as recommended by her program and the Medical Board of California. Due to processing delays by the Medical Board, she had not yet been issued her physician's and surgeon's license and was unable to start her position as a pediatric hospital medicine fellow at UCSD. The Medical Board had a large backlog of applications and was inconsistent in its processing of individual licenses. She asked that the University establish a universal and fair policy to allow residents and fellows to keep working and not punish them for licensing delays beyond their control.

The Committee recessed at 10:30 a.m.

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The Committee reconvened at 12:50 p.m. with Committee Chair Pérez presiding.

Members present: Regents Makarechian, Park, Pérez, Reilly, and Sherman; Ex officio member Drake; Interim Executive Vice President King; Chancellors Gillman and Hawgood; Advisory members Marks and Ramamoorthy

In attendance: Regents Ellis and Tesfai, Regent-designate Beharry, Faculty Representatives Cochran and Steintrager, Staff Advisor Emiru, Secretary and Chief of Staff Lyall, Deputy General Counsel Nosowsky, and Recording Secretary Johns

3. **CALIFORNIA INSTITUTE FOR IMMUNOLOGY AND IMMUNOTHERAPY, LOS ANGELES CAMPUS**

The President of the University recommended that the Health Services Committee:

A. Approve UCLA's affiliation with the Institute for Immunology and Immunotherapy (Institute) and participation in the Institute, subject to the following terms and conditions:

(1) The Institute shall operate as a 501(c)(3) tax-exempt organization operated exclusively for charitable, educational, and scientific research purposes, with its principal purpose to actively and continuously engage directly in the conduct of medical research in conjunction with UCLA Health.

(2) UCLA will have representation consisting of at least four of the 11 members of the Institute's Fiduciary Board.

(3) The Regents retain the right to (i) dismiss the Institute Director; (ii) dissolve and reconstitute the Fiduciary Board; or (iii) terminate the agreements with the Institute in the event of a material default that materially jeopardizes the operations or existence of the Institute.

(4) The Institute will pay UCLA 7.5 percent of its share of the net revenues generated by the commercialization of intellectual property solely owned by the Institute.

(5) The parties will jointly own intellectual property developed by joint efforts and resources and share revenues in accordance with Inter-Institutional Agreements for each technology or field of research.

(6) For intellectual property ownership (i) inventorship will be determined in accordance with U.S. Patent Laws, and ownership will follow from inventorship, and (ii) authorship will be determined in accordance with U.S. Copyright Laws, and ownership will follow from authorship.

(7) The initial term of the affiliation shall be at least fifteen (15) years from occupancy of the permanent facilities and may not exceed the aggregate amount of renewals for subsequent lease terms for the facilities, which in no event may exceed ninety-nine (99) years.

(8) UCLA will have the right to co-invest in start-up companies and other ventures originating from Institute activities.

B. Authorize the President or his designee, after consultation with the Office of the General Counsel, to approve and execute any agreements reasonably required to implement the organizational structure and definitive operating agreements for the Institute, including any subsequent agreements, modifications, or amendments thereto, provided that such agreements, modifications, amendments or related documents are materially consistent with the terms above, and do not otherwise materially increase the obligations of the Regents or materially decrease the rights of the Regents.

[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.]

Interim Executive Vice President King introduced the item, which proposed an innovative, long-term research affiliation and the establishment of a world-class immunological research center, the Institute for Immunology and Immunotherapy (Institute) at UCLA. The affiliation would combine the strengths of UCLA's existing biomedical research infrastructure and human capital, the philanthropic support and vision of key founders, and the generous support of the Governor and State Legislature, who were providing funding for the construction of a new flagship research facility to house the Institute.

UCLA Health Sciences Vice Chancellor John Mazziotta noted that this action item, which sought the approval of the Committee for the establishment of the Institute, was based on a term sheet that had been updated since the Committee's meeting in April. The item also sought authority at the Presidential level to negotiate definitive agreements for the establishment of the Institute with input and guidance from the members of the Committee. Dr. Mazziotta emphasized that this was a unique opportunity not only for UCLA but for the entire UC system because of the collaborations that the Institute would establish. If the Institute's full potential was realized, its work should lead to therapies and new strategies for the treatment of diseases worldwide.

