

Michael V. Drake, MD

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February 28, 2022

Office of the President 1111 Franklin St.

Oakland, CA 94607

universityofcalifornia.edu

The Honorable Nancy Skinner

Chair, Joint Legislative Budget Committee

1020 N Street, Room 553

Sacramento, California 95814

Dear Senator Skinner:

Pursuant to Item 6440-001-0001, Section 2, of the 2021 Budget Act, Provision 11(c) (SB 129, Chapter 69, Statutes of 2021), enclosed is the University of California's report to the Legislature on Programs in Medical Education (PRIME).

If you have any questions regarding this report, Associate Vice President David Alcocer would be pleased to speak with you. David can be reached by telephone at (510) 987-9113, or by e-mail at David.Alcocer@ucop.edu.

Sincerely,

MEDICAL CENTERS

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DIVISION OF AGRICULTURE AND NATURAL RESOURCES

Michael V. Drake, MD

President

Enclosure

Senate Budget and Fiscal Review cc:

The Honorable John Laird, Chair

Senate Budget and Fiscal Review Subcommittee #1

(Attn: Mr. Christopher Francis) (Attn: Ms. Jean-Marie McKinney) The Honorable Kevin McCarty, Chair Assembly Budget Subcommittee #2

(Attn: Mr. Mark Martin) (Attn: Ms. Carolyn Nealon)

Mr. Hans Hemann, Joint Legislative Budget Committee

Ms. Erika Contreras, Secretary of the Senate

Ms. Amy Leach, Office of the Chief Clerk of the Assembly Ms. Sue Parker, Office of the Chief Clerk of the Assembly

Mr. Chris Ferguson, Department of Finance Ms. Rebecca Kirk, Department of Finance Mr. Jack Zwald, Department of Finance

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Mr. Gabriel Petek, Legislative Analyst Office
Ms. Jennifer Pacella, Legislative Analyst Office
Mr. Jason Constantouros, Legislative Analyst Office
Executive Vice President and Chief Financial Officer Nathan Brostrom
Executive Vice President Carrie L. Byington, MD
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UNIVERSITY OF CALIFORNIA

Efforts by UC Medical Schools to Help Meet the Needs of Medically Underserved Communities through UC PRIME

This report is submitted by the University of California (UC) in response to language contained in the 2021 Budget Act, which states:

- "(c) The University of California shall report the following information about UC Programs in Medical Education program outcomes to the Department of Finance and the Legislature by March 1, 2022, and annually thereafter until March 1, 2027:
- (1) Enrollment numbers and student demographics in each program.
- (2) A summary of each program's current curriculum.
- (3) Graduation and residency placement rates for each program.
- (4) To the extent feasible, postgraduate data on where each program's graduates currently practice and the extent to which they serve the populations and communities targeted by the program in which they participated.

This report provides an update on enrollment for FY 2021-22 for existing PRIME programs; an overview of PRIME curricula for each program; information on outcomes with respect to meeting program goals and objectives; and an update on plans for the development of new programs.

I. Introduction and Background

California is home to nearly 40 million residents and its population is increasing in size, age, and diversity. The state also faces a growing shortage and persistent maldistribution of physicians. According to the 2019 report of the California Future Health Workforce Commission (Commission), the state had an estimated need of approximately 4,100 more primary care providers by 2030. The COVID-19 pandemic has further amplified the need to increase the supply and diversity of health professionals throughout the state. Increasing the racial and ethnic diversity of the health workforce and deploying effective strategies to address provider shortages in medically underserved communities throughout this state can both improve health outcomes and achieve health equity.

Launched in 2004, UC Programs in Medical Education (PRIME) are part of an innovative systemwide initiative focused on addressing physician workforce shortages and meeting the needs of California's underserved populations by increasing medical student enrollment and the capacity of UC medical schools to train highly motivated, socially conscious graduates who will become physician leaders committed to serving medically underserved groups and communities across the state.

Rural PRIME (Rural California) at Davis, est. 2007

Incorporates an award-winning model program in telemedicine with a commitment to outreach and rural healthcare.

https://health.ucdavis.edu/mdprogram/community-health-scholars/index.html

PRIME-LC (Latino Community) at Irvine, est. 2004

Emphasizes Latino health issues, including increased proficiency in medical Spanish and Latino culture.

https://www.meded.uci.edu/curricular-affairs/prime-lc.asp

PRIME-LA (Leadership and Advocacy) at Los Angeles, est. 2008

Trains future physicians to lead and advocate for improved healthcare delivery systems in disadvantaged communities.

https://medschool.ucla.edu/prime-about-us

PRIME-HEq (Health Equity) at San Diego, est. 2007

Builds upon research about health disparities to help students learn and contribute to achieving equity in healthcare delivery.

https://medschool.ucsd.edu/education/diversity/prime-heq/Pages/default.aspx

PRIME-US (Urban Underserved) at San Francisco and Berkeley, est. 2007

Offers students the opportunity to pursue interests in caring for homeless and other underserved populations in urban communities.

https://meded.ucsf.edu/prime-us-program

https://publichealth.berkeley.edu/academics/joint-medical-program/curriculum/prime-us/

San Joaquin Valley PRIME at San Francisco and UCSF- Fresno, est. 2011

Provides specialized training with an emphasis on community-based research and educational experiences to improve the health of populations in the San Joaquin Valley region of California.

https://meded.ucsf.edu/ucsf-san-joaquin-valley-prime-sjv-prime

Each program includes a specified area of focus and combines structured activities ranging from student outreach and recruitment to specialized coursework, population-focused clinical training and research experiences, health care leadership and management training, community engagement experiences, master's degree educational opportunities, faculty mentoring, and sponsored events that are open to the broader campus community.

