The Honorable Denise Moreno Ducheny
Chair, Joint Legislative Budget Committee
State Capitol, Room 5035
Sacramento, California 95814

Dear Senator Ducheny:

Pursuant to Item 6440-001-0001, Provision 14, of the 2007 Budget Act, enclosed is the University of California’s annual report to the Legislature on the UC Programs in Medical Education (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.

Sincerely,

[Signature]

Robert C. Dynes

Enclosure

cc: The Honorable Jack Scott, Chair
    Senate Budget and Fiscal Review Subcommittee #1
       (Attn: Ms. Amy Supinger)
       (Attn: Ms. Cheryl Black)
    The Honorable Julia Brownley, Chair
    Assembly Budget Subcommittee #2
       (Attn: Ms. Sara Bachez)
       (Attn: Ms. Amy Rutschow)
    Ms. Elizabeth Hill, Legislative Analyst
    Mr. Mike Genest, Director of Finance
    Mr. E. Dotson Wilson, Chief Clerk of the Assembly
    Mr. Gregory Schmidt, Secretary of the Senate
    Ms. Diane Boyer-Vine, Legislative Counsel
    Ms. Sara Swan, Department of Finance
    Mr. Steve Boilard, Legislative Analyst’s Office
    Joint Legislative Budget Committee (18)
    Provost Wyatt R. Hume
    Executive Vice President Katherine N. Lapp
    Vice President Patrick J. Lenz
    Associate Vice President Cathryn L. Nation
    Associate Vice President Debora Obley
    Interim Assistant Vice President Karen French
    Interim Associate Director Jenny Kao
UC EFFORTS TO MEET CALIFORNIA’S HEALTH WORKFORCE NEEDS

An Update on UC Programs in Medical Education
(PRIME)

Prepared by the
University of California Office of the President

April 2008
UC EFFORTS TO MEET CALIFORNIA’S HEALTH WORKFORCE NEEDS

FY 2007-08 Update on UC Programs in Medical Education
University of California Schools of Medicine

This report is submitted by the University of California in response to language contained in the 2007 Budget Act, which states:

“Of the funds appropriated in Schedule (1), $1,050,000 shall be used to support 70 full-time equivalent students in the Program in Medical Education (PRIME) at the Irvine, Davis, San Diego, and San Francisco 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, 2008, 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.”

This report provides an update on recruitment and admissions activities for the first four classes of medical students enrolled in PRIME-LC at UC Irvine and the first class of students enrolled in PRIME programs at UC Davis, UC San Diego, and UC San Francisco; a description of Summer Immersion Experiences in Cuernavaca, Mexico and the San Francisco Bay Area; 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. An overview of the PRIME programs, curricula for each campus, and plans for enrollment growth are provided in Appendices A and B.

I. IMPLEMENTATION OF THE SYSTEMWIDE 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 further shown that students who enter medical school with an interest in caring for underserved populations are more likely than other students to practice in such communities and to serve minority and uninsured patients. UC medical schools are committed to 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 Programs In Medical Education (PRIME) are innovative and specialized 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 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. Support from The California Endowment (TCE) -- a private, statewide health foundation committed to healthcare access, culturally competent health systems, community health, and the elimination of health disparities -- provided the initial resources needed to develop the program. In view of the urgency of these health needs, yet constrained by the State’s budget shortfall at the time the program was developed, TCE also provided the University $483,525 in one-time funds to assist in recruitment, admission, and teaching the first class of eight students admitted in July 2004.

State support for PRIME-LC began in July 2005 and provides essential core support for instruction as the program continues. State funding in 2005-06 supported the first class of eight students in addition to the second entering class of eleven students, to bring the 2005-06 enrollment to nineteen students. In 2006-2007, thirteen enrolled in the program and twelve additional students enrolled in 2007-08. There are forty-four total students enrolled in the PRIME-LC program. The UCI School of Medicine is currently recruiting students for 2008-09. To date, the campus has received over 125 applications for next year’s PRIME-LC class. The program will reach full enrollment in 2009-2010 with sixty students after the original class graduates.

NEW PRIME PROGRAMS

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 received a $473,000 grant from The California Endowment to assist and expedite these planning activities. The grant also included planning funds for development of a future PRIME program at the David Geffen School of Medicine at UCLA (scheduled to be launched in fall 2008). The new UCLA PRIME program will train physicians to proactively address the needs of diverse, disadvantaged communities by delivering culturally competent clinical care, providing leadership for health delivery systems, conducting research on health disparities and serving as advocates for their communities.

UC Davis

UC Davis’ Rural-PRIME program is an innovative program in medical education, 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. The students were selected because of their demonstrated interest and strongly expressed commitment to rural practice along with having significant exposure to rural communities.

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

UC San Diego

The Program in Medical Education-Health Equity (PRIME-HEq) at UC San Diego is designed to produce physician leaders with the skills, knowledge, attitudes, and behaviors that will help increase health equity and eliminate health disparities in California. PRIME students receive training in the clinical, research, and health policy arenas to prepare them to provide care to underserved populations. Other goals of the
program include increasing the number of clinicians, research scientists, and advocates working to improve minority health; creating a diverse community of scholars that develop, disseminate, and apply new knowledge about health disparities and minority health; and promoting a multidisciplinary university-community partnership to help achieve equity in health care delivery.

This year, UCSD admitted twelve medical students into the PRIME program. UCSD’s PRIME-HEq program was initiated with a more flexible structure due to uncertainty regarding the state budget, changes in the Dean’s office, and ongoing efforts to assure that unique curricular elements were well-defined and consistent with the goals of the new program. Following orientation, and over the first few weeks of the fall, seven of the twelve students admitted as part of the first PRIME HEq class requested and were approved to “opt out” of the program and to instead pursue the four-year core MD curriculum. Although UCSD was disappointed about this outcome, the Dean’s office approved the request of the students because they had not been clearly informed that accepting admission to the PRIME was separate and distinct from the core four-year program (i.e., they were not informed that they could not “change their minds”). UCSD remains committed to the success of the new PRIME-HEq program and is working actively to refine key elements of the program for the coming year. These efforts will include clear communication with students during the admissions process and upon matriculation about the conditions and expectations for enrollment in PRIME-HEq. As these efforts have evolved, and as additional information has been made available to UCSD medical students, a number of first-year students who were not initially admitted to PRIME have expressed interest in the program. The School of Medicine is working actively to assess the feasibility of transitioning some of these students to the PRIME program. UCSD anticipates that this decision will be made by late spring of 2008 and that issues and practices for the incoming class of fall 2008 will be fully resolved.

UC San Francisco

Faculty at UC San Francisco and the Joint Medical Program (JMP) administered by UC Berkeley and UCSF have been at the forefront of investigating the many factors that contribute to urban health disparities, including geographic mal-distribution of clinicians, lack of insurance, minority race-ethnicity, low socioeconomic status, limited English proficiency, and low health literacy. These issues are particularly acute in California, a state with a high proportion of the population lacking insurance, and a tremendous degree of racial and ethnic diversity. The Program in Medical Education for the Urban Underserved (PRIME-US) offers UCSF and JMP medical students the unique opportunity to pursue their interests in caring for underserved populations in urban communities. The program provides a medical education experience 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 twelve first year students. Eight students are enrolled at UCSF and four at UCB. The eight students at UCSF are in the MD program. The four UCB students began with a master’s year, not the MD year as originally anticipated. The Berkeley students will spend their second and third year in the MD track at Berkeley before moving to UCSF for two years of clinical training. In the fall, enrollment in the PRIME-US program will grow to fifteen PRIME students, with eleven at UCSF and four at Berkeley.

