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1111 Franklin Street
Oakland, California 94607-5200
Phone: (510) 987-9074
Fax:(510) 987-9086
http://www.ucop.edu

March 17, 2011

The Honorable Mark Leno
Chair, Joint Legislative Budget Committee
1020 N Street, Room 553
Sacramento, California 95814

Dear Senate Member Leno:

Pursuant to Item 6440-001-0001, Provision 10, of the 2010 Budget Act, enclosed is the University of California's report to the Legislature on *Efforts by UC Medical Schools to Help Meet the Needs of Medically Underserved Communities (PRIME).*

If you have any questions regarding this report, Associate Vice President Debora Obley would be pleased to speak with you. She can be reached by telephone at (510) 987-9112, or by e-mail at Debora.Obley@ucop.edu.

With best wishes, I am,

Sincerely yours,

Mark G. Yudof
President

Enclosure

cc: Mr. Gregory Schmidt, Secretary of the Senate
Ms. Jody Martin, Joint Legislative Budget Committee
Ms. Tina McGree, Legislative Analyst's Office
Ms. Amy Leach, Office of the Chief Clerk of the Assembly
Ms. Diane Anderson, Legislative Counsel Bureau
Executive Vice President Nathan Brostrom
Senior Vice President John Stobo
Vice President Patrick Lenz
Associate Vice President and Director Steve Juarez
Associate Vice President Cathryn Nation
Associate Vice President Debora Obley
Executive Director Jenny Kao

Report on Efforts by UC Medical Schools to Help Meet the Needs of Medically Underserved Communities (PRIME)

March 2011

Legislative Report

An investment in UC pays dividends far beyond what can be measured in dollars. An educated, high-achieving citizenry is priceless.

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Report on Efforts by UC Medical Schools to Help Meet the Needs of Medically Underserved Communities (PRIME)

This report is submitted by the University of California in response to language contained in the 2010 Budget Act, which states:

> "10. Of the funds appropriated in Schedule (1), $2,025,000 shall be used to support 135 full-time equivalent students in the Program in Medical Education (PRIME) at the Irvine, Davis, San Diego, San Francisco, and Los Angeles campuses. The primary purpose of this program is to train physicians specifically to serve underrepresented communities. The University of California shall report to the Legislature by March 15, 2011, on (a) its progress in implementing the PRIME program and (b) the use of the total funds provided for this program from both state and non-state resources".

State funding for the first cohorts of PRIME students was provided in 2005-06, 2006-07, and 2007-08. State funding requested in 2008-09, 2009-10, and 2010-11 for additional PRIME students was not provided. Because of UC's commitment to the goals of PRIME and to maintain momentum in the development of this program, the University made funding available in 2008-09 for PRIME expansion, and in 2009-10, redirected funds from existing medical school resources to support planned enrollment growth for the program. In 2010-11, no state resources were provided, and UC medical schools again provided support for the program. This strategy is not sustainable, however, as UC medical schools face continuous reductions in state support and as student fees and levels of educational debt continue to rise.

This report provides an update on recruitment and admissions activities for the first seven classes of medical students enrolled in PRIME-LC at UC Irvine, the first four classes of students enrolled in PRIME programs at UC Davis, UC San Diego, and UC San Francisco, and the third class enrolled at UC Los Angeles. This report includes: an overview of PRIME curricula for each program; a review of the evaluation process used to assess progress in meeting program goals and objectives; and an overview of the impact that the program has had on campuses and their communities, the University of California system, and medical education nationally. The report includes information and an update on funding for the program.

I. IMPLEMENTATION OF THE UC PRIME PROGRAM

Research has made clear the value of developing a multi-pronged strategy for medical schools to better address the needs of medically underserved groups and communities. Strategies should include the recruitment of students who have a demonstrated interest in community service and an expressed interest in serving disadvantaged communities as part of their future professional careers. Research has also demonstrated that students who enter medical school with a predisposition to care for underserved populations, often related to their own personal experiences growing up in these environments, are more likely than other students to ultimately practice in underserved communities and care for minority and uninsured patients. Students from underrepresented minority groups are more likely to maintain an interest in working with underserved populations during medical school and work in physician shortage areas and care for uninsured and Medi-Cal patients after their training. In addition, students participating in educational pathways focused on the underserved appear to maintain their interest in working with the underserved and demonstrate more positive attitudes toward the underserved than their peers. Through the University's systemwide PRIME initiative, UC medical schools are developing new programs that will offer students new educational opportunities to prepare them as future leaders and experts in caring for California's underserved and increasingly diverse populations.

UC PRIME programs are innovative training programs focused on meeting the needs of these communities by combining specialized coursework, structured clinical experiences, advanced independent study, and mentoring. These activities are organized and structured to prepare highly motivated, socially-conscious students as future clinicians, leaders, and policy-makers.

UC Irvine

UC Irvine's Program in Medical Education for the Latino Community (PRIME-LC) was developed to help address the increasing demand for culturally and linguistically competent physicians, who are better prepared to address the health needs of the Latino population. The 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 socio-cultural values, health beliefs, and lifestyles of Latino patients. Instruction regarding disparities in health status and disproportionate disease burdens suffered by many Latino patients is emphasized. The program is now fully enrolled (across all five years) with 58 students. The program graduated its second class in May 2010. PRIME-LC alumni have chosen residency training programs in primary care fields such as family medicine, internal medicine, and pediatrics while others have chosen programs in emergency medicine, general surgery, obstetrics and gynecology, and psychiatry.

Building on the success of PRIME-LC, UC medical schools engaged in an intensive planning process to develop new programs that focus on rural health/telemedicine (UCD), health equity/health disparities (UCSD), and urban underserved populations (UCSF). In January 2006, the UC Office of the President (Health Affairs) received a $473,000 grant from The California Endowment - a private, statewide health foundation committed to healthcare access, culturally competent health systems, community health, and the elimination of health disparities - to assist and expedite these planning activities with an expectation that these programs would ultimately receive permanent state support. The grant also included planning funds for development of a program at the David Geffen School of Medicine at UCLA, which admitted its first class in fall 2008.

UC Davis

The UC Davis Rural-PRIME program is an innovative program focused on addressing workforce shortages and healthcare access issues in rural communities. Rural-PRIME welcomed its first class of 12 medical students in fall 2007, 13 in fall 2008, 12 in 2009, and 12 first-year students in 2010 . The students were selected because of their demonstrated interest and strongly expressed commitment to rural practice along with having significant previous exposure to rural communities.

The goal of Rural-PRIME is to train medical students to become the future physicians and community leaders in rural California communities. The program builds on UCD's strengths as an integrated health system and medical school including its record of contribution and excellence in primary care education, commitment to rural outreach (rural medical school rotations, residency locations, and clinical affiliations), expertise in telehealth the use of telecommunications technology, and strong commitments to public health, community service, and diversity.

UC San Diego

The UCSD Program in Medical Education-Health Equity (PRIME-HEq) is a five-year dual degree program, first developed in 2007. PRIME-HEq offers students opportunities to examine health equity in an area of interest consistent with the Healthy People 2010 goal of eliminating health disparities among all segments of California's population. The main goals of the PRIME-HEq program are to increase the number of clinicians, research scientists, and advocates working to improve minority health; create a diverse community of scholars that will develop, disseminate, and apply new knowledge about health disparities and minority health; and promote multidisciplinary university-community partnerships to help improve equity and eliminate disparities in health care delivery. UCSD's faculty is committed to the attainment of these goals through partnerships with their communities and by engaging their faculty, staff, and students. There are currently 38 students enrolled in PRIME-HEq, including nine medical students who matriculated in 2010-11.