Several years prior, the UCLA School of Medicine had chosen immunology as one of its seven key research themes. A number of successful immunotherapies have been developed by UCLA faculty and have resulted in commercialized therapeutics. UCLA and UCSF have been members of the Parker Institute for Cancer Immunotherapy for the last six years. In Dr. Mazziotta's view, a more complete knowledge of the immune system would inform treatments for almost every disorder. Some notable successes had been chimeric antigen receptor (CAR) T-cell therapy to fight cancer, strategies to mitigate food allergies, and new interest in and knowledge about vaccines due to the COVID-19 pandemic. The proposed Institute would have many components. A central core of basic science would include theoretical immunology, comparable to theoretical physics, and its work would try to anticipate what parts of the immune system still need to be discovered. A clinical trials unit would take advantage of the opportunities presented by well-characterized patient populations and provide guidance and biological input to lead a therapeutic development core to generate vaccines and biological therapies that could then be tested in these characterized patient populations.

The founders, the group that approached UCLA with this idea in 2018, had considered a number of universities as sites for the Institute, among them Harvard University, Stanford University, and Johns Hopkins University. One reason for the founders' choice of UCLA as the site was because they were seeking a complete research campus, with a medical school and research entities all in one geographic footprint, with the Institute located close to key research cores so that new biological therapeutics could be developed and manufactured locally and then delivered into patient populations quickly and efficiently.

Since the Committee meeting in April, there had been a second allocation of funding from the State, $100 million generated in July from the State budget. UCLA anticipated that the remaining $300 million would be allocated by the Legislature in July 2024. UCLA would seek Regents' approval for the capital project at a future meeting. Dr. Mazziotta presented slides with renderings of the site and possible massing and phasing of the project. UCLA was working with architects and the founders, reviewing massing and phasing studies to determine whether one building or more would be needed. This work was in its early stages.

The governance of the Institute would be modeled after the Broad Institute at the Massachusetts Institute of Technology and Harvard University. UCLA had spent a great deal of time and effort trying to refine the governance rules and to minimize any risk to the University that arises from governance of the Institute. Institute members, staff, and scientists would be fully employed and paid by the Institute. Institute scientists could apply for faculty positions at UC, and this would follow standard University policies and approval processes on a case-by-case basis. Scientists in the Institute who had faculty appointments could also mentor graduate students and postdoctoral fellows, and the Institute would fully fund these trainees' tuition and fees. There would be numerous benefits to UCLA and the UC system, among them revenue from intellectual property, not only property in the creation of which UC faculty have participated, but also intellectual property that is solely owned by the Institute. In the latter case, the University would receive 7.5 percent of the Institute's net share. The University would also be able to co-invest in startup companies originating from the Institute, and 20 percent of the space built with Institute funds would be reserved for the UCLA School of Medicine at below-market rates.

There were some risks as well and UCLA hoped to minimize these. If the Institute failed to thrive and succeed, the space would revert to the University. UCLA tried to make comparable, parallel rules and regulations for both Institute scientists and UC faculty. New terms, which had been accepted and were part of the new term sheet, provided the Regents powers to intercede should there be catastrophic events associated with the Institute.

Committee Chair Pérez commended the work of all those involved that had improved this item since the April discussion.

Regent Sherman asked about the minimum square footage that the Institute would need and the largest size that UCLA would consider. Dr. Mazziotta responded that UCLA was projecting a range from a minimum of 250,000 usable square feet to a maximum of about 500,000 square feet.

Regent Sherman recalled that there was currently a multi-level parking structure on the site. He asked if removing the parking structure would create a burden for the rest of the campus with the need to relocate this parking. Dr. Mazziotta responded that UCLA was working to determine whether this parking needed to be replaced. Replacing parking under the new building with a subterranean parking lot would be costly. He hoped that the parking would not need to be replaced and that the subterranean spaces could be used for activities

of the Institute well-suited for subterranean levels. These considerations were being evaluated by the architects and designers. Following the COVID-19 pandemic, with the onset of hybrid work and fewer people on campus, the tolerance for losing some amount of parking could be managed, but this would have to be evaluated fully.