A. RECRUITMENT & ADMISSIONS

Recruitment

One of the most important early objectives of the PRIME program was attracting a group of applicants that met both the program’s unique criteria, and the overall requirements for admission to UC Schools of
Medicine. PRIME faculty and staff continue to build the infrastructure and expertise to support the recruitment of the best students. This includes the development and revision of informational handouts; training academic counselors and admissions staff to respond to questions related to UC PRIME programs; working with the admissions committees and staff to identify the point at which students would apply to the program; integrating the PRIME application process with the general School of Medicine secondary application process; and developing unique standards for the interview process, including the recruitment of interviewers who are fluent in Spanish and able to assess each applicant's language ability (at UCI) 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 in Northern and Southern California to introduce the program and to speak with potential applicants and advisors.

The PRIME-LC website (http://www.ucihs.uci.edu/PRIMELC/), another important recruitment tool, has also been revised and updated. The site now features student profiles and interviews that have received positive feedback from prospective PRIME-LC applicants. PRIME-US recently launched their website (http://medschool.ucsf.edu/prime/). Interested students are directed to this site for more information about the admissions process as well as helpful program FAQs. UCD also has a website (http://www.ucdmc.ucdavis.edu/medschool/rural_prime/) and UCSD is currently developing a site for PRIME-HEq.

Admissions

The admissions processes for each PRIME program are not identical but very similar. These processes are also evolving as 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 School of Medicine Admissions Committees. 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.

Applicants to the UCSF School of Medicine and JMP are recruited from the pool of students offered an interview for admission to these medical programs. Students receive information about PRIME-US in the secondary application and then again on interview day. Interested students apply within two weeks after their interview. The application process involves a separate essay and two phone interviews. The first interview is conducted by a PRIME-US student, and the second by a PRIME-US faculty member. Interview guides were developed to elicit information on experience with undeserved communities, commitment to working with the underserved, leadership skills, career intentions, and interest in the program. Applicants are then reviewed by the PRIME-US Selection Committee, composed of both students and faculty.

Although most programs are only in their first year, interest in PRIME programs continues to grow and exceed program capacity. For example, UCSF receives over four times the number of applications as they have available positions. Approximately 500 of the 4,500 applicants to the UCI School of Medicine are selected to be interviewed, with only five percent of those invited to be interviewed ultimately offered admission to the PRIME-LC program. As the program expands, the demand is expected to increase significantly.
B. SUMMER IMMERSION EXPERIENCE

Cuernavaca, Mexico (UCI)

The five-week summer program in Mexico occurs during the summer before the students begin medical school to allow the PRIME-LC students to bond as a group before being introduced to the rest of the medical school class. This experience provides students with the opportunity to network with one another and to support each other while traveling abroad. The primary educational aim is to expose them to the health care system in Mexico and the culture, language, and environments from which many of their future patients originate.

Throughout the summer, students rotate through primary care clinics and attend courses in Conversational Spanish, Medical Spanish and History, Geography and Culture of Latin America at the Language Institute. Clinical preceptors from Servicios de Salud Morelos supervise and train students for a minimum of 10 hours per week. The objectives of the clinical internships include (1) exposure to the largest Mexican health system serving uninsured patients, and (2) taking medical histories in Spanish under the supervision of a senior faculty clinician. Students also visit a medicinal plant open market and botanical garden, and participate in presentations given by traditional/alternative medicine healers. Students live with Mexican families identified by Universidad Internacional Center for Multicultural Studies (UNINTER). The home stays are intended to increase the students’ practice of conversational Spanish and give them further opportunities to learn about Mexican culture on a more informal basis.

The 2007 summer immersion included the Summer Institute on Migration and Health in Puebla, Mexico. This one-week course was a binational effort between the Health Initiative of the Americas (formerly known as the California-Mexico Health Initiative), a program administered by the University of California Office of the President, and the School of Medicine of the Benemérita Universidad Autónoma de Puebla (BUAP). The course objective was to provide participants with multidisciplinary instruction using theoretical, methodological, and practical tools to better understand the complexities of health in the context of cross-border and international migration, specifically between Mexico and the United States. The ultimate goal of the summer institute was to identify appropriate and effective strategies for health professionals to better address health issues in transient and immigrant populations.

Upon their return from the summer program, all students meet with faculty in a debriefing session to determine the extent to which the overall objectives were accomplished. Their feedback has led to the integration of the summer curriculum in Mexico with the second and third-year social sciences graduate curriculum. The evaluation session for the summer program is an important component of overall program evaluation, which is held for each class upon their return to UCI. 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.

San Francisco Bay Area (UCSF)

PRIME-US students arrive early for a stipend-supported immersion experience that includes: visiting community-based organizations; meeting clinicians and patients; learning about UCSF and UCB resources and support services; becoming familiar with the Bay Area; and getting to know one another. The UCSF students spend two weeks together, while the JMP students only participate in the first week of activities due to differing academic schedules.
Students are asked to explore their personal, professional, and program goals to facilitate student bonding and to enhance program development. They are also introduced to key faculty members at UCSF and at the JMP. They hear lectures that provide them with a foundation for learning about health disparities and caring for the underserved, and visit a variety of community organizations in San Francisco and East Bay cities.

During the second week, San Francisco students are encouraged to start actively exploring underserved communities that they will serve, both in clinical placements as well as during community-based activities. Issues related to homelessness are used as a framework for the week, providing students with an experience on a mobile van providing care to homeless individuals in San Francisco. PRIME students also participate in Project Homeless Connect, a quarterly event in San Francisco that brings homeless providers and resources together to provide direct care and advocacy.

C. PRIME CURRICULA

The UC system is growing and changing through the creation of new Programs in Medical Education (PRIME) that will increase total medical student enrollment in new and unprecedented ways. Individually and collectively, these programs will begin as structured, five-year (MD and masters degree) programs that will 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 that face insufficient access to health services and disproportionate disease burdens. Detailed descriptions of the curricula, by campus, are provided in Appendix A.

D. PROGRAM EVALUATION

Each program has developed comprehensive 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 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 or enhanced structure and functions.

Other formal activities outside of committee structures provide further input and evaluation of PRIME programs. Medical school faculty and staff meet with their PRIME students to discuss their training experiences and to gain their perspective about what has worked and what needs improvement. For example, following the UCI summer experience in Mexico, students and program planners participate in an in-depth debriefing about their experiences. Faculty and staff discuss information gathered from these and other evaluation activities to determine the extent to which changes may be needed.

Participating UC medical schools are currently working to develop a system-wide PRIME evaluation. A system wide approach will enable each campus to develop both a shared and program-specific evaluation plan that will yield results that will 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.

E. OUTCOMES

The development and implementation of the PRIME-LC program at the UCI School of Medicine has thus far been a remarkable success. Successful implementation of the new PRIME programs are expected as
well. While the program's overall impact will require many years to fully evaluate, important gains that will have positive implications for health care in California have already been achieved. Significant changes have taken place across different departments at UC Schools of Medicine, the broader UC campuses, and their surrounding communities. The most notable changes have involved medical student recruitment, the admissions processes, and active interaction and integration between PRIME and the rest of the University's medical school classes. PRIME represents the first significant increase in medical school enrollment within the UC system in nearly three decades. This unique program reflects rare 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 Schools of Medicine**

The PRIME initiative continues to have a positive impact on medical school classes throughout the UC system. This is 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 at UCI. At UCD, the focus on rural health issues has attracted significant interest from the general medical school class, with students outside the program attending Rural-PRIME seminars, and asking about opportunities to gain clinical experience in rural settings. The importance of such a program is that it will not be limited to graduating physicians from PRIME programs each year, but will produce entire classes of physicians with greater awareness of the barriers to healthcare access and a greater desire to participate in the solution.