Lindia Willies-Jacobo, MD is the Assistant Dean for Diversity and Community Partnerships, and Director of the PRIME-HEq program. She continues to oversee the PRIME program along with Vice Dean for Medical Education, Maria Savoia, MD. PRIME-Heq plans to hire a coordinator for the program to assist the PRIME Director with all aspects of the program, including, but not limited to, expanding community engagement opportunities for their students.

UC San Francisco

Faculty at UC San Francisco and the Joint Medical Program (JMP) administered by UC Berkeley and UCSF have been leaders in research investigating the factors that contribute to urban health disparities, including geographic maldistribution of clinicians, lack of insurance, minority race-ethnicity, low socioeconomic status, limited English proficiency, and low health literacy. These problems are widespread in California, a state with a high proportion of the population lacking insurance and a tremendous degree of racial and ethnic diversity. PRIME for the Urban Underserved (PRIME-US) offers UCSF and JMP medical students the unique opportunity to pursue their interests in caring for medically underserved populations in urban communities. The program provides educational experiences for students that support their goals of becoming leaders; community-engaged clinicians, educators, and researchers; and advocates for improving the care of urban underserved communities.

UCSF launched PRIME-US in fall 2007 with 12 first-year students. Eight students were enrolled at UCSF and four at UCB. In fall 2008, enrollment in the program grew to 15 PRIME students, with 11 at UCSF and four at Berkeley. There are currently 57 PRIME-US students, with 41 at UCSF and 16 participating in the UCSF-UCB joint program at Berkeley.

UC Los Angeles

The David Geffen School of Medicine at UCLA has a long history of training practitioners who provide health care to traditionally disadvantaged populations as demonstrated by the success of its longstanding joint medical education programs with UC Riverside and the Charles R. Drew University of Medicine. Building on the success of these programs, the UCLA PRIME initiative aims to educate future physician leaders trained to address the health care needs of a wide range of diverse disadvantaged communities by delivering culturally competent clinical care, providing leadership for improved health care delivery systems in disadvantaged communities, conducting research on health care disparities, and serving as community advocates for improved health care policies. In fall 2008, 18 PRIME students enrolled in the new UCLA program with 10 students at UCLA and four each at UCR and Charles Drew University. In 2009-10, 17 students matriculated into the program, with nine at the UCLA campus and four each at UCR and Charles Drew University. There are currently a total of 53 students enrolled in PRIME at UCLA (including those in the joint programs noted above).

A. RECRUITMENT & ADMISSIONS

Recruitment

One of the most important early objectives of the PRIME initiative was attracting a group of applicants that met both the program's unique criteria and the overall requirements for admission to UC medical schools. PRIME faculty and staff continue to build the infrastructure and expertise to support the recruitment of well-qualified and highly motivated students. This includes development and revision of informational handouts and web materials; training of academic counselors and admissions staff to respond to questions related to PRIME programs; working with the admissions committees and staff to identify the point at which students apply; integrating the PRIME application process with each School of Medicine's secondary application process; and developing unique standards for the interview process, including the recruitment of interviewers with special expertise in the program's area of focus (e.g., interviewers at UCI who are fluent in Spanish and able to assess each applicant's language ability and commitment to meeting the goals of the program).

Active recruitment also includes year-round visits to UC campuses, California State University campuses, Community Colleges, and private universities in the state. Faculty, staff, and students in the program have attended premedical conferences and outreach fairs in Northern and Southern California to introduce the program and to speak with potential applicants and advisors.

The PRIME websites at each campus are also an important recruitment tool. Each program's site continues to be updated on a regular basis.

PRIME-LC: http://www.meded.uci.edu/primelc/
Rural PRIME: http://www.ucdmc.ucdavis.edu/mdprogram/rural_prime/
PRIME-HEq: http://prime-heq.ucsd.edu
PRIME-US: http://medschool.ucsf.edu/prime/
UCLA PRIME: http://www.medsch.ucla.edu/uclaprime/

UC PRIME has also made a commitment to widening the pipeline for students from diverse backgrounds interested in pursuing careers in health care. In order to identify and support high school students who may have an interest in health and science, PRIME programs are engaged in a number of K-12 outreach activities, including workshops, presentations, and visits to UC medical schools.

Admissions

The admissions processes for each PRIME program are similar, but not identical. These processes are also evolving as the programs grow and as campuses evaluate their progress from year to year. Applicants to PRIME programs must first be identified and invited to submit a secondary application. Only at this stage in the process (at UCI, UCD, and UCSD) are they given the opportunity to apply to the program. Applicants selected to submit a secondary application are screened by UC admissions committees. UCSD added a separate essay for students interested in the PRIME-HEq program for the 2010-2011 application cycle. In this essay, students were asked to describe their level of interest in the program, in addition to describing longitudinal experiences with underserved communities, the type of communities that they've worked with, and their level of involvement. When applicants are invited to interview for PRIME, they are provided with detailed information about the programs and have opportunities to meet faculty, current PRIME students, and other prospective students.

PRIME-LC continues to benefit from the School of Medicine's conditional acceptance program. This program was instituted by the Admissions and Outreach Office to improve representation of students from disadvantaged backgrounds who have the humanistic qualities to become outstanding physicians, but who also may lack adequate academic preparation for the rigors of medical school. An applicant admitted as a conditional accept student may also be accepted as a conditional PRIME-LC student. These students take classes with the first year medical students and if necessary have the opportunity to improve their MCAT scores. Students who succeed in classes and raise their MCAT scores matriculate with the next class of medical students. There are now four students from the conditional acceptance program enrolled in PRIME-LC. The students have done well academically and contributed significantly to PRIME-LC and their respective medical school classes.

Beginning with the fall 2009 application cycle, UCSF has required applicants to apply as part of the secondary application process. Interested applicants are required to submit their PRIME-US essay with their secondary application. As of the fall 2010 admission cycle, additional screening questions on the secondary application and phone interviews have ensured equal and consistent interview opportunities for all PRIME-US applicants.

The admissions process is slightly different for the JMP. Students who are interested in PRIME-US notify the program before their interview date and submit their essays prior to interview day. The JMP submits their top candidate choices to UCSF for final approval. The Joint Medical Program also receives far more PRIME

applicants than the number of available spots, with approximately 50% of JMP applicants also applying to PRIME-US**.**

UCLA PRIME differs from the other UC PRIME Programs in that it has a separate admissions process from the general admissions process for the David Geffen School of Medicine. Students interested in UCLA PRIME at any of the three campuses (i.e., UCLA, UCR or Charles Drew University) apply via the American Medical College Application Service (AMCAS) using a separate code for UCLA PRIME. Applicants are evaluated by an admissions subcommittee composed of faculty from all three institutions. UCLA PRIME was one of the first medical school programs in the country to implement the Multiple Mini-Interview, a process in which students interview in relatively short, but focused sessions, with eleven to twelve faculty members who each rate candidates on a particular question selected to examine a particular characteristic identified by UCLA PRIME faculty and administrators. The Multiple Mini-Interview is now used at other California medical school campuses for their entire applicant pools including UCLA, UC Davis, UC Riverside, and Stanford. UCLA PRIME has shared experiences and resources with the other campuses to help them develop effective programs.