Upon motion duly made and seconded, the Committee approved the President's recommendation, Regents Drake, Makarechian, Pérez, Reilly, and Sherman voting "aye."

4. **ADDITION OF QUALITY PERFORMANCE METRICS TO THE CLINICAL QUALITY DASHBOARD AS RECOMMENDED BY THE UNIVERSITY OF CALIFORNIA HEALTH CLINICAL QUALITY COMMITTEE**

The President of the University recommended that the Health Services Committee recommend that the Regents approve the addition of four categories of performance measures to the University of California Health Clinical Quality Dashboard: (1) quality and patient safety issues reported to the California Department of Public Health and the Joint Commission (including patient complaints); (2) risk management early identification of potential claims; (3) healthcare provider behaviors that undermine a safe, respectful, and reliable environment of patient care; and (4) population health, including efforts to reduce health disparities.

[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.]

Interim Executive Vice President King recalled that, at the August 2022 meeting of this Committee, the UC Health Clinical Quality Committee had proposed the creation of four categories of performance measures. At that time, action was deferred by the Committee to allow for two Regents to become members of the UC Health Clinical Quality Committee, and this took place. The addition of these four categories to the Clinical Quality Dashboard was aimed at supporting the Health Services Committee in its oversight of clinical quality performance across all the UC medical centers.

Committee Chair Pérez noted that the two Regents who were appointed to the Clinical Quality Committee were Regents Reilly and Batchlor.

UCLA Health Chief Medical and Quality Officer Robert Cherry noted that, within the population health category, UC Health would add four measures to the Dashboard to reduce health disparities: (1) blood pressure control overall, (2) blood pressure control in defined populations, (3) optimal diabetes care, and (4) cardioprotective drug use in diabetes. He recalled that, in November 2020, the UC Health Working Group on Clinical Quality, Population Health, and Risk Management had recommended the establishment of a Clinical Quality Committee, and that the Health Services Committee had endorsed this recommendation in December 2020. The Clinical Quality Committee had two main purposes: to drive systemwide improvement that lifts the performance of all the UC medical centers, and to provide the Health Services Committee with prioritized and timely information to support its oversight function for clinical quality and safety across UC

Health. The Clinical Quality Committee included representatives from each UC Health campus, who provided a variety of backgrounds and expertise.

The framework offered by Vizient, the nation's largest healthcare performance improvement company, informed much of the work of the Clinical Quality Committee. The primary objectives of the Clinical Quality Committee were to ensure that UC Health clinical quality strategy and clinical priorities were reflected in its data and dashboards, to leverage alignment and synergy across a complex and distributed organization, and to capture early data signals within the medical centers and escalate as appropriate. The Committee conceived its work within a fourfold framework: (1) UC Health prides itself on being a learning health system which embraces evidence-based and value-based care models for performance improvement; (2) the provision of high-quality and safe care as defined by the Institute of Medicine (National Academy of Medicine) and Vizient; (3) the goal of being a high-reliability organization that focuses on zero harm and has an optimal culture of safety; and (4) and focus on the patient, family, and employee experience, which is reflected in clinical outcomes, quality, safety, and healthcare equity.

Dr. Cherry recalled that the Clinical Quality Dashboard used by UC Health had the following categories or benchmarks: inpatient mortality, 30-day readmissions, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) overall rating, length of stay, central line-associated bloodstream infections, blood pressure control, and Vizient rank. The action being proposed now would add the above-mentioned four criteria to the Dashboard as well as the four measures to the population health category.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board, Regents Drake, Makarechian, Pérez, Reilly, and Sherman voting "aye."

5. **UC HEALTH POLICY / GOVERNMENTAL RELATIONS UPDATE**

[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.]