**UC Admissions Committees**

The Admissions Committees' increased awareness of the need to attract individuals with a demonstrated commitment to serving underserved populations has and continues to evolve and has proven to be a real benefit to the recruitment and admissions process for the PRIME program. It is not uncommon during a review of applicants to find a faculty member approach the Dean of Admissions and point out an applicant as being a “perfect fit for the PRIME program.” This has helped identify applicants who otherwise might have been overlooked.

**Community Partners**

The development and implementation of the PRIME program has also facilitated and enhanced university--community partnerships throughout the state. Through collaborative efforts, the programs are able to remain "in-tune" with community perceptions and perceived attitudes and needs while increasing opportunities to enhance the experiences of UC medical students.

**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 and San Francisco have each implemented new PRIME programs. In addition, the David Geffen School of Medicine at UC Los Angeles is currently engaged in a parallel planning process assessing the core UCLA medical student program and the two existing joint medical education programs that are operated in conjunction with UC Riverside and the Charles R. Drew University of Medicine and Science.

As currently envisioned, and pending customary, programmatic and budgetary approval, total planned enrollment growth for new PRIME programs is expected to result in an enrollment increase nearly equivalent to that of a small new medical school, with a collection of specialized programs uniquely
developed to meet the health needs of California's medically underserved. Ultimately, new UC PRIME programs are planning to enroll a total of approximately 60 to 80 students per campus (i.e., across the five-year curriculum), or the equivalent of a total increase of well over 300 new medical students system wide. See Appendix B for more details. By approaching these enrollment increases through the creation of new programs, the UC health sciences system is aiming to help improve health outcomes across California.

At the national level, interest in the structure and goals of UC PRIME programs continues to grow within the medical education community. In April 2007, the UC Office of the President and each of the five medical school campuses were invited to make a presentation about UC PRIME programs at the Regional Conference of the Western Group on Educational Affairs. This meeting traditionally showcases innovation in medical education, with the UC system being invited to present based upon the growing national interest in the new programs and the planning undertaken within the UC system over the past several years. UC has also made similar presentations at the 2007 national meeting of the Association of American Medical Colleges. In view of this strong interest, UC was invited to submit a major paper for publication and distribution to the national medical education community. Entitled “Preparing for Change: The Plan, the Promise and the Parachute,” this manuscript was published December 2007 in Academic Medicine, the Journal of the Association of American Medical Colleges. A copy of the article is included in Appendix C.

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

The core support for sustaining the undergraduate medical education or MD program is from State funds and student fee funds. The 2007-08 budgeted sources of funds for the PRIME program are presented in Table 1, and the projected expenditures in Table 2. In addition, the costs of clinical training traditionally have been supplemented by physician and other professional fee income and by revenues generated by the UC medical centers.

**Sources of Funds**

State support is provided at the MD marginal cost of instruction for four years of medical school training and at the general campus graduate academic marginal cost of instruction for a fifth masters year.

For 2007-08, the State provided a total General Fund increase of $1,056,956 including $972,268 for 38 MD students and $84,688 for 8 master's students. The increase in support is for adding a third year to the existing program at Irvine (PRogram In Medical Education — for the Latino Community or PRIME- LC), and to support the first year class for the three new PRIME programs at Davis, San Diego and San Francisco-Berkeley. The 38 additional MD students are distributed as follows: 4 additional MD students at Irvine; 12 at Davis; 12 at San Diego, and 10 for the UCSF-Berkeley program (6 at SF and 4 at Berkeley). Support also was provided at the marginal cost of instruction for 8 master's students at Irvine.

The Berkeley portion of the MD program includes a year of master's level training and two years in an MD track. Since the first year of the other PRIME programs is an MD year, it was assumed the Berkeley program would follow suit. Therefore, the 2007-08 budget funded the first year Berkeley students as MD students. In fact, the first year at Berkeley is a master's level, and the second and third years are the MD training years. Thus, the first year at Berkeley should have been funded at the general campus marginal cost rate, rather than the richer rate provided for MD students. The additional funding received for the first year for these students will be acknowledged and reflected in future requests so that overall funding will be evened out over time. Overall funding for the three years of the Berkeley PRIME program at maturity will consist of the first year funded at the general campus marginal cost of instruction for the master's year and two subsequent years at the MD marginal cost of instruction.
The $972,268 for the 38 MD students consists of:

- $402,258 based on the marginal cost of instruction per student provided by the State for all students; and
- $570,000 for the supplement related to the higher costs of medical education, which are currently funded with an additional supplement of $15,000 per student.

Support for eight master’s students will be provided at the marginal cost of instruction or $10,586 for a total of $84,688. With the previous funding provided for 32 students in the Irvine PRIME-LC, total 2007-08 State General Fund support for the PRIME programs is $1.8 million.

All UC students pay mandatory systemwide student fees (Educational and Registrations Fees). Revenue from these fees is used to help support educational costs, including in the medical schools. With the previous Educational Fee revenue associated with the 32 students at Irvine, the total Educational Fee revenue for PRIME in 2007-08 is $258,495.

The Professional Fee, which is mandatory for selected professional students including MD students, also is used to support instruction-related costs, student financial aid, and student services programs in the professional schools. Professional school fees were charged to first-time students in Fall 1990 and became a permanent charge for all subsequent classes in medicine. UC resident fees for health sciences students have increased significantly, and the University is concerned about the impact of the fee increases on efforts to ensure that professional school enrollments, including those in the health sciences, are more representative of the diversity of the State's population as well as the impact high fees may have on graduates' ability to work in medically underserved areas of the State. Health sciences instructional programs are high cost programs and while the State provides an additional contribution to help support these programs, the revenues from professional school fees also are increasingly important. With the previous Professional fee revenue associated with the 32 students at Irvine, the total Professional fee revenue for the PRIME instructional program (after a one-third return to aid) is $643,566 in 2007-08.

Table 1
2007-08 Budgeted Funds- All Sources

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>2006-07 Total (32 MD Students)</th>
<th>Increase (38 MD and 8 Master's Students)</th>
<th>2007-08 Total (70 MD and 8 Master's Students)</th>
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<tr>
<td>State General Funds</td>
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<tr>
<td>Marginal Cost of Instruction</td>
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<td>$486,956</td>
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<td>Medical School Supplement</td>
<td>480,000</td>
<td>570,000</td>
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<td>Subtotal</td>
<td>751,556</td>
<td>1,056,956</td>
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<td>Educational Fee funds (Less Return to Aid)</td>
<td>105,164</td>
<td>153,331</td>
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<td>Professional Fee Funds (Less Return to Aid)</td>
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<td>Total</td>
<td>$1,181,264</td>
<td>$1,529,309</td>
<td>$2,710,573</td>
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*Additional detail, by campus, is provided in Appendix D.*
Uses of Funds

To operate the instructional program, the health science schools 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 science 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. These percentages will vary for new and small instructional programs at least initially, as is the case for PRIME. Projected expenditures for 2007-08 are presented in Table 2.

Table 2
2007-08 Estimated Expenditures

<table>
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<th>Category</th>
<th>Total</th>
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<tr>
<td>Faculty Salaries</td>
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<tr>
<td>Instructional Support Staff</td>
<td>694,847</td>
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<tr>
<td>Benefits</td>
<td>247,696</td>
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<tr>
<td>Other Instructional Support</td>
<td>418,478</td>
</tr>
<tr>
<td><strong>Total (Excluding Student Aid)</strong></td>
<td><strong>$2,710,573</strong></td>
</tr>
</tbody>
</table>

*Additional detail, by campus, is provided in Appendix D.