Although most programs are now in their fourth year, interest in PRIME programs continues to grow and to significantly exceed program capacity. For example, UCSF receives over four times the number of applications as they have available positions. As the program expands, the demand is expected to increase.

B. PRIME CURRICULA

Programs in Medical Education (PRIME) programs are structured, five-year (MD and masters degree) programs that 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. Although the curriculum for each program is unique, the curricula for all PRIME programs generally includes a summer orientation/immersion experience, a seminar series with site visits, clinical immersion in underserved settings, community engagement, a master's degree, and sponsored events that are open to the broader campus community. All five programs include a component for improved training and delivery of care through expanded use of telemedicine. Detailed descriptions of the curricula, by campus, are provided in Appendix A.

C. PROGRAM EVALUATION

Each program has developed evaluation plans that include both formative and summative assessments at the curricular and programmatic levels. The goal of formative evaluation is to facilitate continuous monitoring of the quality of the program as various components are planned and implemented. Issues concerning implementation, overall quality, and program challenges are discussed at regularly scheduled meetings of PRIME planning committees and community partner groups. The outcomes of these meetings have led to improved structure and functions.

The prospective design of most PRIME evaluation plans not only includes both formative and summative measures, but quantitative and qualitative methods as well. Data are being collected over time primarily from students, but also from participating faculty and community partners. Surveys explore predisposing factors to working with underserved populations (demographics, work, and life experience), career intentions, knowledge of health and health care disparities, and attitudes towards the medically underserved. Summative evaluations and outcome data will be used to determine the overall effectiveness and quality of the PRIME program. Outcomes of interest include:

- Increased cultural competence – patient-centered skills and knowledge compared with the rest of the class
- Leadership in extracurricular activities related to the goals of PRIME
- Scholarly activities of PRIME participants including presentations, publications, academic appointments, etc.
- Program retention

- Advancement of telemedicine technologies, implementation, and utilization
- Entering graduate medical education in a specialty and program that is congruent with the goals of the PRIME program
- Future practice in underserved communities – residency locations, specialty, and practice location
- Alumni survey to assess future practice activities and the degree of leadership provided by PRIME graduates - leadership in health organizations, development of programs, and health policy impact

An important goal of the program is the development of a systemwide PRIME evaluation. A system-wide approach will enable each campus to develop both a shared and program-specific evaluation plan that will yield results to be shared across the University and serve as a national model for innovation in medical education. By pooling data, participating campuses will have the opportunity to fully evaluate the effectiveness and impact of the program and produce high quality educational research.

Ultimately, patient satisfaction will be an important measure of the program's success in meeting the goal of providing culturally sensitive, linguistically competent physicians for diverse patients. Patient surveys will be used to evaluate patient satisfaction, comparing PRIME and non-PRIME students, and later, comparing PRIME and non-PRIME physicians.

D. OUTCOMES

The development and implementation of the PRIME-LC program at the UCI School of Medicine has been a remarkable success as they prepare to graduate their third class of graduates this spring (2011). Successful implementation of the newer PRIME programs is expected as well. While the program's overall impact will require many years to fully evaluate, important gains that have positive implications for health care in California have already been achieved. A number of changes have taken place across UC medical education programs and within their surrounding communities. The most notable changes have involved 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. The development of the PRIME initiative has led to the first significant increase in medical school enrollment within the UC system in more than four decades. This unique systemwide program reflects innovation in medical education and is emerging as a model in California and nationally for programs committed to addressing the needs of medically underserved groups and communities.

UC Medical Students

Another major goal of the PRIME program is to inspire students to appreciate the rewards and challenges of caring for medically underserved populations. To achieve this goal, each campus continues to develop new learning opportunities, including offering the PRIME curriculum to non-PRIME students, creating new resources and activities for interested students, and encouraging PRIME students to accept leadership roles in campus organizations.

Current UC PRIME students hold leadership positions in the American Medical Student Association (AMSA), Latino Medical Student Association (LMSA), Student National Medical Association (SNMA), Black Student Health Alliance (BSHA), and several others. Some students have started new organizations and coordinated several electives (e.g., Caring for the Underserved, Incarcerated Youth, and the Health Disparities Lecture Series at UCSF). PRIME students also participate in a variety of off-campus activities, including community screening events, outreach activities, and health fairs.

Increased activism/advocacy among the students in promotion of social justice and equality in health care continues to grow. For example, UCI sends the largest contingent of medical students in California to Lobby Day, where students meet with their legislators to promote policies that aim to reduce disparities. Some students have also completed internships with legislators who are health advocates.

At UCI, student interest in migration and international health has increased as a result of PRIME-LC. Nearly all PRIME-LC students have returned to Latin America after their immersion experience in Cuernavaca. Other students have worked with global health and international health organizations in other countries. This is also noticeable with respect to assessing language and cultural competence. The interest from the general medical student population for continued language and cultural competence training led to the establishment of medical Spanish as an elective course for first and second-year students. Participation has exceeded expectations with approximately twenty-five percent attendance from both classes. The implementation of the PRIME-LC program has also made possible the development of Grand Rounds (a regular series of presentations by experts in Latino health that are open to students, faculty and staff of the UCI School of Medicine, UCI Medical Center, and the larger UCI community).

UC Schools of Medicine

UC PRIME programs continue to have significant positive impacts on medical school classes throughout the UC system. PRIME has also produced significant increases in racial, ethnic, and socio-economic diversity across the UC medical education system. Of the 253 medical students enrolled in PRIME programs in 2010-11, more than fifty percent are students who are underrepresented in medicine (UIM). This level of diversity substantially exceeds the proportion in the core medical school classes.

Although the diversity of UC medical school classes still lags behind the growing diversity of California's population, these increases demonstrate that PRIME is having a positive impact on the University's ability to successfully recruit a diverse group of students who are interested in providing culturally competent care to California's underserved populations.

Display 1, PRIME Enrollments by Race/Ethnicity, 2010-11

Fall 2010 Race/Ethnicity	UCD	UCI	UCLA	UCSD	UCSF	Total
Native American/Alaskan Native	1	0	0	0	0	1
Black/African American	0	2	6	3	15	26
Mexican American/Chicano/ Other Hispanic/Latino	8	39	20	12	14	93
Pacific Islander	2	0	0	0	7	9
Multiple Race/Ethnicity (URM)	3	0	8	0	0	11
Total URM and Other Hispanic/Latinos	*14 (30%)*	*41 (71%)*	*34 (64%)*	*15 (47%)*	*36 (63%)*	*140 (55%)*
Asian American	4	0	8	8	7	27
White/Caucasian	27	14	9	15	14	79
Other/Nonreporting	47	58	53	38	57	253

UCSF hosted the second statewide PRIME conference on October 2-3, 2010, at Mission Bay, with over 150 attendees, including PRIME students, faculty, staff, and invited guests. The theme of the conference was *Building and Strengthening Community*, with state leaders presenting on diversity, health care reform, and community engagement, and students organizing panels, giving presentations, and leading break-out sessions. The agenda, information about speakers, presentations, and other resources are available at http://www.medschool.ucsf.edu/prime/conference/.

As a result of the statewide conference, PRIME students from across the UC system are forming a PRIME Student Council. Each school is contributing students and a small amount of funding to ensure that their work on issues of diversity, health care, and community engagement continues to advance. UCLA plans to host the next PRIME conference.