II. UC PRIME Enrollment

In January 2007, the UC system completed a multi-year health sciences planning effort that recommended the development of new health professions programs to respond to statewide needs for physicians and other health care professionals and to increase enrollment in new and unprecedented ways. This plan included a systemwide framework for medical student enrollment growth through 2020. While the first PRIME program was launched prior to the completion of that planning effort, the development of the programs that followed was aligned fully with it. Despite the precipitous decline in state support for medical education (and other health professions educational programs) over the last two decades, the University has moved forward

in an effort to implement this plan with a focus on California's health workforce needs, including a focus on improving health equity as a core principle for enrollment growth.

The \$12.9 million augmentation approved in the 2021 Budget Act for PRIME will support previously unfunded enrollments (at originally planned levels) in all existing programs, and fund the development of new programs focused on the needs of American Indian/Native American (AI/NA) communities and Black/African American (Black/AA) communities in California. This funding will benefit all six UC medical schools, stabilize resources for teaching, and ultimately grow total enrollment to nearly 500 PRIME students systemwide over the next five years. One-third of the funding will be set aside for need-based student financial aid.

Student Enrollment 2021-22: There are currently 366 PRIME students enrolled across six programs. It is important to note that when the State budget was finalized six months ago, UC Schools of Medicine (SOM) had already recruited their entering classes for the current academic year. Therefore, annual increases in enrollment will be reflected in the annual legislative report starting in 2023. Full enrollment at planned levels (489) is expected to occur by 2026-27. Current and planned enrollment for the program are shown in Table 1.

Table 1. PRIME Program Enrollments, 2021-22

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PRIME Program	Total Enrollment (2021-22 Actual)	Total Planned Enrollment [^]				
EXISTING PROGRAMS						
Rural PRIME (UCD)	32	60				
PRIME Latino Community (UCI)*	66	60				
PRIME Leadership & Advocacy (UCLA/CDU)*	99	90				
San Joaquin Valley PRIME (UCSF/Fresno)	37	48				
PRIME Health Equity (UCSD)	57	60				
PRIME Urban Underserved (UCSF/UCB)	75	75				
NEW PROGRAMS						
American Indian/Native American (UCD/UCSD)	0	48				
Black/African American (UCI/UCR)	0	48				
TOTAL	366	489				

^{^:} Planned enrollment varies by campus. Programs prior to the establishment of the SJV program were originally established as five-year programs that included a Master's/research year (e.g. 12 students over five years is 60 total students for Rural PRIME compared to 12 students per year over four years totaling 48 SJV PRIME students). This funding is based upon a funding amount of \$35,600 per student, with one-third of this per-student amount allocated for need-based financial aid for PRIME students.

<u>Medical Student Diversity</u>: According to the 2019 Commission Report, communities of color will make up over 65% of California's population by 2030, yet they are severely underrepresented in the health workforce and educational pipeline. Language capabilities are

^{*} Some campuses have students who remain in the program longer than five years in order to complete a two-year master's degree program or who have taken a leave of absence, which reflects slightly higher enrollment numbers in 2021-22.

also not aligned, with a large and growing public unable to effectively communicate with their health providers. For the physician workforce to better reflect California's diverse population, it will be critical that California medical schools continue to prioritize efforts to increase diversity among students, residents, and faculty. It is also well documented that physicians from groups underrepresented in medicine (UIM) are more likely to practice in shortage areas and to care for underserved and uninsured populations as compared to others.

Although more progress is needed, UC Schools of Medicine have shown steady gains in the enrollment of UIM students over the last 20 years. This year, nearly 40% of first-year UC medical students are UIM compared to only 16% in 2000. The UC PRIME programs have contributed to these gains, reflecting extraordinary success for racial, ethnic, and socioeconomic diversity across the UC medical education system – with 68% of PRIME students being from groups underrepresented in medicine (Table 2). PRIME has been further recognized by the Commission (and others) as providing a framework for developing future health professions programs aligned with state needs in other health professions.

Fall 2021 Race/Ethnicity	UCD	UCI	UCLA	UCSD	UCSF	SJV	Total
Native American/Alaskan Native	1	0	1	4	1	3	10
Black/African American	1	1	20	14	22	0	58
MexicanAmer/Chic/Other Hisp/Lat	13	52	53	18	24	7	167
Pacific Islander	0	0	0	5	7	1	13
Multiple race/ethnicity (UIM)	0	0	1	0	0	1	2
Total UIM's & Other	15	53	75	41	54	12	250
Hispanic/Latinos	(47%)	(80%)	(765)	(72%)	(72%)	(32%)	(68%)
Asian American	2	4	19	8	14	13	60
White/Caucasian	14	9	2	8	7	2	42
Other/Non-Reporting	1	0	3	0	0	10	14
TOTAL	32	66	99	57	75	37	366

III. PRIME Curricula

All PRIME programs offer specialized education, training and support for students who wish to acquire added skill and expertise as they pursue future careers caring for medically underserved groups and communities. Each program has its own area of focus, which was selected based upon the priorities of the medical school, faculty expertise, the patient populations served by each campus, and other local/regional considerations. The core elements of UC PRIME include:

- Specified Area of Focus and Clear Program Identity
- Targeted Student Outreach and Recruitment
- Supplemental Criteria for Admissions
- Curricular Enrichment
- Population-Focused Clinical Training and Research Experiences
- Dedicated Faculty Mentorship

Although the curriculum for each program is unique, the curricula generally include a summer orientation/immersion experience, a seminar series with site visits, clinical immersion in underserved settings, community engagement, options for a master's degree or research year, and sponsored events that are open to the broader campus community.

UC Davis: Rural-PRIME

The mission of Rural-PRIME is to train medical student leaders to identify, understand, and serve the unique health needs of California's rural communities. Rural-PRIME was developed to address the lack of access in rural areas and to reduce health care disparities in rural populations. Rural-PRIME admitted its first class in 2007, admitting 12 students into the program each year.