Interim Executive Vice President King recalled that in December 2022, UC Health appointed Tam Ma as Associate Vice President to lead the newly established Health Policy and Regulatory Affairs unit within the UC Health division at the Office of the President.

Ms. Ma explained that the task of this newly formed unit was to develop and execute UC Health's policy and regulatory affairs agenda both at the State and federal levels. The unit worked closely with the offices of State Governmental Relations and Federal Governmental Relations, with experts across the UC system, as well as with external partners such as trade associations and State and federal policymakers. The unit carried out one of the goals of the UC Health Strategic Investment Plan, which was to work with the State to improve access to care and health outcomes for Californians.

Ms. Ma reminded the Committee that UC Health bore approximately one billion dollars annually in unreimbursed Medi-Cal costs. Important UC Health advocacy efforts were focused on clarifying to State policymakers UC Health's role as a Medi-Cal safety net provider, including the volume of services that was provided to patients. This year, UC had been briefing the Legislature and legislative staff, particularly those who work on health and budget issues, informing them of UC Health activities, the fact that UC Health now contracted with almost every Medi-Cal managed care plan, and to help them understand the extent of the UC Health footprint. UC Health organized meetings between medical center chief executive officers and chairs of relevant Assembly committees and subcommittees in order to strengthen relationships with key policymakers. This year, UC had been advocating for the State to use revenues from the Managed Care Organization (MCO) tax to increase Medi-Cal provider rates and advocating at the federal level for maintaining the Disproportionate Share Hospital payments to safety net hospitals such as UC Health.

UC worked this year to ensure that MCO tax revenue was used to support the Medi-Cal program and providers and focused on workforce programs. The recently enacted State budget reauthorized the MCO tax, which was estimated to generate about $19 billion in revenue. When one factored in federal funds, this would result in approximately $32 billion for the Medi-Cal program. About $11 billion of this amount would be used for new investments for Medi-Cal provider rates, and the State had prioritized a number of services provided by UC, including primary and specialty care, outpatient services, behavioral health care, and emergency departments. Certain funds would be dedicated for designated public hospitals, which included UC hospitals. UC Health and the larger provider community were excited about the opportunities presented because this was the first time in a very long time, about two decades, that there had been a significant investment in medical provider rates. The details about how these funds would flow to providers would be determined in the next budget cycle, and UC would continue to engage with the Legislature and the California Department of Health Care Services on how these resources would be directed.

The MCO tax included $75 million annually to the University to expand graduate medical education programs in order to increase the number of primary care and specialty care physicians in the state. This was in addition to the roughly $40 million a year that UC received from tobacco tax revenue for graduate medical education programs. This year, UC also advocated for the DDS ASPIRE program, proposed by the UCSF School of Dentistry, which would build on the success of the Programs in Medical Education (PRIME). UC had requested $1.8 million for this program; unfortunately, this was not included in the final State budget. UC Health was having discussions about how to better frame these types of proposals in the future to ensure their success. UC also advocated for another workforce program, the California Medicine Scholars Program, a program supporting underserved community college students to proceed on a pathway from community college to a four-year college and ultimately to medical school, residency programs, and the health workforce. The schools of medicine at the Davis, Riverside, UCSF-Fresno, and San Diego campuses operated regional hubs for this program. The

program had received some initial one-time funding a few years prior; it received $2.8 million in the recently approved State budget.

Ms. Ma then outlined some other policy priorities. The University was co-sponsoring a bill with the American Cancer Society to ensure that health plans and Medi-Cal cover biomarker testing, which was critically important to precision medicine and cancer care. UC was engaged in advocacy on the federal 340B drug pricing program to ensure that safety net hospitals can continue use 340B savings and was working with the Centers for Medicare and Medicaid Services (CMS) to reinstate virtual supervision of residents, which had been permitted during the COVID-19 public health emergency. UC was also working to ensure that UC experts were present and active in State policy-making committees and roles including the California Health Workforce Education and Training Council and the Health Care Affordability Advisory Committee.