The UCI Department of Family Medicine has developed a formal residency track position as part of the PRIME-LC program. This specialized track, designed for residents with an interest in becoming leaders in Latino health, will use some of the same curricular interventions that PRIME-LC has developed. In addition, these residents will receive special instruction in medical leadership. This track will allow residents who did not attend UCI to training with PRIME-LC faculty during residency and act as mentors to PRIME medical students. There are currently two PRIME-LC interns in the residency program. The applicant pool of twelve physicians is highly qualified for the program and includes students from PRIME-LC. The PRIME Graduate Medical Education component will help advance the mission of the University and provides an opportunity for PRIME-LC graduates to build upon their specialized training and continue to build their leadership and advocacy skills.

Community Partners

The development and implementation of the PRIME program has also facilitated and enhanced university-community partnerships throughout the state. Community partners and preceptors are eager to work with PRIME students as a way to instill and promote awareness and respect for the community in future clinicians. PRIME is committed to developing strong and sustainable relationships with the community, and continues to seek ways to 'give back.' As PRIME students become leaders in medicine, their commitment to providing health care and advocacy for the underserved will directly benefit communities throughout California.

The use of technology is becoming an integral part of the PRIME curricula at each school. UC Schools of Medicine plan to use funding from Proposition 1D (passed by voters in 2006) to help equip their PRIME partner hospitals and affiliated clinics with telemedicine/telecommunication and simulation equipment to help train students and to increase access to specialty services in remote or underserved areas. As part of becoming a preceptor site, clinics and hospitals teaching PRIME students will receive training on the use of the equipment for telemedicine consultations, for teaching students, and for accessing Continuing Medical Education. Clinicians practicing at the sites will gain access to a wealth of live and online medical research, publications, and other resources.

Impact on Medical Education within the UC System and Nationally

Building on the efforts linked to PRIME-LC, the UC Schools of Medicine at Davis, San Diego, San Francisco, and Los Angeles have each implemented new PRIME programs. As currently envisioned, pending programmatic and budgetary approval, planned enrollment growth through PRIME is ultimately hoped to result in an enrollment increase nearly equivalent to a small new medical school, with a collection of specialized programs dedicated to meeting the health needs of California's medically underserved. Ultimately, UC PRIME programs are planning to enroll a total of approximately 60 to 80 students per campus (i.e., across the five-year curriculum), equivalent to a total increase of more than 300 new medical students system-wide. By pursuing these enrollment increases through the creation of new programs, the UC health sciences system is aiming to help increase the diversity of the physician workforce and to improve health outcomes in California.

At the national level, interest in the structure and goals of UC PRIME programs continues to grow within the medical education community. Based upon the growing interest in these programs and the planning undertaken within the UC system over the past several years, UC is frequently invited to present at national and statewide conferences and meetings.

II. THE SOURCE AND USE OF STATE AND NON-STATE FUNDS FOR THE MD PROGRAM

The core support for sustaining the undergraduate medical education or MD program is from State funds and student fee funds. In addition, the costs of clinical training traditionally have been supplemented by physician and other professional fee income and by revenues generated by the medical centers.

For the initial growth of the PRIME programs, UC had requested and received the MD marginal cost of instruction for the undergraduate medical education students (MD) and the marginal cost of instruction for master's degree students. For 2007-08, for example, at $25,600 per MD student, the State provided $972,000 of

State General Funds for 38 MD students, and at the general campus marginal cost of instruction rate of $10,600, a total of $85,000 for 8 master's degree students. Additional support for the medical program was derived from fee revenue from mandatory systemwide student fees paid by all students and from the professional fee charged to MD students.

For 2008-09, 2009-10, and 2010-11, however, the State budget for the University provided no new resources for the PRIME program. In order to maintain momentum in the development of this program, the University provided one-time funding in 2008-09 for PRIME expansion, and in 2009-10 and 2010-11, redirected funds from regular MD programs to PRIME to support planned enrollment growth, and the programs enrolled the additional students. But accommodating enrollment growth with few additional resources other than the student fee income associated with growth means that new and existing students alike are impacted by the lack of resources to support a high quality academic experience. This is especially true in the high cost disciplines that characterize the health sciences. The University cannot continue to accommodate increased enrollments without State funded workload support.

To operate the instructional program, the health professional programs require faculty, administrative and staff personnel, supplies, and equipment. Faculty requirements are determined in accord with student-faculty ratios that have been established for each profession and for each of the categories of students enrolled. The historical budgeted student-faculty ratio for medical students is 3.5:1.

For the University's total health sciences budget, faculty salary and benefit costs constitute over half of the total expenditures for the health sciences instructional program. Instructional support costs represent approximately 42% of the budget. These costs include salary and benefits for non-faculty personnel, partial support of stipends paid to interns and residents, and supplies and equipment. The remaining 7% of the program's expenditures are for other expenses such as a portion of malpractice insurance premiums.

A portion of the revenue from student fees is used for financial aid. As professional fees for medical students have increased, student financial aid for PRIME students is a priority given the negative impact that increasing debt loads will have on UC medical students and how it influences the career paths they pursue.

UC medical schools are committed to developing new programs, such as PRIME, that will offer students new educational opportunities to better prepare them as future leaders and experts in caring for California's underserved and increasingly diverse populations. PRIME programs build upon research showing that students who enter medical school with an interest in caring for underserved communities as part of their future career are more likely than other students to practice in such communities.

During a budget crisis, the temporary solutions used for 2008-09, 2009-10, and 2010-11 PRIME workload increases were necessary but these are not sustainable solutions over a long period of time if the quality of the University is to be preserved. The University cannot indefinitely accommodate larger numbers of students without the resources needed to provide them a UC-caliber/quality education. Without new workload support, the University will consider plans to bring enrollments more into line with resources.

APPENDIX A: Overview of PRograms In Medical Education (PRIME)

California's physician workforce is vital to the health and well-being of the state's 37 million residents. As the most populous, and most ethnically and culturally diverse state in the nation, California faces unique challenges in improving access to care and health outcomes for its citizens. In both urban and rural communities, challenges associated with inadequate access to care and resulting health disparities stem from multiple factors, including geographic maldistribution of clinicians, lack of insurance, low socioeconomic status, limited English proficiency, and low health literacy. Without comprehensive strategies and focused health professions teaching programs, current health disparities will persist and likely intensify in the years ahead as the state is facing an estimated 15.9% shortfall of physicians (equivalent to nearly 17,000 physicians) by 2015. This shortage is expected as a result of rapid growth and aging of the state's population, aging of the current physician workforce, and a comparative lack of growth in medical education and residency programs in California – *including virtually no growth within UC for more than three decades.*

To help improve health outcomes and better serve patients who face limited access to care, California's health providers must acquire improved understanding of research findings pertaining to health disparities and improved skills with respect to the needs of underserved groups and communities. Health sciences graduates must be prepared and better trained to consider the cultural and socioeconomic factors, health practices, and potential environmental hazards that affect health outcomes.

UC medical schools are committed to developing new programs that will offer students new educational opportunities to better prepare them as future leaders and experts in caring for California's underserved and increasingly diverse populations. PRograms In Medical Education (PRIME) build upon research showing that students who enter medical school with an interest in caring for underserved communities as part of their future career are more likely than other students to practice in such communities.

The PRIME programs incorporate specific training and curricula designed to prepare future physician leaders to address health disparities and improve the quality of healthcare available to all Californians. The special training ranges from enhancing cultural sensitivity to the use of tele-health technology to overcome geographic barriers to comprehensive health care.