Rural-PRIME students meet all of the SOM graduation competencies in addition to the Rural-PRIME curriculum requirements, which are designed to enhance the core curriculum by increasing exposure to rural communities and practice, providing mentorship by rural physicians and community leaders and providing the tools to best equip students for life-long learning in rural areas. The Rural-PRIME curriculum spans four years of medical training and aims to provide students with the foundation to provide outstanding clinical care for underserved communities, with a focus on five pillars of excellence: community engagement, leadership, professional development, mentorship, and scholarship. The major elements of the program include:

<u>Orientation</u>: A one-week long orientation before they start their first year which introduces students to each other, program leadership, and rural community partners.

<u>Rural-PRIME Seminars</u>: One- to two-hour sessions occurring twice a month during the first and second year of medical school delivered through a combination of faculty and community guest speakers, as well as student-led seminars. Each session aims to address at least one of the curricular pillars as it relates to caring for vulnerable and marginalized populations.

<u>Intersession Rural-PRIME Days</u>: These full-day sessions are reserved during the preclerkship intersession weeks for students to engage in experiential activities. No other medical school responsibilities are scheduled during this time. Activities include visits to community partners to engage in active dialogue with community members and understand how community organizations work to address social determinants of health in their community. Students also participate in case-based interprofessional educational activities with nurse practitioner or physician assistant students.

Longitudinal Scholarly Activity: Students are required to engage in a longitudinal scholarly activity that spans the entirety of their medical school experience. Students may work together or alone, and their scholarly activity must address a specific need or issue within the community that the student identified in their first year through collaborative conversations with community members. Examples of acceptable scholarly projects include a community engagement project with a local organization, a needs assessment and recommendations for meeting those needs, community-based health fairs, and community-oriented research. Students regularly present their work-in-progress and receive peer and faculty feedback throughout medical school, with a final capstone project presentation at the end of their fourth year prior to graduation.

<u>Summer Elective (4 weeks)</u>: Rural-PRIME students are required either to enroll in the *Summer REACH* elective, which is an immersive experience within Central Valley Communities where students work closely with local hospitals and community groups to understand the needs of those specific communities; *Summer Institute on Race and Health;* or engage in a rural-based activity, which can include community engagement projects, community research, or other scholarly activities in or in support of rural-communities.

<u>Clerkship Year</u>: Rural-PRIME students are required to complete a minimum of 20 weeks at an approved rural site, and their internal medicine clerkship is completed at an approved site also serving medically underserved populations.

<u>Clinical Intersessions</u>: Since 2021, students have been required to reserve one half-day for Rural-PRIME specific activities during the six one-week intersessions during their clerkship year (third year). This time is spent visiting community organizations, gaining additional clinical skills in addiction medicine, and making progress on students' longitudinal Community Health Scholars (CHS) activity.

<u>Clinical Skills Facilitation (Doctoring 4)</u>: In their fourth year, students are strongly encouraged to serve as clinical skills facilitators for first- and second-year Rural PRIME students' doctoring courses to help develop the fourth-year students' mentorship and medical education skills. Students who do not serve as a doctoring facilitator are required to facilitate at least one teaching activity for junior Rural PRIME students during their seminars or intersessions.

Medical Care for Underserved and Marginalized Communities: Beginning in 2023, Rural PRIME fourth year students will be required to do a two-week rotation, during which they will reflect on their medical training, learn new clinical skills, and make plans to utilize these skills in service for patients from marginalized communities.

Masters (optional): An optional fifth-year masters is available.

UC Irvine: PRIME-Latino Community (LC)

Established in 2004, PRIME-LC was developed to help meet the increasing demand for physicians who are better prepared to address the health needs of the Latino population. This five-year program is designed to improve the cultural and linguistic competence of future physicians by developing Spanish language proficiency and increasing familiarity with the sociocultural values, health beliefs, and lifestyles of Latino patients. Instruction on health disparities and disproportionate disease burdens suffered by many Latino patients is emphasized.

The PRIME-LC curriculum begins with a survey course prior to the first year, which serves as an overview of PRIME-LC and establishes a baseline for the next five years of training. This one-month course introduces students to the concept of physician-leadership, with a highlight on health disparities around the state. Students spend time at local community advocacy centers and visit nonprofit organizations active in health issues that are prevalent along the US/Mexico border and in California's Central Valley. Students also spend a day at the Capitol in Sacramento advocating for health equity with legislators and staff.

The summer curriculum prior to the first year also contains the first seminar course for PRIME-LC students with UCI's Department of Chicano/Latino Studies. During their first three years, the UCI Department of Chicano/Latino Studies provides cultural immersion experiences for students and exposes them to the history, politics, and socio-cultural experiences of U.S. and non-U.S. Latinos as it pertains to health and biomedical institutions. This summer course is conducted entirely in Spanish and focuses on historical and political antecedents of health disparities. First-and second-year seminars focus on modern barriers and solutions toward health equity, and the third-year course requires students to lead discussions on the themes from the first and second years using real-life examples from students' experiences on clinical rotations. Overall, the Chicano/Latino Studies courses form the "spine" of the curriculum for PRIME-LC.

In addition, several SOM courses have been modified to include content addressing the PRIME-LC mission and program goals. For example, the PRIME-LC *Clinical Foundations* course series and *Problem Based Learning* sessions integrate material specific to treating Latino patients, and standardized patients communicate in Spanish. Additionally, PRIME-LC students are given priority for experiences with predominantly Latino patient populations during clinical rotations, including the longitudinal *Patient and Community Engagement* clinical clerkship spanning the first and second years.

All students also complete a service-learning project related to Latino health in the first and second years. Students primarily focus on the Santa Ana community for their service learning projects. For example, they have created a health education series called *Una Hora con la Doctora*, in which they team with the Madison Park Neighborhood Association and an alumnus from the first cohort of PRIME-LC to provide health tips on a variety of different conditions. They have also produced a health education program with the Centro Cultural de Mexico through Radio Santa Ana. Overall, these programs have reached thousands of participants and provide culturally and linguistically fluent information.