Committee Chair Pérez asked how Regents were included in stakeholder discussions. Ms. Ma responded that UC Health had solicited feedback from Regents and all UC Health leadership in developing the Strategic Investment Plan and would engage with Regents on any issues of interest or concern.

Committee Chair Pérez suggested that there might be opportunities for more engagement by the Regents in developing strategy, and that this might be helpful. Money spent on association memberships might be better spent effectuating UC Health priorities. He expressed approbation for the priorities Ms. Ma had outlined, in particular the focus on Medi-Cal and use of MCO tax revenue.

Regent Ellis referred to statements made earlier that day during the public comment period. He asked about UC's plans to address the problems that had arisen with licensing for residents and fellows due to delays in processing by the Medical Board of California. Ms. Ma responded that UC Health was very much aware of this issue and concerned about the large number of applications for licenses that would need to be processed by September. UC was in direct discussions with the Medical Board about ways to ensure that these applications can be processed in a timely manner. UC was also working to inform the State Legislature about this issue. Regent Ellis noted that the UC alumni associations would like to assist in this effort and advocate in any way they can.

Regent Makarechian referred to information provided in the background material according to which UC medical centers had less than six percent of hospital beds in California, but that Medi-Cal patients accounted for approximately 35 percent of hospital inpatient days at UC Health. The University was losing almost a billion dollars annually. He asked why other health systems, such as Kaiser Permanente (Kaiser), were not accepting Medi-Cal patients, and if this was simply a refusal to do so. Ms. Ma explained that UC hospitals provided a high number of Medi-Cal inpatient services because several UC medical centers functioned as county hospitals. The extent of Medi-Cal services provided by other health systems varied, due to financial decisions or in some cases to the fact that some health systems were closed systems, with services available only to members of their particular plan or network.

Committee Chair Pérez commented that the statistics mentioned by Regent Makarechian showed that UC was taking on more than its share of Medi-Cal patients. He asked if Kaiser was taking on an appropriate percentage of Medi-Cal patients, or more or less than such a percentage. UC Davis Human Health Sciences Vice Chancellor David Lubarsky responded that his campus had studied the question of what would happen to the cost of health care in Northern California if Kaiser took its appropriate share of Medicaid patients along with its commercial share. Kaiser currently had 67 percent of the commercially insured healthcare market in Sacramento but provided services to about 15 percent to 20 percent of the Medicaid population. The remaining Medicaid patients came to the UC Davis Medical Center, where 41 percent of inpatients were Medicaid patients. Throughout California, Kaiser provided care to about 25 percent of the population overall, but 90 percent of that number were commercially insured or Medicare Advantage patients; only ten percent were Medicaid patients, despite the fact that 38 percent of the California population was covered by Medicaid. Large numbers of Medicaid patients who need advanced care come to UC hospitals.

Committee Chair Pérez asked if this indicated that UC was subsidizing Kaiser. Dr. Lubarsky responded in the affirmative. He estimated that, if Kaiser took on an appropriate share of the Medicaid population in Northern California, UC Davis Health rates would decrease by 20 percent and Kaiser rates would increase by 20 percent. If this were the case, UC Davis Health would be parity priced with Kaiser in the commercial marketplace.

Committee Chair Pérez emphasized the importance of the points raised by Regent Makarechian and Dr. Lubarsky; these points needed to be reflected in discussions UC Health has with legislators and regulators about public investments, and the University could be more strategic in raising these points. In practical terms, the University was subsidizing other health systems. The University's service to Medi-Cal patients was consistent with UC's mission of public service, but public investment in health care should recognize the entities that provide public benefit and public service.

6. **UPDATE ON UNIVERSITY OF CALIFORNIA HEALTH'S CENTER FOR DATA-DRIVEN INSIGHTS AND INNOVATION**

[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.]

Interim Executive Vice President King introduced the item by noting that the Center for Data-driven Insights and Innovation (CDI2) enabled UC Health to be a data-driven learning healthcare system. CDI2 built and maintained the data analytics capabilities and technical infrastructure for the UC Health Data Warehouse, a unique system-level data asset created to enhance operational improvements, promote high-quality patient care, and enable the next generation of clinical research.