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. Aid is offered to ensure that student debt level upon graduation will not deter students committed to working in medically underserved areas of the State after graduation.

As apparent from the discussion in the first section of this report, PRIME is a program whose success begins before medical school with the careful selection of students who are deemed likely to meet its goals. The success of the program is contingent upon student choices after graduation and on into practice. Meeting the goals of PRIME therefore requires effort and planning that is beyond the traditional medical student curriculum and that is thus beyond that which is covered by core state support. The California Endowment provided essential support for initial recruitment efforts.
III. APPENDICES

A. Overview of PRograms In Medical Education (PRIME) and Details of the PRIME Curricula, by campus

B. PRIME Enrollment Growth, by campus

C. Academic Medicine article: “Preparing for Change: The Plan, the Promise and the Parachute” (December 2007)

D. Additional Detail on the Sources of Budgeted Funds for the PRIME Programs, by campus
APPENDIX A

Overview of PRogram In Medical Education (PRIME)

Details of the PRIME Curricula, by campus
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 teaching programs, current health disparities will persist and likely intensify in the years ahead as the state is facing a projected 15.9% shortfall of physicians (i.e., almost 17,000) 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 nearly 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 curriculum designed to prepare future practitioners to address disparities that exist in the provision of health care throughout the state, improving the quality of healthcare available for all Californians. The special training ranges from enhancing cultural sensitivities to the use of technology to overcome geographic barriers to quality care.

The PRIME-Latino Community program at the Irvine campus is the first of several new medical student education programs specifically developed to address the health needs and disparities of California’s underserved groups and communities. The University added three additional programs at Davis, San Diego, and San Francisco-Berkeley, focusing on the special needs of urban and rural communities for 2007-08. A fourth program at UCLA in cooperation with Riverside and Drew University will be added in the Fall of 2008. All five of the PRIME programs will include a component for improved training and delivery of care through expanded use of telemedicine.
APPENDIX A (Continued): Details of the PRIME Curricula, by campus

UC Irvine
Planning and developing the PRIME-LC curriculum required a wide range of expertise, both within and outside of the medical school. The 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.

The PRIME-LC curriculum is comprised of six components:

- The unchanged 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.
- Courses related to the graduate degree portion of the program. To date, most PRIME-LC students have declared interest in the Master of Public Health, Master of Public Policy, and Master of Business Administration (with special emphasis in not-for-profit) degrees.
- Electives focusing on the PRIME-LC objectives are continuously being developed. Students have already taken advantage of some of these opportunities. Practical experiences working with California legislators, grass roots 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. Reading material is assigned in conjunction with these discussions—one of the books extensively used is La Nueva California by Dr. David Hayes-Bautista. 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 Cuernavaca 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.

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 will receive an MD and will also complete a masters in year four of the five-year curriculum, in Public Health, Health Informatics, or a related healthcare subject area. The primary difference for Rural-PRIME is that the course content of the general curriculum 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 masters 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

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.

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 will focus on advanced clinical skills, epidemiology, ethics and problem-based assessment. Rural-PRIME students will also focus on population-based health, be exposed to rural inpatient practice, and continue to use telecommunication technology as a clinical and educational tool. Second year Rural-PRIME students will be introduced to UC Davis’ simulation center (the Center for Virtual Care) and the Telemedicine Learning Center to increase their exposure to the diagnosis and treatment of clinical conditions that are prevalent in rural areas.

Third year Rural-PRIME students follow the same clerkship rotations as traditional students, but will receive a portion of their training in rural clinical settings. Rural hospitals and clinics are being invited to participate in a rigorous selection process, to become one of eight rural centers of excellence. These sites have an outstanding record of clinical care, service to the community, high quality physician teachers, and serve
rural, underserved patients. UCD School of Medicine faculty members have approved two months in rural areas, and with proper site development, additional months will be proposed. During their rural infield experiences, Rural-PRIME students will participate in clinical teams working alongside other health professionals, clinical staff and community leaders, learning to work in a team as a patient advocate and health policy leader.

The School of Medicine at UC Davis recently relocated to a 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 the 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 will be engaged in the pursuit of a masters degree in Public Health, Health Informatics, or a healthcare related subject area. Year five will be a clinical year during which Rural-PRIME students will gain additional rural practice experience. 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 masters 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 masters degree program
- Quarterly meetings with PRIME-HEq faculty advisor
- Debrief with PRIME-HEq faculty advisor as part of students’ ongoing reflective practices
PRIME-HEq students may obtain a masters 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 & Medicine.

In 2007-2008, UCSD faculty developed and conducted two of the three new courses required for all PRIME-HEq students. *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.

The first two courses are integrated into the preclinical years, while the third 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 three 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. In addition, these three courses will be available as elective courses to all students enrolled in degree programs in the health sciences.

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 ISP’s will strengthen the 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 core PRIME-US curriculum includes a seminar series, clinical immersion, and community engagement activities.

**Core Seminar Series**

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 health disparities, community assessment, homelessness, immigrant health, and more. These interactive teaching sessions are complemented by field trips to community-based organizations and institutions. For example,
after attending a seminar on health care in the prison system, students travel to San Quentin Prison to meet with clinicians and peer educators.

PRIME-US combines informal seminars with evening events and field trips. Some activities are held at San Francisco General Hospital or at the JMP, while others 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, evening events and other optional activities are open to all interested students at UCSF and the JMP.

In the second year, seminars continue to focus on topics related to underserved care, with input from the students about which topics they wish to cover. This year, several students were particularly interested in mental health issues, so a seminar on Mental Health in Underserved Populations as well as opportunities to visit mental health facilities in San Francisco was integrated. As students progress in their training, the focus of the seminars will transition from general topic issues into a more skills-based curriculum (e.g. leadership training).

Clinical Immersion

The clinical component of PRIME-US includes preceptorships, clerkship rotations, and an elective in the final year.

All students at UCSF and the JMP participate in preceptorships. PRIME-US students, however, are specifically placed in community-based clinics to learn about direct patient care in community settings. Longitudinal placements enable students to understand the clinic structure and public health system, and to develop relationships with clinic staff, physicians, and patients.

In addition to clinical goals and objectives established by UCSF and the JMP, PRIME-US preceptorship goals include:

- Practice clinical skills in an urban underserved setting
- Develop long-term relationships with patients
- Learn about the community served by the clinic
- Practice linguistic and cultural sensitivity
- Work directly with clinician role models and mentors
- Understand the role of other providers and staff at the clinic
- Learn about community-based health centers and the role they play in the health and health care of underserved populations
- Find inspiration

During their clerkship years, students will rotate through the UCSF hospitals and UCSF affiliated hospitals and clinics. Instead of developing a separate clerkship model for PRIME students, they are encouraged to enroll in current models to explore underserved medicine in a variety of settings.

In their fifth and final clinical year, PRIME-US will offer participating students and their interested peers the opportunity to participate in an urban underserved medicine elective. This elective will be developed to maximize student time spent in community-based clinics and organizations, encourage multidisciplinary collaboration (nursing, dentistry and pharmacy), and enable students to explore potential career paths. For example, students interested in caring for inner-city African American youth will have the opportunity to
perform clinical work at Southeast Health Center, a community clinic in Bayview/Hunters Point, a poor and predominantly African American neighborhood. At the clinic, the students will work with physicians, nurses, and social workers as well as on-site dentists. They will also be introduced to neighborhood resources, including teen advocacy groups, resource centers, violence prevention programs, and schools in order to gain a better understanding of the community outside of the health center. Students will be expected to create a legacy project, such as developing a culturally appropriate violence screening form or teaching a health education class to students in an after-school program. This type of elective experience will offer a unique opportunity to students interested in pursuing careers in underserved medicine the opportunity to work in urban underserved settings (clinics, hospital settings and community centers) and obtain additional faculty involvement, mentoring and inspiration.