The capstone of the PRIME-LC curriculum is a rotation in Latin America. The goal of this one-month clinical rotation is to compare the physician-patient relationship and healthcare systems in Latin America with that of the United States. The program's traditional partner has been Universidad Cayetano Heredia in Lima, Peru, which has provided outstanding clinical experiences and instruction. Unfortunately, this rotation has been put on hold since 2020 due to the COVID-19 pandemic, and new partners in Mexico are being engaged to reinstate the rotation when it is safe to do so.

Students begin their master's degree training within two months of their return from Latin America. A master's degree is required of PRIME-LC students who have not previously completed a master's degree pertinent to Latino health. The most popular choices for master's programs include Public Health and Business Administration, but students are free to choose a program based on their personal ambitions to become a leader in Latino health. While most students stay at UCI to complete their degrees, students have attended institutions such as Harvard University, The Johns Hopkins University, and Columbia University.

PRIME-LC has made the hidden curriculum of emotional, academic, and spiritual support for students more explicit, with multiple programs to promote wellness and teamwork. The connections created during medical training are especially durable among PRIME-LC students,

and the PRIME-LC Alumni Association is built to promote ongoing engagement and wellness through the careers of students and alumni.

UC Los Angeles: PRIME-Leadership and Advocacy (LA)

PRIME-LA is a five-year program focused on healthcare leadership and advocacy for diverse disadvantaged communities. The program aims to enhance the development of physician leaders whose careers will advance public policy and research in healthcare for the underserved. PRIME-LA students are admitted to either the David Geffen School of Medicine (DGSOM) or the Charles R. Drew University of Medicine and Science (CDU).

The DGSOM launched a new curriculum – <u>HEALS</u> in August 2021. The first- year PRIME-LA students are learning under the new curriculum and all other PRIME-LA students remain under the legacy curriculum.

<u>HEALS Curriculum (Year One)</u>: HEALS replaces the longitudinal preceptorship with a new *Early Authentic Clinical Experiences* curriculum designed to expose first-year medical students to immersive, real-life clinical experiences that will provide context and opportunities to apply the knowledge, skills, and abilities acquired in *Foundations of Practice*, and begin to form their professional identity. PRIME-LA's unique curricular components during the first year of medical school include:

- Completion of a three-week summer program. The goals of the PRIME- LA Summer Pre-matriculation Foundations Program are to 1) provide a deep understanding of key issues in underserved communities and health and healthcare disparities on a local, regional, or national level, 2) discuss strategies in health policy or education that address increased equity and reduce health disparities for underserved and vulnerable populations, 3) become familiar with service projects, community engagement and participatory research methods so that students can effectively work collaboratively with underserved communities during their career, and 4) to become familiar with effective cultural and linguistically appropriate care for underserved patients and communities. The program consists of didactics focused on health equity for the underserved, site visits to community organizations focused on dismantling health disparities (e.g. LA County Department of Public Health, community clinics, County Hospitals, and ethnic neighborhoods in LA), and mentorship and advising.
- Early Authentic Clinical Experiences in student-run free homeless clinics, AltaMed clinics (Federally Qualified Health Center), LA County community health centers, Saban Free Clinic, and Veterans Affairs facilities. These experiences are designed to expose first-year PRIME students to clinical experiences that will enhance their skills working with underserved communities. Students serve in roles such as, health coach, patient navigator, intake coordinator, and other roles in a variety of different healthcare settings.
- The PRIME-LA Health Equity and Leadership Seminar Series, which includes guest lecturers with expertise in underserved and vulnerable populations.
- A year-long community partnered cohort service project. Students are required to partner with a community organization to address a health disparity identified by the community. For example, this year, first-year students partnered with Black Women for Wellness to

bring awareness to environmental justice issues from a reproductive justice lens. The goal of the cohort project is to equip students with experiential learning and community-based real-world experience dismantling health disparities.

• Elective courses that align with the PRIME-LA mission and focused on healthcare for the underserved.

<u>Legacy Curriculum (Years Two-Five)</u>: PRIME-LA students will complete medical school under the legacy curriculum. This curriculum includes a master's year, and the following:

- Summer research project with a focus on underserved and vulnerable communities
- The PRIME-LA Health Equity and Leadership Seminar Series, which includes guest lecturers with expertise in underserved and vulnerable populations. This seminar will continue to be implemented in the new HEALS curriculum.
- Longitudinal preceptorship in underserved community settings
- Elective courses that align with the PRIME-LA mission. These electives will also be available in the new HEALS curriculum.

UC San Diego: PRIME-Health Equity (HEq)

The PRIME Health Equity (HEq) program was established in 2007 to train physician leaders to care for and advocate on behalf of vulnerable populations and communities at risk for health disparities, in order to provide equitable care in California and across the nation.

<u>PRIME-HEq Orientation</u>: All incoming PRIME-HEq students participate in a four-day PRIME-HEq orientation to introduce students to local San Diego community sites and the PRIME-HEq community. Students participate in community building and leadership activities and are given an introduction to health disparities research projects.

PRIME-HEq Pre-Clinical Electives:

Core Topics in Biomedical Sciences (CTBS) - The CTBS course is given during the summer and provides students a head start in mastering some of the more challenging topics presented in the first-year UCSD SOM curriculum. It models the pace and intensity of the SOM curriculum.

Influences on Health: From Genes to Communities - A person's health is affected by a myriad of influences – everything from genetic inheritance to the places we live. In this course, the concept of health equity is introduced, with a discussion of health care system models that may either increase or decrease health equity in a given population. The course includes the opportunity for students to hear health-related stories about people from varied backgrounds through cultural immersion tours to the Indian Health Council and San Ysidro Health Center.

Healthy Minds, Healthy Bodies – UCSD medical students are trained to give lessons on health topics to a local high school class providing a longitudinal health curriculum experience. Medical students learn teaching strategies, receive written feedback, track student learning, and act as role models. Students alternate each week between attending lesson training on the medical campus and teaching in the high school classroom. This course culminates with the Doctor-4-a-Day event, in which high school students are invited to the UCSD SOM campus to participate in hands-on activities in their simulation suite. UCSD medical students supervise stations that highlight key principles in medicine.