UC Health Chief Data Scientist Atul Butte explained that the UC Health Data Warehouse comprised electronic health records data from all six University of California academic

health centers, containing clinical data from just over nine million patients cared for in centers owned or operated by UC over the past 11 years, with 1.4 billion prescriptions ordered, written, or filled and 47 million medical devices used. The Data Warehouse also included claims data from UC self-funded health plans and from other external sources. CDI2's earliest focus was on operational improvements for quality of care, but research offerings would be the next area of growth. Dr. Butte stressed that this work was in the interest of safe, respectful, regulated, and responsible use of clinical data.

CDI2 assisted clinical strategy and operations, the Leveraging Scale for Value initiative, clinical research, UC's self-funded health plans, and local analytic teams. CDI2 worked on opportunities to benefit the entire UC Health system while respecting local authority. CDI2 had an oversight governance board of 15 members to help decide on projects, with representatives from the campuses as well as two patient representatives. The oversight board met quarterly to guide the CDI2 agenda.

Dr. Butte discussed examples of CDI2's work. CDI2 helped all UC Health campuses document, report, and improve the quality of care delivered to Medi-Cal patients. CDI2 coordinated the development of 48 quality measures that must be reported to the California Department of Health Care Services. Because all the campuses were using the same, standardized data model and extraction tools, data regarding the 48 quality measures can be provided by five teams, and each campus can complete this work in less time. Faster implementation also meant that UC can share and check results with the State earlier. In performance year five, using this approach, all UC Health campuses received maximum incentive payments of over $50 million. Since 2018, this had resulted in a total of $250 million in incentive payments.

CDI2 worked closely with UC Population Health teams to identify health disparities and improve the quality of care. Dr. Butte presented a statistical process control chart which indicated that Hispanic or Latino/a patients with diabetes had a significant disparity in hemoglobin A1c control, one subcomponent of optimal diabetes control. This data point might have been lost without a subgroup analysis. UC Population Health was able to identify that medication adherence among non-English-speaking Hispanic patients was the significant factor. Population health teams across UC Health were working to address this disparity, each in its own way, but sharing their best practices.

Committee Chair Pérez asked why the chart indicated low adherence among the Latino population and high adherence in the Asian/Pacific Islander population when these groups might face similar language barriers. He did not dispute the fact that language can be an impediment, but one would not expect to see high adherence in one community that included significant numbers of language minorities and low adherence in another community with that same characteristic, especially when the community with lower adherence had a single language and the community with high adherence had multiple sets of language minorities. Dr. Butte responded that the chart illustrated the need to look at subpopulations, to recognize differences, and to explore the reasons for these different results. The data on the chart were from December 2022 and the situation had improved in the months since then.

Committee Chair Pérez asked to what degree language was a predictive or non-predictive factor. Dr. Butte responded that language was a major cause for hemoglobin A1c control in this particular instance, but that other factors, not just language, would account for how different groups performed on this criterion.

Dr. Butte continued the presentation. CDI2 worked closely with the chief pharmacy officers, who suggested projects for consideration. One such project was the study of inappropriate use of intravenous (IV) acetaminophen. Oral or tablet acetaminophen, which can be known as Tylenol, was inexpensive, but the cost of IV acetaminophen was $50 per dose. UC was not paid separately for using this drug, and the reimbursement for an inpatient admission was often already pre-negotiated. The CDI2 dashboard showed that many doses of IV acetaminophen were being administered inappropriately at the same time as oral tablets, when acetaminophen or Tylenol could have been administered in tablet form, saving money. Use of IV acetaminophen had now been reduced, resulting in significant savings. CDI2 would develop new dashboards for other drugs, exploring all inpatient drug costs unit by unit and campus by campus.