Community Engagement Program (CEP)

Community engagement activities are incorporated into all aspects of PRIME-US, from the core seminar series and independent project/activity time to the masters degree and fifth year curriculum.

The two major goals of the CEP are to provide students with 1) a framework for working effectively with urban underserved communities to build successful and sustainable partnerships, and 2) opportunities to work directly with communities on longitudinal projects (including research) and service learning activities.

In collaboration with the UCSF Community Partnership Resource Center (CPRC), community engagement principles are incorporated into the core seminar series where students learn a framework for building community partnerships. Students then apply these principles by developing specific projects or participating in long-term service learning activities with community partners. As with preceptors and partner clinics, the program’s goal is to ‘give back’ to community partners. In order to ensure that PRIME students are not a burden, UCSF acquired funding from The California Wellness Foundation to provide small grants to students to cover project/activity expenses.

A formal mentorship program has been developed to provide participating students with social and academic guidance to ensure personal, professional, and academic success. Students are assigned both peer and faculty mentors, and are offered additional opportunities to meet informal mentors and role models.

Every PRIME-US student is paired with a faculty mentor who is actively involved in teaching, clinical care, and/or research related to the care of the urban underserved. Faculty mentors are based at several of the clinical and teaching sites within UCSF and practice in a variety of specialties. Students meet with their faculty mentor on a quarterly basis throughout the year for support and guidance. Mentors provide guidance on questions related to their mentee’s career path, work/life balance, and personal and professional growth. Although faculty mentors are assigned to ensure early and strong support, students are encouraged to find other mentors as needed. Seminar guests, preceptors, and other faculty advisors provide an easily accessible pool of informal mentors.
APPENDIX B

PRIME Enrollment Growth, by campus
APPENDIX B: PRIME Enrollment Growth, by campus

Over a nine-year period, as shown in Tables A (non-cumulative) and B (cumulative growth), the PRIME programs will expand MD enrollments by about 10%, or by 276 students, and add 69 master's degree students.

UNIVERSITY OF CALIFORNIA

Table A

PRogram in Medical Education (PRIME) Enrollment Growth 2005-06 to 2012-13

<table>
<thead>
<tr>
<th>Program (Campus)</th>
<th>Budgeted</th>
<th>Proposed</th>
<th>Total 9-Year</th>
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<td>PRIME-Health Equity (San Diego)</td>
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4/7/08

*The Berkeley program begins with the master's year, not an MD year as originally anticipated.

Source: UCOP.
APPENDIX B: PRIME Enrollment Growth, by campus (continued)

UNIVERSITY OF CALIFORNIA

Table B
PRograms in Medical Education (PRIME) Enrollment Growth 2005-06 to 2012-13

Cumulative by Year

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4/7/08

*The Berkeley program begins with the master's year, not an MD year as originally anticipated.

Source: UCOP.
APPENDIX C

*Academic Medicine* article:
“Preparing for Change: The Plan, the Promise and the Parachute” (December 2007)
Preparing for Change: The Plan, the Promise, and the Parachute
Cathryn L. Nation, MD, Andrea Gerstenberger, ScD, and Dena Bullard, MHS

Abstract
The University of California’s (UC’s) medical education programs are on the brink of change. In January 2007, the UC system completed a multiyear health sciences planning effort that is the most comprehensive undertaken in decades. For medical student education, the plan calls for an approximately one-third increase in enrollment across the system—from approximately 650 current medical school graduates per year to a projected 920 graduates annually by the year 2020. During the same period, California’s population is expected to increase in size and diversity in ways unmatched by any other state in the nation.

The plan calls for development of new programs that will increase enrollment in unique and unprecedented ways. The first phase of this growth is under way and is planned to continue through a series of programs that seek to address the needs of California’s medically underserved communities. Areas of focus include rural health and telemedicine (Davis); the Spanish-speaking Latino community (Irvine); diverse, disadvantaged communities (Los Angeles); health disparities and health equity (San Diego); and the urban underserved (San Francisco and Berkeley). In November 2006, UC medical schools received $200 million in bond funding to support this growth and to create new telemedicine programs to increase access to services provided by faculty physicians. In the coming years, UC medical schools will face demographic and budgetary challenges that will require perseverance, creativity, and certain leaps of faith. Public expectations are high.


Editor’s Note: A Commentary on this article appears on page 1121 of this issue.

The University of California (UC) health sciences system is on the brink of change and is preparing to make a leap of faith. For the past several years, UC medical schools have worked with one another and together with the university’s system-wide office of the president to plan for the future. In January 2007, the UC system completed a multiyear health sciences planning effort that is the most comprehensive undertaken by the system in decades. The recommendations resulting from this effort are contained in a recent report, A Compelling Case for Growth: Special Report of the Advisory Council on Future Growth in the Health Professions. This report builds on an in-depth review of California’s health workforce needs, and it provides a strong rationale for growth in UC’s medical education programs and in four other health professions (nursing, pharmacy, public health, and veterinary medicine).

For medical education, the report’s recommendations are based on several considerations, including awareness that California’s existing shortages of physicians are likely to increase in future years, belief that educational opportunities for California students are not sufficient for meeting future needs, recognition of the responsibilities of UC campuses for providing access to public higher education in medicine (delegated in state law exclusively to UC), and consideration of the interests of UC’s medical school chancellors, deans, and faculty. In view of these and other findings, the new plan recommends substantial enrollment growth at each of UC’s five medical schools for the first time in nearly 30 years. The plan also contains advice about how growth should occur:

In recommending substantial growth in five professions, the Council urges that these new expansions be viewed as opportunities for innovation. New educational models involving interdisciplinary training and team-based approaches to patient care should be developed. . . . Efforts to significantly increase the diversity of all UC health professions faculty and students should be vigorously pursued. . . . Innovative approaches to teaching, including telemedicine, distance learning, and use of new technologies should be utilized and supported. . . . In identifying priorities for growth, campuses should demonstrate that each adds new value for students, the people of California, and the professions themselves.

About California: Considerations for Medical Education
The people. California is the most populous state in the nation, with one in eight Americans living here. The population currently totals 37 million and is expected to grow at a rate that is twice the national average, to an estimated 42 million by 2020. Future growth will occur across the state and will vary enormously by region, from an estimated 10% increase in Los Angeles County to an approximate 40% increase in the Inland Empire (i.e., Riverside and San Bernardino counties).

California is racially, ethnically, and culturally diverse. One in four Californians was born outside the United States—more than twice the national average of 1 in 10. Currently, the majority of Californians are non-Latino whites, yet by 2015 approximately 57% will be nonwhite. Of that group, 37% will be of
Latinos, and 113% higher among Latinos than among Caucasians. Latina women have the highest risk of any group for developing cervical cancer, accounting for one third of all invasive cervical cancers diagnosed each year. Compared with non-Latino Caucasians, Latinos have higher age-adjusted years of potential life lost before age 75 from stroke, chronic liver disease and cirrhosis, diabetes, HIV, and homicide; African American women have significantly higher rates of colon/rectal, pancreatic, and stomach cancers.

Studies show that racial and ethnic minorities generally receive lower-quality health care and less intensive diagnostic services than do Caucasian patients, even when their income, insurance, and medical conditions are similar. To improve the overall health of the state, and to improve outcomes for underserved groups in particular, California’s health providers must acquire better understanding of the nature and causes of health disparities, and better understanding of the cultural and socioeconomic factors, health practices, and environmental risks that affect health outcomes. To acquire these skills, new strategies and educational programs are needed.

