

PREPARING FOR CHANGE

The University of California Medical Education Programs



The University of California'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. The plan calls for the development of new programs that will increase enrollment in unprecedented ways.

The first phase of this growth is now under way and will continue through a series of educational programs that address the needs of California's medically underserved groups and communities. Areas of focus include: rural health and telemedicine (UC Davis); the Spanish-speaking Latino community (UC Irvine); diverse disadvantaged communities (UC Los Angeles); health disparities and health equity (UC San Diego); and the urban underserved (UC San Francisco and Berkeley). UC is also expanding its nursing programs to help meet the growing health needs of Californians.

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 its 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.

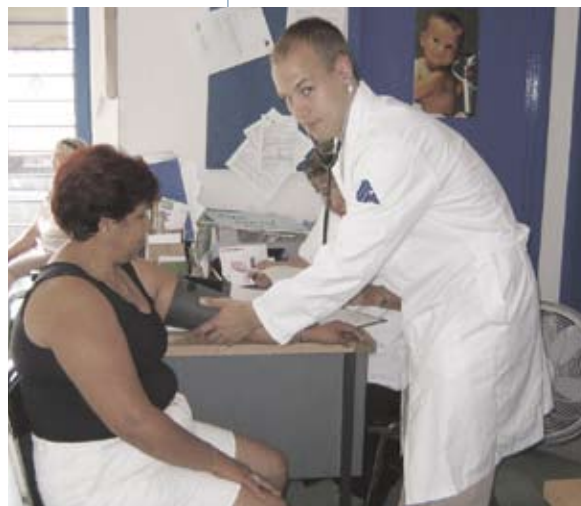
PRIME—GROWING UC MEDICAL EDUCATION IN UNIQUE WAYS

The UC medical education system is growing and changing through the creation of new programs that will increase medical student enrollment in new innovative ways. The PRIME in Medical Education (PRIME) programs will begin as five-year (M.D. 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 PRIME program in 2004 and admitted its fourth class of 12 students in July 2007. Three other UC medical schools (Davis, San Diego and San Francisco) and the UCSF-UC Berkeley Joint Medical Program have received campus and systemwide approvals for their programs and are admitting their first classes in fall 2007. Respectively, these programs will focus on rural health and telemedicine (Davis); the urban underserved (San Francisco and the UC San Francisco-UC Berkeley joint program); and health equity (San Diego). In 2008, UCLA will launch its PRIME program, with planning now under way in coordination with its longstanding partners, UC Riverside and the Charles Drew University of Medicine and Science.

The Latino Community (UC Irvine)

In summer 2004, UC Irvine started its new PRIME program 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 startup costs of the program was provided through a generous grant from The California Endowment, a foundation dedicated to improving access to health 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 in 2005 and 12 each in 2006 and 2007. All students admitted to the program have a record of prior service and commitment to Latino communities and a level of Spanish-speaking ability. 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 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 study and research relevant to Latino health needs. At full enrollment, PRIME-LC will have 60 students (12 per year) in a five-year program.

Rural Health (UC Davis)

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 coursework 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 the request of rural preceptors and attending physicians.

The Urban Underserved (UC San Francisco)

The new PRIME program at UC San Francisco 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 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 sites providing care for urban underserved populations in the Bay Area, including regional safety-net clinics and hospitals. 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 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 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.



UC San Diego has developed a new 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 aligns with the objectives of the federal initiative "Healthy People 2010," which calls for the elimination of health disparities among all segments of the population by 2010. Through creation of choices for dual degrees concentrating in minority health and health disparities, and utilization of community-UC 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 (UCLA)

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 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 longstanding 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 various communities. Students will participate in a new curriculum that will prepare them to use technologies and multicultural solutions for improving health services for diverse disadvantaged communi-

ties. The program will include a combined M.D. 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 planning (with UC Riverside and Drew University) for new medical students in fall 2008.

TELEMEDICINE — DELIVERING HIGH-QUALITY HEALTH CARE TO ALL CALIFORNIANS

As the state's population becomes larger and more diverse, more Californians lack access to quality health care, resulting in a growing disparity between well-served and underserved communities. Adding to these challenges, California is also expected to face an estimated physician shortage of almost 16% by the next decade, further exacerbating current health care disparities.

The University of California has implemented a broad spectrum of telemedicine, telehealth and e-health programs that will enable an increasing number of patients throughout California to receive direct clinical and specialty care without leaving their own communities. These cutting-edge programs use UC research and expertise and the latest in telecommunications technology to improve the access and cost-effectiveness of health care for Californians.