UC Irvine

The PRIME-LC curriculum incorporates three broad components: the traditional medical school core curriculum; the "Doctoring Curriculum" (i.e., the Introduction to Clinical Medicine course, but with additional experiences in the third and fourth year); and the curriculum for the advanced degree program.

Summer Immersion Experience: Southern California and the Central Valley

After six years of providing the cultural immersion summer program in Cuernavaca, Mexico, the PRIME-LC program changed their summer curriculum in 2009. Program faculty and staff wanted PRIME students to have immediate access to the many opportunities for cultural immersion in California. The one-month curriculum combines classroom learning, community service, and field trips emphasizing successful collaborations between physicians and communities with opportunities to learn about health policy and clinical experiences with underserved Latino populations in both urban and rural settings.

Some of the curricular elements of the Cuernavaca experience were retained such as the course taught by Dr. Socorro Torres-Sarmiento, an anthropologist from Chicano/Latino Studies at UCI, on the History, Culture, and Geography of Latin America. During the first three weeks of the course, the students' time is shared between classwork, health training and outreach, and clinical experiences in community clinics around Orange County with majority Latino patient populations.

Students also explore the relationship between the environment and health in Long Beach to learn about models of successful community interventions. Students spend time at the Unihealth Foundation to learn how funding agencies operate and how they may help meet future needs. They also complete a half-day media training. More than half of the students used this experience in live media interviews before the end of the summer program.

The final week includes five days of working at UCSF-Fresno. The students complete a variety of assignments – clinical practice, teaching children in a migrant housing complex, speaking with kids involved with the Doctor's Academy at the Latino Center for Medical Education and Research, and understanding the challenges and opportunities of rural medicine for Latino populations. The students also spend two days in Sacramento where they learn about health policy and the legislative process. Students have the chance to participate in direct advocacy by participating in legislative visits with state policy makers and the governor's office. After returning to Irvine, students complete their required community projects and make presentations on the final day of the summer experience.

Although the summer experience no longer takes place in Cuernavaca, students still have access to educational opportunities in Mexico. UCI has plans to offer a fifth-year rotation in Mexico, which focuses on clinical and community health. Postponement of this experience to the fifth year will allow students to gain more from working with Mexican physicians, and is likely to have a greater impact on their understanding of Latino and border health issues.

After the summer, all students meet with faculty in a debriefing session to determine the extent to which the overall objectives were accomplished. The evaluation session for the summer program is an important component of overall program evaluation. Feedback has been used to improve the experience in 2010 and those improvements were reflected in stronger evaluations overall. The immersion experience has proven to be a unique learning experience that builds on the linguistic and cultural competence that PRIME-LC students possess upon matriculation to the program.

The PRIME-LC curriculum is comprised of six components:

- Traditional medical school courses
- Additional courses modified to include content addressing the PRIME-LC goals. For example, the PRIME-LC Clinical Foundations (formerly Patient-Doctor) course series and Problem Based Learning sessions integrate material specific to treating Latino patients, and the standardized patients communicate in Spanish.
- New courses specifically designed for PRIME-LC that, in addition to the material taught during the summer immersion experience, include courses developed by the Department of Chicano/Latino Studies in the School of Social Sciences.
- Master's degree
- Electives focusing on the PRIME-LC objectives are continuously being developed. Practical experiences working with California legislators, grassroots organizations, border experiences, and international experiences are examples of electives that have proven popular among the students.
- Scheduled extracurricular activities, such as student gatherings with a moderator to discuss books and other material. In addition, leaders from health care and other disciplines are invited to these sessions as guest speakers as part of or in addition to the PRIME-LC Grand Rounds. Heads of industry, managers of philanthropic foundations, scholars in Latino Studies, and representatives from community-based

organizations are examples of those who have participated. These meetings provide opportunities for students to strengthen their relationship previously established during their early experiences together and to network with all students in the program and invited speakers.

In the second year, students have a twelve-week community based primary care experience. They work with a community faculty member in his or her practice to enhance history-taking and exam skills. These experiences include exercises in cultural values, spirituality, ethics, nutrition, pain, humanities, and geriatrics. PRIME-LC students work primarily in Spanish-speaking practices.

Early in the second year, the Chicano/Latino Studies experience begins. Taught by UCI faculty in the Chicano/Latino Studies department, this experience focuses on the history, politics, medical and cultural beliefs, and life experiences of Latinos living in the U.S. and in Latin America. Originally scheduled for initiation in the third year, it became apparent that it should begin in the second year to build steadily on the cultural immersion experience. Courses teach students to integrate cultural health care models to provide optimal clinical care to Latino patients. Students are invited to participate in seminars to discuss contemporary issues in Latino health.

PRIME-LC students are required to obtain an additional graduate degree. The Master of Public Health (MPH) degree is the most popular choice. Several PRIME students are in the MPH program at California State University, Long Beach, Berkeley, UCLA, or Johns Hopkins. Other students have either completed or are in the process of completing their Master of Business Administration (MBA) and a Master of Philosophy. The program works closely with the Directors of these degree programs to ensure their compatibility with the students and the mission of PRIME-LC.

UC Davis

Rural-PRIME is an "integrated" track within the UCD School of Medicine. Students take the same lectures and classes as the general class each year. All students receive an MD and complete a master's, in Public Health, Health Informatics, or a related healthcare subject area in year four of the five-year curriculum. The primary difference between the regular MD program and Rural-PRIME is that the course content of Rural-PRIME integrates rural contextualization and infield experiences. For example, Doctoring (a course to introduce students to the clinical curriculum and to model physician-patient interaction) has been modified to have a rural focus, the Primary Care clerkship in year three will be at rural centers of excellence, and a voluntary seminar series is available to Rural-PRIME students to learn more about health issues in rural and underserved populations.

All Rural-PRIME students participate in a special two-day orientation, which provides an overview to the basic concepts of rural health care and early exposure to rural life and health care services. The orientation includes both lecture and hands-on experiences in a range of topics:

- Rural-PRIME curriculum and master's degree options
- Rural models of health care delivery and rural case discussions
- Applications of telecommunication and simulation technologies in learning as well as increasing access to medical care for rural patients

Display 2. Rural-PRIME Curriculum Wheel

In 2010, students toured a partner rural clinic in Plymouth, California, and had the opportunity to ask questions of the physicians and staff working there. Following the clinic visit, the students toured Sutter Amador Hospital in Jackson, California, and met with several of the lead teaching faculty, as well as discussed the challenges of rural health care, the structure of the hospital, and the local patient population with a local public health officer. The CEO of the hospital met with the students to discuss the logistics of rural health care and how the hospitals and clinics operate.

In addition, during orientation, students have the opportunity to meet with rural practice faculty instructors who will advise them and follow them throughout their medical school experience. The longitudinal Doctoring course, which begins in the first year for all medical students (Doctoring 1), affords Rural-PRIME students the opportunity to work with rural practice faculty instructors who teach portions of the course both in the classroom and in rural practice settings.

Classes modified to have a rural focus help students obtain the same core knowledge and skills as the general medical school class but use case studies to highlight rural themes, use of technology, distance learning, and public health. Through the infield experience in Doctoring 1, Rural-PRIME students are exposed to migrant and other underserved populations in community-based clinics. Students are also introduced to the use of

telecommunication technology in the practice setting and as a tool to connect with faculty, the classroom, and fellow students.