The overall picture. In urban and rural settings, equitable access to quality health services remains an elusive goal. Long-standing disparities in health status and inadequate access to care affect millions of Californians. These realities stem from multiple causes, including geographic maldistribution of health professionals, lack of health insurance, low socioeconomic status, limited English proficiency, and low health literacy. To improve the overall health of the state, and to improve outcomes for underserved groups in particular, California’s health providers must acquire better understanding of the nature and causes of health disparities, and better understanding of the cultural and socioeconomic factors, health practices, and environmental risks that affect health outcomes. To acquire these skills, new strategies and educational programs are needed.

The UC health sciences system. UC operates the largest health sciences instructional program in the nation, annually enrolling more than 13,000 students in 15 schools on seven health sciences campuses. In medicine, this includes more than 2,600 medical students and 4,400 residents and fellows in the full array of medical and surgical specialties and subspecialties. Within the 10-campus system, UC operates five schools of medicine located on the Davis, Irvine, Los Angeles, San Diego, and San Francisco campuses, and four smaller medical education programs in Berkeley, Fresno, Riverside, and at the Charles R. Drew University of Medicine and Science. Together, these programs enroll approximately half of all California medical students, with the remaining half enrolled in three private allopathic medical schools (Loma Linda University School of Medicine, Stanford University School of Medicine, and the Keck School of Medicine at the University of Southern California) and two osteopathic medical schools (Touro University College of Osteopathic Medicine and Western University of Health Sciences College of Osteopathic Medicine).

The Plan

Persuaded by evidence that the California population will continue to grow, age, and increase in diversity, and aware that shortages of physicians and other health professionals already exist, UC faculty, clinicians, administrators, and policy makers, including the present authors, worked across campus, professional, and administrative lines and conferred with deans, chancellors, faculty colleagues, and others. Together, we crafted a new health sciences enrollment plan that calls for growth in medical education and four other health professions (nursing, pharmacy, public health, and veterinary medicine) across eight campuses, through the year 2020. Each step of this growth will be contingent on adequate state and nonstate financial support for meeting teaching and capital needs. Development of the campus-specific, profession-specific, and system-wide plans took place during a four-year period. This work involved significant effort by the university’s long-standing, system-wide health sciences committee, a subsequent special advisory council appointed by the UC president, and a series of smaller subcommittees organized for various purposes. Beginning with a series of workforce studies, and followed by discussions with leaders on UC campuses, new enrollment plans were drafted and finalized. Once complete, the overall system-wide plan was presented to, and endorsed by, the university’s board of regents in November 2006. The university’s office of health affairs was responsible for leading and organizing this major initiative.

Quantitatively. For medical student education, the plan calls for an approximately one-third increase in enrollments across the system between 2005–2006 (the base year for the plan) and 2020. This is equivalent to an increase from UC’s current 2,564

1140
medical students to approximately 3,429 students by 2020. If achieved, this would translate, for workforce purposes, from approximately 650 current UC graduates per year to about 920 graduates annually (an increase of 270) by the year 2020. During the same period, California’s population is expected to grow by 5 million people, and increasing numbers of practicing physicians and medical school faculty will retire.

Programmatically. The first phase of growth for all UC medical schools will occur through the development of new Programs in Medical Education (PRIME). Individually and collectively, these programs seek to address the needs of California’s underserved populations in both rural communities and urban areas. Each program has (or will have) an area of focus that is selected on the basis of faculty expertise, the populations served by each school and its medical center, and other local considerations. Each is developing new guidelines for admission and recruitment of students, and a new curriculum to prepare students as future leaders, clinicians, and advocates for the communities they will serve. Although each campus will design and implement individualized evaluation programs, all are also working together to develop a comprehensive, system-wide evaluation plan for PRIME. Additional growth beyond the PRIME programs is planned for later years.

The Promise
As described earlier, over the past several years, we have worked together to develop the new multiyear plan that addresses the needs of our campuses, our students, and the public. The university’s long-standing, system-wide health sciences committee, a special advisory council appointed by the president, and leaders within the UC office of the president staff embarked on these efforts mindful of the Institute of Medicine’s work documenting existing health disparities and its recommendations for new and innovative educational programs to ensure that physicians are better prepared to work with increasingly diverse populations.\textsuperscript{11,12} We reviewed accreditation standards that emphasize curricular changes to ensure that physicians understand the importance of socioeconomic factors and cultural competence in clinical practice.\textsuperscript{13} We also reviewed reports from the Sullivan Commission on Diversity in the Health Care Workforce and other groups that call for new efforts to increase the diversity of the medical workforce.\textsuperscript{14,15}

Nowhere in the United States could these reports and recommendations be more relevant for medical education and the delivery of health services than in California. In viewing medical education as a public good, we carefully considered the needs of the state and the public that we help to serve. We endorsed the need to create new teaching models, and we agreed to jointly explore new roles for technology, both regionally and across the UC system. In preparing for change, we understood that the future is not certain, and we promised to go forward.

New PRIME programs
The UC medical education system is growing and changing through the creation of new programs that will increase medical student enrollment in new and unprecedented ways. UC’s PRIME programs will begin as five-year (MD and master’s degree) programs offering specialized education, training, and support for students who wish to acquire added skill and expertise as they pursue careers caring for people who suffer disproportionate disease burdens.

Focusing on the growing needs of California’s Latino communities, UC Irvine launched the first UC PRIME program in 2004 and admitted their fourth class of 12 students in July 2007. Three other UC schools (Davis, San Diego, and San Francisco) and the UCSF–UC Berkeley Joint Medical Education Program (JMP) have received campus and system-wide approvals for their programs and are preparing to admit their first classes in fall 2007. These programs, described more fully below, will focus on rural health and telemedicine (Davis), the urban underserved (San Francisco and the UC San Francisco–UC Berkeley JMP), and health equity (San Diego). In 2008, UC Los Angeles intends to launch its PRIME program, with planning now underway in coordination with their long-standing partners, UC Riverside and the Charles R. Drew University of Medicine and Science (Drew).

The Latino community (UC Irvine). In the summer of 2004, UC Irvine started its new Program in Medical Education for the Latino Community, referred to as PRIME-LC. The first in the PRIME series, this program is the product of an intensive, multiyear planning effort at the UC Irvine School of Medicine and the UC Office of the President. Funding to support planning and start-up costs of the program was provided through a generous grant from The California Endowment, a private, nonprofit foundation dedicated to improving access to care in California. PRIME-LC expands the traditional curriculum to a five-year program with a dedicated focus on Latino health issues and additional graduate work in environmental health, science, and policy.

Eight students were admitted to the inaugural class in 2004, 11 students were admitted in 2005, and 12 were admitted in 2006 (see Table 1 for a student profile). All students admitted to the program have a record of prior service and commitment to the Latino community and a minimal fluency in speaking Spanish. The program begins with a summer immersion experience in Mexico that provides further instruction in Spanish (including medical Spanish), supervised interaction with Spanish-speaking patients and health care personnel, and additional instruction about Latino cultures. The program continues at Irvine with newly developed didactic sessions and structured clinical experiences in settings serving predominantly Spanish-speaking patients. PRIME-LC requires that all students complete requirements for a master’s degree in one of several areas requiring further study and research relevant to Latino health needs. At full enrollment, PRIME-LC will have 60 students (12 per year). (For a more in-depth description of this program, see the article by Manetta and colleagues in this issue.)

Rural health and telemedicine (UC Davis). With teaching facilities in Davis and Sacramento, the medical school and its medical center have a long history and record of commitment to meeting the health and health workforce needs of the rural north and northeastern parts of California. The UC Davis Medical Center (UCDMC) serves as the principal tertiary care referral center for 33 counties and is the region’s leading provider of health care to poor and uninsured populations.
† Deferred from 2005.