Proposition 1D – Critical Support for UC and an Important Boost to Telemedicine

In November 2006, California voters approved Proposition 1D – California's infrastructure bond measure – which included \$345 million per year to support UC's facilities programs and an additional \$200 million over two years to expand UC's medical school enrollment and enhance its telemedicine programs throughout the state. (www.universityofcalifornia.edu/news/prop1d) This additional funding for infrastructure provides a tremendous boost to UC's telemedicine programs and supports UC's ability to help address the health care needs of California's medically underserved communities.

UC Davis – Pioneering Programs in Telemedicine

The UC Davis telemedicine program began in 1992 with a tele-fetal monitoring link between the UC Davis Medical Center and a community hospital. Since then, it has grown to include a variety of innovative telemedicine applications, including video-based consultations, ER and intensive care consultation, telerradiology, video interpreting of test results, and telehome health. Over the past 14 years, the program has completed more than 13,000 video-based clinical consultations.

In 2000, UC Davis established the Center for Health and Technology (www.ucdmc.ucdavis.edu/cht) to consolidate its telehealth projects, which include telemedicine, distance education and applied medical informatics. The center collaborates with health care professionals, IT experts, medical researchers and engineers to develop and evaluate information and telecommunications technologies that improve access to high-quality patient care, information resources and health education opportunities.

UC's Telemedicine Learning Center at Davis teaches physicians, clinic coordinators, business executives and technicians how to establish effective telemedicine programs to meet the unique needs of patients in their communities. Since 1999, the learning center has trained about 1,000 health care professionals. It also serves as an educational resource to staff at other telemedicine sites.

Using high-speed data lines linked to video units at the UC Davis Medical Center and outlying hospitals and clinics, physicians and patients can have a live, interactive consultation with UC specialists by simply dialing them up on video.

Southern California Telemedicine Learning Center (UC San Diego)

The UC San Diego School of Medicine has recently received a \$1 million grant from the California Telemedicine and eHealth Center to support the development and implementation of a Southern California Telemedicine Learning Center (TLC).

The Southern California TLC will be based on the UC San Diego campus, with training and continuing medical education opportunities to be provided in remote sites. Participating in the TLC are the UCSD Medical Center, the Department of Veterans Affairs Healthcare System, and CALit2 (the California Institute for Telecommunications and Information Technology, based on the UC San Diego campus).

One of the TLC's major partners will be the Community Clinics Health Network, which includes 17 community clinic organizations with more than 70 locations in San Diego County. UCSD is currently working with the clinics to identify telemedicine education and training needs to enable clinics to build and implement telemedicine programs. An example of telemedicine in this arena is a project that allows community clinic providers access to the medical records of clinic patients seen in the UCSD Medical Center Emergency Department, specialty clinics or discharged from a UCSD hospital to improve continuity of care for these patients.





Telemedicine networks also improve access for clinics in outlying and rural areas to specialists who can provide consultation and education.

Another example of telemedicine in action is UCSD's STRoKE-Doc program, which provides long-distance consultation by UCSD stroke specialists to emergency rooms in San Diego and Imperial counties using wireless, interactive audiovisual teleconsultation technology.

The UCSD TLC will also work with Imperial County schools to link providers with schools that lack adequate school health resources, especially for students with chronic medical conditions and moderate-to-severe disabilities. Telemedicine will help support school nurses and community physicians in caring for these students by linking providers and specialists to school sites.

The UCSD TLC will also focus on physicians in the UCSD Physician Assessment and Clinical Education Program (PACE). These are physicians who may have been referred by a state medical board for additional evaluation and education in order to successfully return to practice. A high percentage of these physicians are primary care doctors who care for poor, underserved patient populations.

A common challenge for these physicians is that many are solo practitioners who are not connected with colleagues or health systems. By providing telemedicine training the TLC proposes to improve their access to current medical information and continuing education opportunities, which will improve the quality of care they deliver.

UC Berkeley Optometrists Use Telemedicine to Keep an Eye on State's Underserved Residents

Armed with new telemedicine software, UC Berkeley optometrists are working with doctors at community clinics throughout California's Central Valley to provide eye exams for thousands of low-income diabetic patients, especially Latinos who have a rate of diabetes nearly three times higher than the general U.S. population and are at high risk for diabetic retinopathy, a sight-threatening side effect of the disease. (www.berkeley.edu/news/media/releases/2006/08/14_telemedicine.shtml)

UC Health Care on Campus

Through its campus health services, the University of California promotes students' good health and well-being — which are important elements in their academic success as well as the overall the quality of campus life. UC health centers provide a comprehensive array of accessible, convenient, cost-effective health care and health promotion services. These services include education about healthful lifestyles and behavior that prevent illness and lead to optimal health. UC also plays an important role as a health care advocate for its students. www.universityofcalifornia.edu/health/students.html

For more information on UC health services and programs: www.universityofcalifornia.edu/health