Until the past month, CDI2 maintained weekly dashboards of COVID-19 data, and daily dashboards during the surges, which were sent through mailing lists reaching hundreds of people within and outside the UC system. At the peak of this activity, 1,500 people were viewing these dashboards on Twitter. Since CDI2 had the data organized, it helped UC Irvine Professor Dan Cooper secure a $500,000 grant from the National Institute of Health (NIH) to copy all of these data into the National COVID Cohort Collaborative; UC was safely sharing its data with the NIH and the entire country. CDI2 had also used its data sets to assist with COVID vaccine distribution to UC patients across California. CDI2 had a strong relationship with the California Department of Public Health (CDPH). The prior year, UC provided weekly updates to CDPH on its COVID admissions. CDI2 had received its first grant from CDPH of $210,000 to continue to provide data and insights. The UC COVID research data set was being used by 200 UC researchers; this had resulted in 17 published papers to date.

Committee Chair Pérez recalled a past presentation on long COVID, in which data on the numbers of cases and demographics were different from the numbers of cases and demographics of COVID-19. It was stated that this might be due to patients having difficulty navigating the healthcare infrastructure and being able to obtain a diagnosis of long COVID. Committee Chair Pérez asked if there had been progress in review of these data over the last six months and for future review, so that one could track long COVID and have a better idea of the populations affected, not just those patients who receive treatment for long COVID at UC. Dr. Butte responded that he did not have this information at hand but would provide it. There were an estimated one million residents of California with long COVID; UC medical centers might have ten percent of those patients, or about 100,000. There were challenges in diagnosing long COVID and even in getting access to testing.

How UC used and shared its data resources internally and with community partners was a matter of critical importance. Launched in 2017, the UC Presidential Task Force on Health

Data Governance initially focused on how clinical data resources should be stored, how UC patient data should be used internally and shared externally, and this in the context of over 25 years of the Health Insurance Portability and Accountability Act (HIPAA) and a changing landscape of organizations and companies that could benefit from having access. Chief Health Data Officer Cora Han was working to develop these policies, managing three work groups of 30 health campus leaders who were volunteering their time to ensure that the recommendations were well formulated. Separately, President Drake created a Working Group on Artificial Intelligence and CDI2 co-led the health subcommittee of the Working Group. There would be much discussion about artificial intelligence in the future.

One new direction for CDI2 was to build out the UC Health Data Warehouse offerings for external organizations. There was increasing demand by pharmaceutical companies, biotechnology companies, medical device manufacturers, and even the U.S. Food and Drug Administration to learn more about what really happens to patients, or real world evidence. UC Health convened its Real World Evidence Collaborative monthly, sharing best practices and research opportunities.

CDI2 had many upcoming and planned initiatives: working closely with the chief medical officers and chief nursing officers on Vizient rankings and data, enhancing internal laboratory testing capability so that more laboratory tests can be performed in house rather than sent out, and supporting the Cancer Consortium by helping to expand cancer screening. These initiatives were all tied to the UC Health Strategic Investment Plan. CDI2 planned to launch more systemwide clinical trials, work more with CDPH, enable and empower more UC researchers at all levels and backgrounds, and continue data governance work, including artificial intelligence.

The investment in CDI2 and the UC Health Data Warehouse had been just over $30 million over the past five years. This significant investment had resulted in a mature data resource for the University which also benefited the state and the entire nation. CDI2 knew that it needed to increase the cohort of data users from across the campuses. One challenge was that CDI2 had the data to empower many teams, but the data were often only one part of a story. There was a need to assemble more teams for continuous improvement, and UC could not afford to fall behind on artificial intelligence. Dr. Butte adumbrated a landscape of opportunities and competitors. CommonSpirit, Providence, and other entities had joined forces to build a single central data warehouse within a for-profit company called Truveta, initiated with a $200 million investment from these health systems. Mayo Clinic and Duke Health had partnered in a separate for-profit company called nference, launched two years prior with a $60 million investment. Kaiser began an effort on a data warehouse in 2016 with an initial investment of $45 million. He noted that all these efforts were solely for research, not for improving operations or quality of care, which the UC Health Data Warehouse can enable.