* PRIME-LC (Programs in Medical Education–Latino Community) is the first of the PRIME programs being carried out or planned by the University of California medical education system. PRIME-LC began in 2004, continues to attract highly qualified, diverse medical students to the program, and has garnered state and national recognition as an exceptionally innovative and rigorous educational model. Each student is selected because of his or her academic achievement and demonstrated commitment to working with underserved Latino communities.

† Deferred from 2005.

Davis has a nationally recognized program in telemedicine that enables the campus to link rural primary care clinics to specialty clinics at UCDMC to provide telemedicine services and training to rural and urban organizations throughout California. The campus has also developed strong ties to underserved communities in California’s Central Valley through an extensive primary care network.

The UC Davis School of Medicine has created a new PRIME program that will focus on training physicians to serve California’s medically underserved rural communities. The program will offer new course work addressing rural health needs, telemedicine, primary care, and the challenges of practicing in rural locations. Courses focusing on rural health policy, public health, language competency, and other topics relevant to rural health and health care delivery will be provided. Students will complete clinical clerkships in rural sites and will participate in telemedicine consultations provided by the medical staff at UCDMC at the request of rural preceptors and attending physicians.

The urban underserved (UC San Francisco). The new PRIME program at UC San Francisco (UCSF) will offer classes and clinical instruction emphasizing the care of large, urban, underserved populations. The new curriculum builds on the expertise of UCSF, UC Berkeley, and UCSF–Fresno faculty in the field of health care for urban, underserved populations. Elements of the new PRIME curriculum will include a core seminar series, community preceptorships, and required community projects. The seminar series will include interactive teaching sessions that explore the health and health needs of urban, underserved populations. Experts on homelessness, immigrant health, the prison health system, and related topics will participate. Students will have longitudinal experiences in a variety of settings that will enable them to become part of the health care team and to develop relationships with patients and the community.

Clinical experiences will be based at regional safety-net clinics and hospitals that provide health care to urban, underserved populations in San Francisco and the greater Bay Area. In these settings, students will care for diverse populations and learn more about systems-level disparities. All students will complete a longitudinal community health or social advocacy project, such as setting up community-based disease-prevention programs, engaging in local community organizing campaigns, or conducting community-based research. An essential, yet less visible element of the curriculum for PRIME students will include a comprehensive mentorship program, with faculty and peer-mentoring relationships organized to provide ongoing academic and social support.

Health equity (UC San Diego). San Diego has one of the largest and most rapidly changing immigrant and migrant communities in the country. The city is in the top 15 metropolitan areas nationally for immigration, with more than 13,000 legal immigrants. The area has one of the busiest international border crossings in the world, with more refugees resettling in San Diego than in any other metropolitan area in Southern California. An estimated one third of San Diego households are non-English speaking. San Diego County is also home to 18 Indian reservations—more than any other county in the United States.16 (p149)

UC San Diego has developed the PRIME-HEq (Health Equity) program that will emphasize multicultural, multidisciplinary approaches to patient care, research, and health care advocacy. The program will build on UCSD’s extensive regional resources and offer culture and language studies and immersion experiences that give students the flexibility to examine health equity in an area of interest that is consistent with the objectives of the federal initiative Healthy People 2010,17 which calls for the elimination of health disparities among all segments of the population. Through creation of choices for dual degrees concentrating in minority health and health disparities, and the use of community–university partnerships formed over the past 20 years, PRIME-HEq seeks to increase the number of clinicians, scientists, and advocates who will create and promote multidisciplinary partnerships for reducing health disparities.

Diverse disadvantaged communities (UC Los Angeles). Physicians are increasingly trained to understand the disease burdens and health risks of various population groups. There are many reasons, however, that people may be disadvantaged in terms of their health status. They may be part of growing numbers of low-income groups who cannot afford health insurance or who have been chronically underinsured. They may be members of traditionally

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**Table 1**

<table>
<thead>
<tr>
<th>UC Irvine–PRIME-LC Student Profile*</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entering class</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Male/female</td>
<td>3/5</td>
<td>8/3</td>
<td>6/7</td>
</tr>
<tr>
<td>Disadvantaged</td>
<td>3</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td><strong>Ethnicity/race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Latino, other</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Mexican</td>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Average undergraduate GPA</td>
<td>3.53</td>
<td>3.41</td>
<td>3.50</td>
</tr>
<tr>
<td>Average MCAT–verbal</td>
<td>9.00</td>
<td>9.72</td>
<td>9.3</td>
</tr>
<tr>
<td>Average MCAT–physical</td>
<td>9.8</td>
<td>9.72</td>
<td>9.2</td>
</tr>
<tr>
<td>Average MCAT–biological</td>
<td>10.25</td>
<td>10.36</td>
<td>10.3</td>
</tr>
</tbody>
</table>

* PRIME-LC (Programs in Medical Education– Latino Community) is the first of the PRIME programs being carried out or planned by the University of California medical education system. PRIME-LC began in 2004, continues to attract highly qualified, diverse medical students to the program, and has garnered state and national recognition as an exceptionally innovative and rigorous educational model. Each student is selected because of his or her academic achievement and demonstrated commitment to working with underserved Latino communities. 

† Deferred from 2005.

**Addressing Physician Shortages**

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underserved African American, Latino, Hmong, Vietnamese, or other ethnic and cultural groups who are unable to find providers whom they trust or with whom they can communicate.

Building on the long-standing UCLA/Drew medical education program, the new UCLA PRIME program will train physicians to proactively address the needs of diverse, disadvantaged communities by delivering culturally competent clinical care, providing leadership for health delivery systems, conducting research on health disparities, and serving as advocates for their communities. Students will participate in a new curriculum that will prepare them to use new technologies and multicultural solutions for improving health services for diverse, disadvantaged communities. The program will include a combined MD and master’s degree selected from a variety of UCLA degree programs in public health, public policy, telemedicine, clinical informatics, and other related fields. Clinical rotations will be based in diverse settings and will emphasize cultural competence, leadership training, and community advocacy. The UCLA program is on track and is planning (with UCR and Drew) for new students in the fall of 2008.

The UC system overall

Ultimately, UC’s new PRIME programs plan to enroll 60 to 80 students per campus (across five-year programs), or more than 300 students system-wide. By approaching growth through new educational programs, UC medical schools are aiming to help prepare future graduates who will work to improve health outcomes for individuals, as well as to improve standards and systems of care for many of California’s neediest communities.

In November 2006, California voters acted in support of the state’s public higher education systems by passing Proposition 1D, which includes $200 million in new funding for UC medical schools to expand class size and to invest in new telemedicine programs and other high-tech approaches to health care. Although these funds are for capital and infrastructure only, they will provide much-needed support for equipment and other capital needs for new teaching and clinical care programs. As part of this initiative, UC medical education programs will invest in new and renovated classrooms that will be linked across the system for teaching and other purposes. New telemedicine programs will be developed regionally and connected to community-based locations to expand access to services provided by UC faculty physicians. Where possible, these efforts will be linked system-wide.

The Parachute

As the University of California prepares for long-term enrollment growth, our medical schools will face demographic challenges and budgetary uncertainties that will require perseverance and certain leaps of faith. We have planned the successive launch of a series of newly designed programs across multiple sites; the first phase of these programs was described above. The overall plan is aimed at providing new educational, research, and patient-care programs that will be responsive to changing demographic needs.