Beyond the Bench and Bedside: Partnering with Communities - This course is designed to provide students with the knowledge and skills to partner with communities to develop, conduct, and evaluate community-based research, as well as design and implement community program evaluations. During this course, students complete a Community Snapshot assignment to conduct an in-depth analysis of a region or community in San Diego County. Students learn about the demographics of the community including race, ethnicity, as well as their access to economic, educational, and health resources. At the end of the course, students present their Community Snapshot assignment to their class, providing an opportunity for students to learn about similarities and differences that exist between regions, thus allowing them to become more familiar with diverse areas in San Diego County.

Ambulatory Care Apprenticeship in underserved areas: During the first and second year, PRIME-HEq students are matched with a primary care physician that practices in an underserved community. The course places an emphasis on the students learning the best practices for history taking, physical examinations, and patient interaction in an underserved setting.

<u>Primary Care Core Clerkship in underserved areas</u>: During the third year, PRIME-HEq students are matched with a family medicine physician that practices in an underserved community. The year-long longitudinal course places an emphasis on caring for patients with a whole-person approach, taking into consideration the socioeconomic factors and striving to practice disease prevention and patient education.

<u>Master's Research Year</u>: All PRIME-HEq students are required to complete a one-year master's degree to develop research skills and knowledge on factors impacting social determinants of health and health disparities. Most UCSD SOM students complete a Master's in Public Health or Advanced Clinical Sciences.

UC San Francisco: PRIME for the Urban Underserved (US)

PRIME-US is a five-year curricular track at the UCSF School of Medicine and UCB-UCSF Joint Medical Program (JMP) for medical students who are committed to caring for under-resourced communities and becoming health equity and social justice leaders.

PRIME-US cultivates a community of diverse students who are dedicated to improving all aspects of primary and specialty care in under-resourced communities and catalyzing healthcare and societal systems change. PRIME-US students acquire unique knowledge and skills that will enhance their capacity as future physician leaders to lead transformational change through

quality improvement, research, education, workforce development, community engagement, policy, advocacy, and activism.

<u>Summer Introduction</u>: Students arrive at medical school early for an immersion experience that focuses on team building and an introduction to the framework of cultural humility.

<u>Seminars and Site Visits</u>: Afternoon seminars and a month-long capstone course (which marks the culmination of their program) create a solid foundation in understanding health equity principles and practices. Seminars focus on critical reflection, skills-building, project-based learning, and site visits to community organizations.

<u>Clinical Immersion</u>: Students are placed in healthcare systems that care for under-resourced communities to learn about direct patient care and quality improvement.

<u>Community Engagement</u>: Students learn anti-racist, anti-oppression frameworks to build and sustain equitable community partnerships. PRIME-US students participate in mentored short-term and longitudinal community engagement projects.

<u>Master's Degree/ Research Program</u>: All students do an additional year of master's level education or research to enhance their health equity leadership capacity.

Mentorship and Support: Program and peer mentorship and support are incorporated throughout PRIME-US to ensure personal, professional, and academic success.

<u>Community Building</u>: PRIME-US provides a space for students to support one another and affirm their personal and shared health equity missions.

<u>Leadership</u>, <u>Advocacy</u>, and <u>Activism</u>: The curriculum prepares PRIME-US students with skills to critically examine and reflect upon how to collaboratively create just and healing changes in medical education, healthcare, and society.

<u>Workforce Development</u>: To increase the impact of PRIME-US, the program sponsors numerous activities, in partnership with local pipeline programs, to increase the number of diverse, historically excluded students who are prepared to enter the healthcare workforce.

UC San Francisco: San Joaquin Valley PRIME (SJV)

In 2011, the SJV PRIME program was launched by UC Davis (as the sponsoring and accredited medical school), in partnership with regional partners at UCSF Fresno and UC Merced. The program was designed to develop future physicians to become health care leaders who will practice in the SJV region of California. Starting in 2019, responsibility for accreditation, degree-granting authority, finance, and other responsibilities associated with the management and oversight of the program transitioned from UC Davis to UCSF. This move was in alignment with plans to expand medical education in the SJV through a unique partnership with the UCSF Fresno regional campus for clinical studies and a newly designed UCSF Fresno regional campus that will ultimately include pre-clerkship studies at UC Merced.

At this time, the four-year SJV PRIME curriculum is supplemental to the UCSF SOM curriculum, which introduces the PRIME students to the health issues and needs of the SJV. The social determinants of health, health disparities among the SJV population (including environmental health), and medical conditions that are prevalent in the region serve as a backbone to the SJV PRIME didactic and clinical curriculum. The major healthcare priorities for the SJV are immigrant health, diabetes and obesity, pre-term birth, coccidioidomycosis (Valley Fever), methamphetamine abuse disorder, and human trafficking. Community engagement with community partners is the foundation of the leadership curriculum.

<u>Summer Introduction</u>: The program begins with the *Advance Regional Information Summer Education* experience held jointly on the UC Merced and UCSF Fresno campuses, in which the students are introduced to community partners and begin to understand the health issues facing the Valley.

<u>Pre-Clinical Curriculum (Years One and Two)</u>: First-year and second-year students complete their pre-clerkship work over an 18-month period in San Francisco. The students build on the themes identified in the summer experience and the issues that make up the curricular "backbone" outlined above in a supplemental course, *Activities for Longitudinal Interaction to Generate New Leaders in the SJV* for the duration of their pre-clerkship period. This course consists of interactive bi-monthly sessions with faculty from UC Merced, UCSF Fresno, and UCSF, as well as community partners.