In 2009-10, the curriculum was changed so that first and second year students (versus only second year students) receive skills-based training sessions in the UC Davis Center for Virtual Care. The exposure is double that of previous years and overall, translates into PRIME students having four to five times the amount of simulation training received by the students in the general class. Under the expert tutelage of the nurses and administrators at the Center, the students learn to use simulation technology to mimic real-life situations, learn basic skills such as suturing, and hone their ability to make logical decisions in crisis situations. A faculty member oversees the process, helps with the training, and creates real-life "scenarios". These skills-based sessions are meant to increase preparation for third-year clinical rotations (clerkships).

Doctoring coursework follows a similar implementation plan in the second year of the program (Doctoring 2), and combines required core courses with increased exposure to rural practice. It focuses on advanced clinical skills, epidemiology, ethics and problem-based assessment. Rural-PRIME students also focus on population-based health, are exposed to rural inpatient practice, and continue to use telecommunication technology as a clinical and educational tool. Another recent change to the curriculum is the additional training in the use of telecommunications technology for distance learning and telemedicine. They are trained to become familiar with the operations of the equipment, with using peripherals such a general exam camera, and with telemedicine protocol. As they become proficient in the basics of video-conferencing, they become more confident about the prospect of their third year, when they will be "beaming" back to their didactics sessions at UC Davis several times a week.

Third-year Rural-PRIME students follow the same clerkship rotations as traditional students, but receive a portion of their training in rural clinical settings. In 2010, Rural-PRIME had its second third-year cohort doing their six core clerkships in Primary Care, Pediatrics, Ob/GYN, Psychiatry, Surgery and Internal Medicine. In 2010, Rural-PRIME had its second 3rd-year cohort doing their six core clerkships in Primary Care, Pediatrics, Ob/GYN, Psychiatry, Surgery and Internal Medicine. These students are still completing their clerkships at rural hospital and clinics around Northern California and the Central Valley. In 2010, Rural-PRIME recruited a number of new training sites including a number for psychiatry clerkships after a successful pilot the previous year.

The Rural-PRIME partner sites for 2010-11 are:

- Tahoe Forest Hospital, Truckee, CA
- Sutter Amador Hospital, Jackson, CA
- Shasta Community Health Center, Redding, CA
- Mee Memorial Hospital, King City, CA
- Oak Valley Hospital, Oakdale, CA
- Communicare Health Centers, Davis/Woodland/Sacramento, CA
- Merced County Mental Health and Primary Care, Merced, CA

Feedback from the rural rotations continues to be very positive and enthusiastic, citing the high level of hands-on experience that comes with being part of a smaller team and often the only student with the attending physician. Students were also impressed with the hospitality and goodwill shown them by administration, staff and patients at the rural sites.

Telemedicine and video-conferencing equipment , funded by Proposition 1D, has been purchased and deployed at the sites in Jackson, Truckee, Davis, Woodland, King City, Redding, and Oakdale, while Merced already had equipment in place that is being or was upgraded. This equipment is also used for attending departmental grand rounds and supervision by instructors on case loads. Clerkship coordinators, faculty, students, and rural site

personnel underwent training to make the connection seamless. The distance education component has saved an enormous amount of travel and "lost" clinical time, allowed the students to experience the benefits of real rural immersion versus commuting, and allowed rural sites to access Continuing Medical Education for their medical and nursing staff.

Weekly didactics are featured in Rural-PRIME's new distance interactive medical school education program. The didactics are delivered at a distance via telemedicine with interactive methods at multiple sites simultaneously. This new field includes many diverse areas of medicine, technology, and pedagogy: technology culture development, technology faculty instruction, measurement of pre-existing experience with teleteaching, building and facility restructuring with technology installation, instructor medical expertise, instructor teaching perspectives, student learning styles, methodology fitting the goals/objectives, and modified evaluation. Distance learning began in July 2009 and has continued through each cohort's clerkship year. Rural-PRIME has continued to build this culture during 2010-11, with advanced web streaming software installed last spring in the School of Medicine.

Display 3. Rural-PRIME Distance Education Wheel

In 2008, the School of Medicine at UC Davis relocated to a new state-of-the-art facility in Sacramento, on the health system campus. The new building has "smart" classrooms and distance learning capabilities that will result in a unique learning experience. These technologies will allow Rural-PRIME students to get the most out of their rural immersion experiences and enable them to access resources available to the School of Medicine. On returning from rural clerkships, students will use the Center for Virtual Care to enhance their exposure to more complex diagnostic and treatment processes and to supplement their rural practice experience. UC Davis telemedicine resources will also provide on-site and remote Continuing Medical Education training for

instructors who participate in the Rural-PRIME program to ensure that the educational objectives are achieved and the learning experience is maintained at a consistent level.

During year four, Rural-PRIME students engage in the pursuit of a master's degree in Public Health, Health Informatics, or a healthcare related subject area unless they had applied for and received an exemption. Of Rural-PRIME's first class of students who chose to pursue a master's, all chose a Master's in Public Health. Current third year students have completed their master's applications and are awaiting replies.

Year five will be a clinical year where students will engage in a number of clinical electives based in their interest. Select specialties have volunteered to design rural rotations at clerkship and other rural hospital/clinic sites, such as Indian Health. During year five, medical students will partner with Family and Community Medicine residents at rural sites.

The role of advising and mentoring the Rural-PRIME students has consistently been communicated as a vital one as the planning team has developed the curriculum and kept faculty updated. In the early stages of the planning process, research from other programs across the country showed that mentoring at various levels is crucial in keeping the students focused on their studies, doing well, and passionate about going back to rural areas to practice.

Rural-PRIME students receive advising in several dimensions. In addition to traditional advising, students also attend seminars in the Office of Career Advising, approximately once per month. This makes graduate group faculty available to them, and provides the opportunity for discussion about the master's component of the program. Mentoring occurs through rural physician preceptors. This provides the students with a deeper understanding of rural practice and leadership, both through their course work and patient care experiences.

UC San Diego

The PRIME-HEq curriculum is a five-year dual degree program that offers students the flexibility to examine health equity in a particular area of interest consistent with the Healthy People 2010 goal to eliminate health disparities among all segments of the population. Medical students match their interests, backgrounds, and expertise to the scholarly pursuit of reducing disparities in health. All students participating in PRIME-HEq receive a broad-based preparation in the clinical, research, and health policy arenas. This preparation occurs through the five primary components of PRIME-HEq:

- Participation in a series of courses that address disparities in health and health equity
- Participation in community based experiences with underserved and at risk populations
- Completion of an Independent Study Project (ISP) as part of a master's degree program
- Quarterly meetings with the PRIME-HEq Director
- Debriefing with the PRIME-HEq faculty advisor as part of students' ongoing reflective practices

PRIME-HEq students may obtain a master's degree in any discipline, including, but not limited to, Public Health, Leadership of Healthcare Organizations, Bioengineering, Advanced Studies in Clinical Research, Business Administration, or Advanced Studies in Law and Medicine.

The PRIME-HEq curriculum's primary aim is to ensure that all graduates of the PRIME-HEq program have the knowledge, skills and attitudes necessary to become clinicians, researchers, and advocates fully committed to finding solutions to eliminate disparities in health care. Although developed for PRIME-HEq students, PRIME courses are open to all students enrolled in degree programs in the health sciences.

The first three courses are integrated into the preclinical years. *From Genes to Communities: Influences on Health* is a course that addresses health care equity. Using a variety of methodologies, this course examines

some of the influences on health ranging from genetic inheritance to the environment. In addition, 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 stories from people from varied backgrounds about their health.