We understand there are no guarantees about the future. As described earlier, UC Irvine has received permanent state support for PRIME-LC, and the first class of eight students will graduate in May 2009. Eleven more will graduate in 2010, and 12 more should graduate annually thereafter. We have plans for new PRIME programs at three UC medical schools (Davis, San Diego, and San Francisco) and at Berkeley beginning in the fall of 2007. However, until the passage of the state budget later this year, our schools are moving to admit new students with no guarantee about the permanent resources required to train them. The UC regents and leaders in Sacramento are fully aware of the goals of these programs. While we wait for final approval of the state budget for 2007–2008, our schools are moving forward and admitting new students.

We have plans for enrollment growth beyond PRIME that will unfold in stepwise fashion. Each phase of this growth must build on the success of previous ones. As we admit new students in UC PRIME programs, we are planning for further enrollment growth at other locations. UC medical schools are fortunate to have $200 million in new bond funding to improve infrastructure for increasing numbers of students and to invest in new telemedicine programs designed to expand access to services provided by our faculty. We are planning new, technology-based programs that will include a system-wide videoconferencing network linking our schools together for teaching and other purposes. Public expectations are high, and meeting them will require facing a level of risk.

UC medical schools have a metaphorical parachute that is embodied in the history, reputation, and longevity of the University of California system itself. This improves the odds that UC medical schools will successfully launch these and other new programs. Those of us who lead and support these schools are prepared to make the leaps of faith that will be required, and we know that we cannot guarantee that all efforts will land successfully. That said, we have planned, packed, and promised to go forward. We are prepared for change and ready to jump.

Note added in proof: On August 21, 2007, after new students had arrived on two UC campuses, the California State Senate adopted the FY2008 state budget, which was signed by Governor Arnold Schwarzenegger on August 24th.

References


12 Cuff P, Vanselow N. Improving Medical Education: Enhancing the Behavioral and Social Science Content of Medical School Curricula. Washington, DC: Institute of Medicine, National Academies Press; 2004.

**Did You Know?**

In 1998, with funding from the National Institutes of Health, researchers at the University of California–Irvine identified for the first time an easily detectable protein that holds the key to more reliably warning women about early cell abnormalities in the cervix before they get cervical cancer.

For other important milestones in medical knowledge and practice credited to academic medical centers, visit the “Discoveries and Innovations in Patient Care and Research Database” at (www.aamc.org/innovations).
APPENDIX D

Additional Detail on the Sources of Budgeted Funds for the PRIME Programs, by campus
APPENDIX D: Additional Detail on the Sources of Budgeted Funds for the PRIME Programs, by campus

UNIVERSITY OF CALIFORNIA

Table C
Program in Medical Education (PRIME)
Budgeted Funds - All Sources

<table>
<thead>
<tr>
<th>Level of Student/Fund Source</th>
<th>TOTAL 2006-07</th>
<th>FY2007-08 Workload Funding Increase</th>
<th>Increase Subtotal</th>
<th>TOTAL 2007-08 (2006-07 Baseline) Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irvine</td>
<td>Irvine</td>
<td>Irvine</td>
<td>Irvine</td>
</tr>
<tr>
<td>General Funds</td>
<td></td>
<td>(32 Budgeted Students)</td>
<td>(4 Budgeted Students)</td>
<td></td>
</tr>
<tr>
<td>M.D. Students</td>
<td></td>
<td>(12 Budgeted Students)</td>
<td>(12 Budgeted Students)</td>
<td></td>
</tr>
<tr>
<td>State General Fund</td>
<td></td>
<td>Marginal Cost of Instruction</td>
<td>271,566</td>
<td>42,344</td>
</tr>
<tr>
<td>Subtotal M.D.</td>
<td></td>
<td>Medical School Supplement</td>
<td>60,000</td>
<td>127,032</td>
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<tr>
<td>Masters Students</td>
<td></td>
<td>Marginal Cost of Instruction</td>
<td>-</td>
<td>207,032</td>
</tr>
<tr>
<td>Subtotal General Funds</td>
<td></td>
<td>Medical School Supplement</td>
<td>180,000</td>
<td>180,000</td>
</tr>
<tr>
<td>Student Fee Funds (After Return to Aid)</td>
<td>187,032</td>
<td>207,032</td>
<td>207,032</td>
<td>153,516</td>
</tr>
<tr>
<td>M.D. Students</td>
<td></td>
<td>Educational Fee Funds</td>
<td>13,333</td>
<td>40,000</td>
</tr>
<tr>
<td>Masters Students</td>
<td></td>
<td>Educational Fee Funds</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Subtotal Educational Fee</td>
<td></td>
<td>-</td>
<td>39,997</td>
<td>40,000</td>
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<tr>
<td>Professional Fee Funds (After Return to Aid)</td>
<td>472,363</td>
<td>429,708</td>
<td>77,529</td>
<td>152,956</td>
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<td>M.D. Students</td>
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<td>Professional Fee Revenue</td>
<td>324,544</td>
<td>37,532</td>
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<tr>
<td>Subtotal Professional Fee</td>
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<td>-</td>
<td>324,544</td>
<td>112,596</td>
</tr>
<tr>
<td>Subtotal Student Fee Funds</td>
<td></td>
<td>-</td>
<td>429,708</td>
<td>152,956</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,101,264</td>
<td>264,561</td>
<td>469,528</td>
<td>229,914</td>
</tr>
</tbody>
</table>

(a) The Berkeley portion of the MD program includes a year of master's level training and two years in an MD track. Since the first year of the other PRIME programs is an MD year, it was assumed that the Berkeley program would follow suit. Therefore, the 2007-08 budget funded the first year Berkeley students as MD students. In fact, the first year at Berkeley is a master's level, and the second and third years are the MD training years. Thus, the first year at Berkeley should be funded at the general campus marginal cost rate, rather than the richer rate provided for MD students. The additional funding received for the first year for these students will be acknowledged and reflected in future requests so that overall funding will be evened out over time. Overall funding for the three years of the Berkeley PRIME program at maturity will consist of the first year funded at the general campus marginal cost of instruction for the master's year and two subsequent years at the MD marginal cost of instruction.

Source: OP Budget Office
4/24/2009
APPENDIX D: Additional Detail on the Sources of Budgeted Funds for the PRIME Programs, by campus (continued)

UNIVERSITY OF CALIFORNIA

Table D
Program in Medical Education (PRIME)
Estimated Expenditures of Budgeted Funds, FY2007-08

<table>
<thead>
<tr>
<th>Category</th>
<th>Irvine</th>
<th>Davis</th>
<th>San Diego</th>
<th>San Francisco</th>
<th>Berkeley</th>
<th>Increase</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Salaries</td>
<td>799,969</td>
<td>159,399</td>
<td>226,450</td>
<td>121,390</td>
<td>42,344</td>
<td></td>
<td>1,349,552</td>
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<tr>
<td>Staff Salaries</td>
<td>201,614</td>
<td>229,578</td>
<td>41,482</td>
<td>72,193</td>
<td>60,000</td>
<td></td>
<td>694,847</td>
</tr>
<tr>
<td>Benefits</td>
<td>168,204</td>
<td>20,551</td>
<td>56,941</td>
<td>*</td>
<td>*</td>
<td></td>
<td>247,696</td>
</tr>
<tr>
<td>Other Instruction/ Administrative Support</td>
<td>186,039</td>
<td>50,100</td>
<td>132,775</td>
<td>36,231</td>
<td>13,333</td>
<td></td>
<td>418,478</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,445,826</td>
<td>459,828</td>
<td>459,828</td>
<td>229,814</td>
<td>116,677</td>
<td></td>
<td>2,710,573</td>
</tr>
</tbody>
</table>

*Benefits not separately identified. Included with faculty and staff salaries.
Note: Includes General Funds, Educational Fee funds, and Professional Fee funds.

Source: OP Budget Office
4/11/2008