The final component of the pre-clinical curriculum is the AHEC-affiliated Summer Program Including Research and Community Engagement which is a six-week program that integrates community engagement activities such as working with community health workers/promotoras, clinical experiences in AHEC (Area Health Education Centers) clinics, and a research project of the student's choice done with a faculty mentor focused on one of the priority health issues for the region.

Clinical Curriculum (Years Two-Four): As the second-year students transition to UCSF Fresno, they complete the *Longitudinal Integrated Fresno Experience* (LIFE) program. LIFE is a one-year longitudinal integrated clerkship that encompasses the core clerkship year for students in the UCSF SJV PRIME program. It is designed to address competencies for all of the core medical student clerkships which include: Family and Community Medicine, Internal Medicine, Psychiatry, Surgery, Obstetrics/Gynecology, Anesthesia, Neurology, and Pediatrics. In contrast to a traditional "block rotation" curriculum, LIFE students participate in patient-centered longitudinal care with scheduled clinical experiences in the SJV for all core disciplines over the course of an entire year, under the mentorship of faculty preceptors in each specialty. Community engagement is built into the curriculum as students partner with the pediatric residency program to work cooperatively in local schools.

The final phase of the medical school curriculum, *Career Launch*, starts in the spring of the third year. This phase includes internships, longitudinal outpatient experiences, electives in their field of choice, and three or more months of an inquiry (often research) project, also with a faculty mentor of their choice. A final gathering including reflection and a celebration of their Residency Match Day concludes their SJV PRIME experience.

IV. PRIME Program Outcomes

The development and implementation of the PRIME programs across the University of California system has been a remarkable success. There have already been measurable gains for health care in California including student diversity, specialty choice, location of residency, health disparities research, leadership, and engagement with underserved communities. Other notable changes have involved targeted medical student recruitment, the admissions processes, and active interaction and integration between PRIME students and students enrolled in the core (i.e., non-PRIME) medical school classes. PRIME has also led to the first significant increase in medical school enrollment within the UC system in more than four decades. This unique program reflects innovation in medical education and is a model in California and nationally for programs committed to addressing the needs of medically underserved groups and communities.

Campus	Graduation Rate from UC MD School	Residency Placement Rate
Davis	97%	100%
Irvine	100%	98%
Los Angeles	99%	100%
San Diego	100%	100%
San Francisco	100%	98.50%
San Francisco (SJV)	98%	100%

California leads the nation in the retention of public medical school graduates. Among physicians who graduated from a UC medical school in 2018, 69% practiced in California, according to the Association of American Medical Colleges (2018). Over 500 UC PRIME students have graduated since 2004, the majority of whom have completed residency training in primary care (i.e., more than half) and in residency programs serving designated health workforce shortage specialties (e.g., primary care, psychiatry, general surgery, emergency medicine). The majority of PRIME graduates are in California residency programs (nearly 70%) or are practicing in the state.

Although many PRIME graduates are still in residency or fellowship training as it takes seven to ten years to become a practicing physician, over half of those who have completed their training are serving under-resourced communities (e.g., community health centers, academic teaching hospitals, hospitals or clinics that have a social mission) and report leadership experience outside of their practice setting including serving as mentors and teachers to students.

These outcomes demonstrate that UC PRIME programs have a substantial impact on increasing the number of UC medical school graduates who pursue careers devoted to improving the health of the underserved through leadership roles as community-engaged clinicians, educators, researchers, and social policy advocates.

IV. New PRIME Programs

As noted above, the 2021 State budget included funding to develop two new PRIME programs, which will be focused on Black/African American and American Indian/Native American health. This new funding will support the enrollment of 48 PRIME students in each program, eventually resulting in 96 new UC medical students per year preparing for a career serving underserved Black and Native American patients. The new programs will be launched at four UC SOMs as follows:

- UC Irvine and UC Riverside will share the increased enrollment (six students per year, or 24 total for each school) and funding for new programs focused on Black/African American communities.
- UC Davis and UC San Diego will share the increased enrollment (six students per year, or 24 total for each school) and funding for new programs focused on American Indian/Native American communities.

Although these new programs are under development and still in the planning phase, each of the campuses anticipate enrolling six new PRIME students in fall 2022. The following overview provides information on campus plans for the new programs.

<u>UC Irvine: PRIME Leadership Education to Advance Diversity - African, Black, and Caribbean (LEAD-ABC)</u>

PRIME LEAD-ABC is a curricular thread of seminars, workshops, reflection sessions, and experiential learning opportunities spread across medical students during four years of education at the UCI School of Medicine. The thread examines the intersections of Anti-Black racism, medicine, and health with the goal of increasing students' knowledge of historic and current systems influencing health outcomes, and ability to effectively address health inequities impacting African, Black, and Caribbean communities in Southern California and beyond.

The curriculum is designed to strengthen students' skills in the clinical care of diverse populations, advocacy, community engagement, and scholarship through fostering awareness, and enhancing students' presentation and writing skills. In leaning on theoretic frameworks outlined by the Socio-ecological model, Capacity Building, the Transtheoretical Model for Change, Adult Learning Theory and Professional Identify Formation, the four-year curriculum strives to foster growth based on fundamental goals outlined by the **ABC**³ academic themes below:

- Awareness
- **B**elonging
- Clinical care, Competence, & Compassion

The **ABC**³ themes are embedded in each year of the curriculum, but the preclinical – first and second – years have an increased emphasis on awareness and belonging. The themes of clinical care, competence, and compassion are an area of increased focus during the clinical third and fourth years, but these themes are also addressed as early as the first year.

<u>Pre-Clinical Curriculum (Years One and Two)</u>: The first year of the curriculum begins during orientation and celebrates the interdisciplinary foundation of the curriculum by introducing

scholars to diverse faculty from the School of Medicine, Department of African American studies, Claire Trevor School of the Arts, and Schools of Nursing, Public Health, Pharmacy, and Law. Scholars are also quickly engaged in reflection about hard historic facts tied to the field of medicine, and also the importance of self-care in sessions led by faculty from the Department of African American studies.