Beyond the Bench and Bedside: Partnering with Communities provides an overview of community-based quantitative and qualitative research methods, and includes a review of selected "best practices" for community assessments and program planning. The course is designed to provide students with the knowledge and skills to partner with communities to conduct and evaluate community-based research, and design and conduct program evaluations of community programs.

Healthy Minds, Healthy Bodies: In partnership with an urban public high school, this course was developed as an outreach opportunity where PRIME students teach a longitudinal health curriculum, established to address the six urgent health topics identified in the most recent Youth Risk Behavior Survey (YBRS) 2007. PRIME-HEq students teach this curriculum monthly, and have recently added an interactive component to it. High school students visit the UCSD School of Medicine, where they have the opportunity to be a "doc-for-a day".

As a result of the new Integrated Scientific Curriculum at UCSD School of Medicine (fall 2010), students are provided with more extensive clinical experiences in the preclinical years. Their first and second year PRIME students have been specifically paired with preceptors who care for patients in underserved communities during their ambulatory preceptorships. Students in their third year of medical school are required to have a longitudinal primary care experience. PRIME students are assigned to a community-based clinic for their experience. A fourth year *Telemedicine* elective in partnership with the same high school is currently under development. Once developed, students will rotate at the school and work with the Nurse Practitioner (who staffs the clinic) under the supervision of a faculty member.

The fifth course, *Health Policy,* will occur during a period in the final year of medical school. *Health Policy* will be developed and implemented in partnership with UCSD Extension. These new courses will ensure that all graduates of PRIME-HEq have a strong foundation and the knowledge and skills necessary to be clinicians, researchers, and advocates committed to finding solutions to eliminate disparities in health care.

PRIME-HEq is continuing to expand opportunities for students to work and become engaged in the community. PRIME students continue to be involved in UCSD's three Student Run Free Clinics, mentor students in various programs, and continue to have strong collaborations with programs developed for disadvantaged students on the undergraduate campus. PRIME has recently developed a new partnership with the UCSD Center for Community Wellbeing (CCW), a multidisciplinary group whose main goal is to improve the education, health, safety, economic and social development in underserved communities of southeast San Diego. UCSD will be setting up a "field station" in this underserved community, and are in the process of defining what their role will be and further developing a sustainable project at this site.

PRIME-HEq students are very committed and dedicated to outreach programs and activities. In partnership with the Dietician Interns at the UC San Diego Medical Center, PRIME students will be leading a health fair for fourth and fifth grade students at a local elementary school located in an underserved neighborhood in March 2011.

In addition to the aforementioned community engagement activities, students have made time for scholarly endeavors. Several have embarked on a large asset-mapping project of a number of communities throughout San Diego, and many are conducting community-based participatory research.

PRIME-HEq builds on the foundation of excellence in research, clinical care, health promotion, disease prevention and health care advocacy that exists as part of the university-community partnerships between UCSD, San Diego State University School of Public Health, and the Council of Community Clinics network in San Diego. Training in community clinics reinforces culturally effective care practices and will allow PRIME-HEq students to participate in the care of underserved and at risk populations as they become skilled physician healers. Completion of independent study projects will strengthen population health and evidence-based medicine skills of PRIME-HEq students as they learn to be competent physician scholars. Exposure to health policy and advocacy will train the students to become skilled physician advocates who will be able to promote change in the health care system to improve the health status of underserved populations. These concepts will be reinforced during coursework, clinical experiences, faculty meetings, and self-reflection activities.

UC San Francisco

The PRIME-US curriculum includes a summer introduction, an experiential seminar series, community projects and service learning activities, clinical immersion, a master's degree, and a capstone experience. Longitudinal themes of leadership and community engagement incorporate evidence-based competencies and critical reflection. A strong mentorship and support program ensures personal and professional success.

Summer Orientation

PRIME-US students arrive early for a stipend-supported orientation experience that includes visiting community-based organizations, learning about underserved care, and getting to know one another. Students are asked to explore personal, professional, and program goals to facilitate peer bonding and enhance program development. They are introduced to key faculty members at UCSF and the JMP, as well as institutional resources and support services. They attend talks on health disparities and vulnerable populations, and visit a variety of community organizations in San Francisco and the East Bay. To learn about community engagement and critical reflection, students participate in a community assessment walking tour of the Mission District followed by a facilitated reflection session. At the end of orientation, the PRIME students and faculty serve lunch at a large food kitchen in the Tenderloin District to demonstrate our commitment to service learning.

Experiential Seminars

Regularly scheduled afternoon seminars provide students with a solid foundation in the principles, practices, and populations of urban underserved care. In small group settings, students meet with faculty and community members to discuss their work and careers in underserved care. Topics include at-risk youth, prison health, legal issues, public health, and more. These interactive teaching sessions are complemented by field trips to community-based organizations and institutions. Some activities are held at one of the campuses, while most are held in the community. Seminar guests are invited faculty and community experts who are encouraged to present their work in a manner that engages the students. Guests are also asked to share their career path stories, offering the students an opportunity to hear how others have pursued their goals. While most seminars are specifically for PRIME-US students, other activities are open to all interested students at UCSF and the JMP. Leadership competencies such as negotiation, public speaking, advocacy and media skills are incorporated into the seminar series.

Clinical Immersion

Clinical immersion experiences in PRIME-US provide students with a valuable opportunity to work directly with underserved communities, learn about the systems of care in a variety of settings, and meet physician role models. Their presence in these settings also creates a pipeline, providing opportunities for community clinics and public hospitals to cultivate their future workforce. The clinical component of PRIME-US includes preceptorships and clerkships rotations.

All students at UCSF and the JMP participate in preceptorships. PRIME-US students, however, are specifically placed with a physician role model in community-based clinics for the first two years of medical school. These

longitudinal placements enable students to understand the clinic structure and public health system; develop relationships with clinic staff, physicians, and patients; and learn about direct patient care in community settings. In addition to clinical goals and objectives established by UCSF and the JMP, PRIME-US has additional preceptorship goals. Students are expected to spend extra time at their preceptor sites to help fulfill the following goals:

- Work directly with urban underserved patients
- Learn about the clinic and health care system
- Explore the community
- Practice cultural/linguistic competence
- Form longitudinal relationships with patients
- Work with a role model
- Find inspiration

PRIME-US students in their clerkship year participate in the same clinical rotations as their non-PRIME peers, but have the opportunity to complete at least some of their rotations in under-served settings. Students often select placements at the local county hospital (San Francisco General Hospital) or at UCSF-Fresno hospitals, all of which offer a wealth of experiences to meet the goals of the program and interests of our students. During this year, most students also participate in a Longitudinal Continuity Experience where they can gain exposure to whatever field they want to explore in more depth, including subspecialty medicine. PRIME-US seminars are offered during the UCSF intersession curriculum and additional evening events provide an opportunity to discuss challenges of caring for underserved patients, access like-minded peer support, and obtain career mentorship.