Dr. Butte concluded that CDI2 had built a team that can safely build and respectfully manage and use the UC Health Data Warehouse. The team would continue to expand uses in operations, quality of care, and research, but there were opportunities for which CDI2 currently did not have sufficient resources, such as artificial intelligence.

Regent Park referred to the goal of increasing the cohort of data users across the campuses and asked about a five-year target in terms of number or types of data users. Dr. Butte responded that predicting future numbers of users in the world of computing was difficult. He would be happy but still perhaps disappointed if there were 10,000 individuals using the UC Health Data Warehouse in five years for research and operational purposes at UC campuses with and without medical centers, because this was an outstanding data asset. The University should be drawing on its own data instead of national resources to create problem sets for undergraduates and students of population health and public health.

Regent Park asked about the investment model for supporting and training the community of users. Dr. Butte responded that, while UC Health central resources were rather thin, one could build on the resources of each UC Health campus. The Clinical and Translational Science Institute, located on five of the six UC Health campuses, was renewed every five years; these resources provided education. Many researchers learn on their campus first before accessing UC-wide resources, using the same software code. Researchers on non-UC Health campuses received a credential or an affiliation with a UC Health campus, where they would access educational resources. Education today was scalable in many ways, such as delivering content via video, and CDI2 was developing this.

Regent Park asked if there was a plan for providing this resource beyond the University. Dr. Butte responded in the negative. There was not yet a plan, other than the real world evidence projects he had mentioned. Per CDI2 governance, UC-affiliated individuals had access and they signed an electronic agreement form every time they had access to central resources. The system was not set up for non-UC users; these individuals would have to obtain a UC affiliation.

Regent Park asked about upcoming discussions of artificial intelligence and the topics that would be discussed. Dr. Butte anticipated that there would be many discussions in the coming year. One important aspect was the ability and the responsibility to carry out this work properly with data reflecting race, ethnicity, and socioeconomic status in California. It was also important to recognize that it was a duty or responsibility to share what one has learned about patient care using digital tools. UC data sets were highly diverse, and in Dr. Butte's view, these were the data sets that should be used around the U.S. It was the University's duty and responsibility to build these models for the nation.

Regent Park asked how artificial intelligence would be used by CDI2. Dr. Butte responded that CDI2 had a small artificial intelligence team, but CDI2 was developing and testing models, such as predictive tools, to ensure that they were safe and equitable for operational uses. Artificial intelligence was used in the preparation of dashboards for population health teams and others. Most importantly, CDI2 would develop artificial intelligence to support and enable the work of UC researchers.

Committee Chair Pérez asked about protections and guardrails that should be in place so that artificial intelligence is not used in a way that limits access to health plans for UC employees or limits access in terms of broader policy, and about guardrails on using the predictive abilities of artificial intelligence, from the perspective of UC values. Dr. Butte

responded that some of the experts who were discovering the problems of using artificial intelligence were UC faculty, such as UC Berkeley Associate Professor Ziad Obermeyer, who had uncovered racial and ethnic biases in well-known commercial artificial intelligence models used in health care, and with whom CDI2 consulted. Artificial intelligence was still in early stages of development, and UC's use of these models was still very limited. Dr. Butte stressed that UC must do this work, because artificial intelligence models built by other entities would be biased.

Committee Chair Pérez stated that he did not question the value of this work but wanted to know about the values-based discussions that UC should be engaged in before undertaking this work. Dr. Butte responded that the report of President Drake's Working Group on Artificial Intelligence was something like a first draft, a prelude to UC Health data governance work over the next five years.

Committee Chair Pérez emphasized the need to ensure that one asked the right questions and used the right sets of information for machine learning so that it would produce actionable information. Dr. Butte expressed agreement and anticipated that UC would develop health-specific guidelines in the use of artificial intelligence. The University was also participating in national consortia which were studying the safe and equitable use of these models.

Regent Reilly asked if CDI2 needed increased funding. Dr. Butte responded that there were opportunities that CDI2 currently did not have the resources to address, and he would not want the University to fall behind in this field.

The meeting adjourned at 2:00 p.m.

Attest:

Secretary and Chief of Staff