Community is also further strengthened during pre-clinical years in weekly sessions supporting the development of patient care skills in communication, physical examination, and clinical reasoning during standardized patient encounters with core groups led by PRIME LEAD-ABC Dean Scholars. Select PRIME LEAD-ABC clinical faculty mentors at diverse sites also support early clinical exposure and reflection about the unique experience of Black patients with health systems during the Patient and Community Engagement (PACE) clerkship, in which all medical students participate. Seminars addressing imposter syndrome, capacity building, resilience and maternal-child health inequities also complement the standing curriculum fostering cultural humility and understanding of the diverse and unique needs of ABC communities in the region.

Scholars also are required to complete a service-learning project addressing ABC health issues or communities by the end of their second year, and are invited to help with *Confronting Anti-Blackness Curriculum* projects influencing the broader SOM curriculum, if interested.

Clinical Curriculum (Years Three and Four): The focus of the third and fourth years is to support students' professional identity formation as they work to determine their fields of interest, achieve scholarship, and begin to characterize their future career paths. Clinical exposure is introduced as early as the first year of medical school through standardized patient encounters and the PACE clerkship described above. Core clinical clerkship rotations beginning in the third year are complemented by evening seminars and workshops designed to expand students' awareness of historic and recent ABC health narratives, as well as topics such as health equity, intersectionality, structural competence, and cultural humility. During the third year, this is achieved through evening bi-monthly *Reflection*, *Advocacy and Public Speaking* seminars fostering reflection, conscientiousness and an appreciation of historic and patient narratives, led by faculty in the Department of African American Studies. Fourth-year scholars participate in monthly *Art of Doctoring* seminars and a two-to-four-week community-engaged clinical service elective entitled the *LEAD-ABC Harvest* elective, in partnership with nonprofit organizations including The Shared Harvest Fund and myCovidMD.

Optional Curriculum – Graduate Training or Research: PRIME LEAD-ABC scholars are encouraged to pursue additional graduate training in public health or translational science, with scholarship support for master's degrees in public health or translational science from UCI affiliated programs. Scholars with interest in completing a research year, or other graduate training in fields such as business, law, or humanities, or who want to pursue training outside of UCI must seek additional scholarship funding support.

Although no scholars are currently enrolled in the UCI MD/PhD program, future MD/PhD scholars will be encouraged to participate in reflection sessions with their cohort throughout their doctoral training and will be invited to serve as session small group facilitators for pre-clinical training years, and mentors for scholars championing scholarship in partnership with students supporting PRIME LEAD-ABC *Confronting Anti-Blackness through Research* projects.

<u>Future Curriculum Goals</u>: As PRIME LEAD-ABC continues to grow, the ABC <u>Community Experiential Learning Lessons</u> will be strengthened in partnership with diverse regional stakeholders; ABC <u>Scientific Evidence & Epidemiology Sessions</u> will be implemented; global health partnerships and training experiences will be created; and research opportunities will be enhanced in partnership with the Institute for Clinical and Translational Science and Center for Clinical Research as health equity is optimized in partnership with student scholars through service, research, and advocacy. The program will also continually strive to grow in humility as it listens and learns through sessions highlighting diverse ABC Historical Narratives, Patient Narratives, and Community Narratives, and acts to disrupt the cycles of racism and inequity that disproportionately impact Black and other historically marginalized communities.

Additional information about LEAD-ABC at UCI can be found <u>HERE</u>.

<u>UC Riverside: PRIME Leadership Education to Advance Diversity - African, Black, and Caribbean (LEAD-ABC)</u>

The UCR School of Medicine is developing their new PRIME program in partnership with the UCI School of Medicine and will utilize the blueprint of Irvine's existing PRIME LEAD-ABC program to create a two-campus program. However, UCR is also developing a five-year program incorporating elements of immersive instruction, community-based education, clinical experience in underserved communities, and research. Upon completion of the educational program, PRIME students will be prepared to:

- Demonstrate knowledge of the unique health issues affecting ABC communities
- Conduct culturally sensitive history and physical exams of patients from ABC communities
- Develop a service-learning project that examines and addresses health disparities that disproportionately affect ABC populations
- Serve as mentors and future leaders who will advance the provision of quality healthcare to ABC communities

In addition, curricular content and experiences that exist as part of the UCI program will be shared where possible with UCR PRIME students.

<u>Summer Immersion</u>: Students will arrive at medical school early for an immersion experience that focuses on team-building, skill-building for medical education success, self-advocacy, and the *Meet a Mentor Series*. The summer leading into the second year, students will participate in summer activities such as the *Resilience and Flourishing Building Skills Series* and will receive focused mentoring on preparing admissions applications for advanced degree programs.

<u>Pre-Clinical Curriculum (Years One and Two)</u>: Students will enroll in either the *Community Health or Health Leadership Emphasis* and selection of their ABC physician, faculty, community mentors and advocates will be made. In addition, each student will have the option of being paired with an ABC mentor at the national level.

<u>Clinical Curriculum (Years Three and Five)</u>: Students will complete their clinical rotations at sites that serve ABC communities. They will have opportunities in their last year to participate in

teaching and leadership opportunities such as student-led development of ABC pathway programs, leading an advocacy initiative, teaching, or creating ABC-centered curricular material for medical education and completion of Franklin Covey's Six Critical Practices for Leading a Team series.

<u>Master's Degree</u>: Students will do an additional year of master's level education or research to enhance their ABC/health equity leadership capacity in Year four of the program.

UC Davis: Tribal Health PRIME (THP)

In Summer 2022, THP will join the existing Community Health Scholars (CHS) programs at UCD (which includes Rural PRIME) to train medical student leaders to identify, understand, and serve the unique health needs of California's Indigenous, rural, urban, and valley communities. The anticipated capacity for THP will be four to six students per year.