Community Engagement Program (CEP)

Community engagement activities are incorporated into all aspects of PRIME-US. The goals of the CEP are to:

- Provide a framework for working effectively in partnership with urban underserved communities building successful and sustainable partnerships
- Develop opportunities to work with communities on short-term service learning activities and longitudinal projects
- Promote critical thinking and reflection on experiential learning activities

Student objectives are to:

- Learn ways to define community
- Learn and practice the core principles of community assessment including:
- Understand principles of cultural humility
- Understand purpose of community-campus partnerships
- Identify and apply core principles of service learning
- Understand the impact of historical and current social determinates on health disparities
- Create and reflect on a personal vision for community engagement

Community engagement is “wrapped around” all components of the PRIME-US curriculum. Seminars and site visits introduce students to community experts and leaders, providing them with an opportunity to learn directly from those working and advocating for the underserved. Preceptorships and clerkships also provide an opportunity for students to engage directly with community-based organization, health care providers, and patients. In addition to the CEP goals and objective listed above, evidence-based competencies enable students to reflect on their activities and evaluate their progress.

Master’s Degree

An extra year of graduate study is included in the PRIME-US curriculum. All JMP students complete a master’s of Science during their first three years, while UCSF students will explore a variety of master’s degree

opportunities (e.g. public health, public policy) between their third and final year. PRIME-US has worked closely with the UCSF liaison to the UC Berkeley MPH program and secured additional spots for PRIME students. This year, four PRIME-US students will complete their MPH at UC Berkeley. Students who have already completed a master's degree or equivalent experience, or students facing extreme financial hardship, can request a waiver.

Capstone Experience

During their final year of medical school, PRIME-US students are required to participate in a month long course to revisit principles, practices and populations of urban underserved care, reconnect with peers, and complete a legacy project. The course, offered in collaboration with UCSF's Health and Society Pathway, combines small group seminars, skills-building workshops, and experiential sessions. Students gain exposure to experts in academia and the local community in the areas of community engagement and advocacy, health systems, health policy, and social and behavioral science. They review concepts of quantitative, qualitative and translational research, and are provided with a variety of opportunities to develop their leadership skills. The course also provides PRIME-US students with overlap activities with some "near-peer" resident physicians who share a commitment to clinical and leadership roles in care of the under-served. At the conclusion of the course, all students make a formal presentation of their work to the group. Plans are underway for the next academic year to devote more time during this course to a community-engaged group project that students can complete together.

Mentorship and Support

A formal mentorship and support program provides participating students with support and guidance to ensure personal and professional success. Mentorship comes in the form of peer, near peer, faculty and community mentors. PRIME-US helps to facilitate and sustain these relationships, depending on the needs of the mentee. PRIME-US offers facilitated discussion sessions to address hard issues like exploring the professional identity of "doctor", navigating the culture of medicine, and coping with "-isms". Fireside chats feature a guest faculty member or community leader working with underserved populations. Guests are asked to talk with students about their career paths and experiences, both good and bad, with mentors. This provides students with an opportunity to hear about mentoring and interact with role models and potential mentors in a 'safe' environment.

Statewide Conference

UCSF hosted the Second Statewide PRIME Conference, *Building and Strengthening Community*, with a focus on diversity, health care reform, and community engagement on October 2-3, 2010. One student wrote, "The best part of the conference was being able to connect with PRIME students throughout the state. It is not often that we are all brought together to interact in a formal way. All of us left the conference with so much fire and heightened pride in this amazing program."

UC Los Angeles

While UCLA PRIME students will receive the same general four-year M.D. program instruction as the existing student body, their experience is augmented by activities and electives that will provide them with experiences to further their goals of clinical care, research, or health policy. All will develop expertise in aspects of telemedicine by having experience in a robust clinical telemedicine program. Although all students will have exposure to telemedicine, PRIME students will have greater breadth and depth than non-PRIME students.

During a three week pre-matriculation program, UCLA PRIME students are presented with an examination of traditional models of leadership, given the opportunity to identify a group project designed to help in a disadvantaged community, and serve as mentors for undergraduate students who are participants in the Summer Medical and Dental Education Program (SMDEP), a national program funded by the Robert Wood Johnson foundation.

The faculty have developed new courses and activities to supplement existing courses: Caring for the Underserved in Los Angeles, Health of the Latino Population, Medical Spanish, Salvation Army Homeless Clinic, Immersion Experience in Cross-Cultural Medicine, and Healthcare Delivery in Nontraditional Settings. New courses include:

- Tele-Health Program: Introduction to information related to basic telemedicine such as video conferencing, utilization of a "smart classroom," and technology links with community clinics or affiliated sites to increase patient access to care
- Tele-Education: This selective will increase students' experience in the planning and implementation of teleconferences from across the UCLA system of affiliates on topics relevant to health care disparities and care of the underserved
- Student Operated Homeless Clinic: Located in Riverside, this clinic is currently a volunteer activity that will be transitioned to a service-learning selective

Students participate in a Summer Immersion Experience after the first year. They have the opportunity to choose from a service-learning program, a research project with a faculty member conducting studies related to underserved populations, Spanish language and culture immersion programs, or administrative fellowships with UCLA Health Systems Leadership. All UCLA PRIME students present a poster about their experiences at the annual Short Term Training Program Scholarship Day.

During the second year, opportunities for all students to learn about health care needs of underserved communities are increased through existing weekly problem-based learning (PBL) sessions. PBL cases will be developed that emphasize issues related to underserved populations in both rural and urban settings. PRIME students will be expected to share their experiences and knowledge with other students in their groups and become the "expert" on health disparities in these sessions. Eventually, second year PRIME students will be expected to design PBL experiences for first year students.

Students have access to the clinical clerkships that are currently offered at UCLA and affiliated sites for third year students. PRIME students are required to have their clinical clerkship experiences in one of the affiliated County hospitals or the VA hospital. They are assigned to the LA County Hubert Humphrey Clinic, Inland Empire and Imperial Valley sites, or at one of the Venice Family Clinic sites. These sites are equipped with telemedicine technologies. Clinical preceptors are identified to provide longitudinal experience for PRIME students in medically underserved areas in specialties of their choice. Students have clinical opportunities during core rotations in pediatrics, psychiatry, and surgery/surgical subspecialties to work in settings where tele-imaging, tele-pathology, tele-dermatology, tele-psychiatry, and/or tele-ophthalmology are available.

Students enrolled in the PRIME program are required to obtain an advanced degree during the fourth year in which they will develop a project related to helping improve healthcare for disadvantaged/underserved Californians. This additional educational experience will prepare clinician leaders who will be advocates and activists in underserved communities. With opportunities to develop expertise in academic medicine, public health, health care disparities research, public policy, telemedicine, clinical informatics, and other related fields, PRIME graduates will be knowledgeable about various ways to influence change with regard to California's health systems. Opportunities are also be available for students to obtain work experience that will advance their knowledge and leadership skills in health policy and advocacy for medically underserved communities. Students are expected to design and implement a research project that will meet the criteria for a thesis.

In addition to the currently offered clinical electives, PRIME students have required selectives during the fifth year. Proposed selectives may include Telemedicine in Psychiatry; Clinical Informatics; joint selectives in business/medicine, public health/medicine, or law/medicine; and clinical experiences in telemedicine programs such as tele-emergency department consultation, tele-stroke, pediatric tele-psychiatry, tele-imaging, tele-

dermatology, tele-pathology, and more. Students are required to participate in Senior Scholarship Day in a special section devoted to care of vulnerable populations. Presentations and posters provide an opportunity for members of the entire medical school class to learn about the needs of the underserved and the outcomes of targeted interventions.

Prepared by:
University of California Office of the President
Health Sciences and Services

Contact information:
UCOP Budget and Capital Resources
1111 Franklin Street, 6th Flr.
Oakland, CA 94607-5220
Office website: http://budget.ucop.edu
Report website: http://budget.ucop.edu/legreports/