The THP-CHS curriculum spans four years, and like other CHS programs, aims to provide students the foundation to provide outstanding clinical care for underserved communities, focusing on five pillars of excellence: 1) Community Engagement, 2) Leadership, 3) Professional Development, 4) Mentorship, and 5) Scholarship. THP-CHS graduates will complete all SOM requirements and competencies. In addition, all CHS graduates are expected to:

- Provide outstanding clinical and culturally humble care for patients from disadvantaged backgrounds utilizing an interprofessional team approach
- Identify unique health disparities in a community and understand how social determinants of health and structural inequities contribute to the development of such disparities
- Complete a longitudinal scholarly project using principles of asset-based community engagement
- Demonstrate effective leadership such as advocacy, change management, and team facilitation
- Demonstrate exemplary professional interactions, adaptability, and capacity for selfimprovement
- Serve as mentors for learners from diverse backgrounds to achieve their career goals or objectives

THP scholars will explore the following core topics in their studies, service, and clinical work:

- History of Indigenous people, regional sovereignty, and politics, and Indian Health Service/health policy
- Social, political, and economic determinants of health including effects of oppression, privilege, and colonization
- Environmental justice/relationship to the land
- Traditional Indian medicine/Indigenous healing practices
- Cultural humility including Indigenous culture or cultural ways of being (general and regional)
- Bias, assumptions, self-evaluation, and stereotypes/discrimination
- Traumatic life experiences/loss

The curriculum for the new THP program includes the following components:

CHS Orientation: THP community formation (students, CHS leads, community partners)

<u>Pre-Matriculation Program</u>: Introduction to learning skills to ensure a solid foundation for academic success

<u>CHS Class</u>: Seminars will be led by faculty, community guest speakers, and/or students to address caring for vulnerable and marginalized populations and other THP core topics.

CHS Days: Full-day experiential learning sessions that include visits to community partner sites

<u>Longitudinal Scholarly Activity</u>: This longitudinal scholarly activity spans the medical school experience and must address a specific need or issue within the community identified during the student's first year.

<u>Summer Elective (4 weeks)</u>: THP students are required to enroll in the *Summer Institute on Race and Health* or engage in a tribal health-based activity with advanced approval from the THP Director.

<u>Clinical Rotations</u>: Core clerkship sites (Family Medicine, Internal Medicine, Ob/Gyn, Pediatrics, Psychiatry, and Surgery) will be prioritized at Northern California health systems and CHCs serving Indigenous communities.

<u>Clinical Intersessions</u>: One day during each Intersession is dedicated to visiting community organizations, gaining additional clinical skills (e.g., addiction medicine), and working on the longitudinal scholarly activity.

<u>Clinical Skills Facilitation (Doctoring 4)</u>: In the fourth year, THP students will either serve as clinical skills facilitators for first, second, or third-year CHS students or facilitate at least one teaching activity for junior CHS students.

<u>Medical Care for Underserved and Marginalized Communities</u>: Required for fourth-year THP students

<u>Pathway to Residency</u>: THP scholars are encouraged to explore clinical electives at residency training sites with ties to California's and the Pacific Coast's many Indigenous communities, including through the COMPADRE program.

Masters: Optional fifth-year masters available

Additional information about THP can be found HERE.

UC San Diego: PRIME - Transforming Indigenous Doctor Education (TIDE)

In the Fall of 2020, the UCSD School of Medicine established a medical student concentration focused on Native American/Alaska Native Health, which was entitled *American Indian Health Academic Concentration (AIHAC)*. This concentration consisted of didactic coursework,

independent study, a research project and a required clinical elective during the fourth year at an approved Indian Health Service facility. The AIHAC program will serve as the foundation for the new PRIME-TIDE program currently under development, which will matriculate up to six students per year. The curriculum will be closely aligned with the AIHAC program but with a few modifications. The required didactic coursework will include:

- Required PRIME-TIDE Courses (8 units):
 - o Influences on Health: From Genes to Communities
 - o Beyond the Bench and Bedside: Partnering with Communities
 - o Tribal Ambulatory Healthcare Experience
- Elective PRIME-TIDE Courses selected from the following (6 units):
 - o Introduction to the Politics of Medicine
 - o Health Education Outreach/DOC 4 A DAY
 - o Healthy Minds, Healthy Bodies
 - o Occupational/Environmental Health
 - o Cultural Perceptions about Health and Disease
 - o Emerging and Re-emerging Infectious Diseases

<u>Summer Experience (Between Years One and Two)</u>: Students will complete an experience that provides clinical, community or scientific exposure to Native American health. Examples include shadowing a physician at a Native American clinic, participating in community outreach events hosted by Native American organizations or conducting a focused research project.

<u>Clinical Training During (Years One and Two)</u>: As feasible, the PRIME-TIDE didactic coursework and experiential activities will be integrated with required SOM core courses. For example, there may be opportunities to offer the *Ambulatory Care Apprenticeship* within the *Clinical Foundations* course.

<u>Specialized Clinical Training (Year Three)</u>: Due to some of the special healthcare needs of Native American patients, students enrolled in PRIME-TIDE will complete an internal medicine rotation that is focused on endocrinology/diabetes and a psychiatry rotation that includes significant exposure to the treatment of substance abuse disorder.

Native Health Clinical Experience (Year Four): All PRIME-TIDE students are expected to participate in a clinical rotation (or a combination of clinical and research experience) at an Indian Health Service site for academic credit, with the approval of the AIHAC Steering Committee. The experience will occur for a minimum of four weeks but may be longer. The experience must be sponsored by a UCSD faculty member who can ensure proper oversight of the experience and assign academic credit.

<u>Master's Degree (Year Five)</u>: Students will complete a master's degree program in Public Health, Public Policy, Advanced Studies (Clinical Research), or Advanced Studies (Leadership in Healthcare Organizations). There will be options to complete the master's year between years three and four.

Additional information about PRIME-TIDE can also be found HERE.

Contact Information:

University of California Office of the President 1111 Franklin Street Oakland, CA 94607 http://www.ucop.edu