ISSUE: TELEHEALTH

University of California health science schools and medical centers are telemedicine leaders. Telemedicine uses live videoconferencing, e-mail "store and forward" of data and images, video interpreting, telepharmacy, and other technologies to provide interactive health care over distance. Telehealth includes telemedicine and related educational, public health and research activities. UC has provided thousands of specialty telemedicine consultations and continues to play a key role in expanding telehealth access in California. Building upon national and state initiatives in telehealth, broadband access and health information exchange, UC is leveraging its leadership to extend the reach of UC health care expertise.

CALIFORNIA TELEHEALTH NETWORK

The California Telehealth Network (CTN) is a new statewide broadband telehealth initiative created with funding from the Federal Communications Commission and several major California investors. Since 2007, UC has been leading a statewide coalition in developing the CTN, which will provide managed broadband access to more than 800 California health care facilities, connecting public and nonprofit health care providers in rural and urban locations. The CTN also will link facilities to a national Internet "backbone," increasing access to medical expertise, continuing education programs and research efforts. The CTN will increase UC's ability to provide specialty consultations, provide health professionals with distance learning and disaster preparedness training, and expand access to in-home monitoring and teleconsulting. *www.caltelehealth.org*

PROPOSITION 1D

Passed by California voters in 2006, Proposition 1D includes $200 million to help UC expand its telemedicine programs, including $10 million for the purchase of telemedicine equipment that will be located at affiliated community health care facilities, many of which will be connected under the California Telehealth Network. A video conference network will link UC health science campuses as a system for the first time. These and other infrastructure for teaching and clinical care are being developed collaboratively to ensure maximum economies of scale and interoperability within and beyond the CTN.

SPECIALTY CARE SAFETY NET INITIATIVE

The Specialty Care Safety Net Initiative (SCSNI), a program administered by the Center for Connected Health Policy, is a collaborative effort between UC medical school specialty departments and safety net clinics in California. The initiative seeks to identify barriers that prevent widespread adoption and sustainability of telehealth programs and will focus on care delivery in high-need specialties including dermatology, endocrinology, hepatology, neurology, orthopedics and psychiatry. *www.connectedhealthca.org/scsni*

CAMPUS HIGHLIGHTS

UC Berkeley: The UC Berkeley School of Optometry began telemedicine consultations in 1994, expanding worldwide with a focus on screening and treating diabetic retinopathy–a leading cause of blindness among U.S. adults that is 90 percent preventable with timely screening. Working with more than 100 safety-net clinics, the school has screened thousands of diabetic patients in the Central Valley through a program that aids low-income residents, especially Latinos, who are diagnosed with diabetes at rates approximately three times higher than the general population.

UC Davis: The UC Davis Center for Health and Technology has an internationally recognized telemedicine program that began in 1992 and has grown to include video-based consultations for emergency and intensive care units; one of the nation's first pediatric critical-care telemedicine program; a virtual tumor board; video interpreting; and store and forward teleophthalmology, teleradiology and teledermatology. The program has provided over 26,000 real-time consultations in more than 40 specialties to over 100 (primarily rural) clinics and hospitals. UC Davis continues to train hundreds of health care professionals yearly via its telemedicine labs and customized telehealth classroom, provides continuing medical and nursing education programs, and with substantial funding from Proposition 1D is building a new California Telehealth Resource Center. *www.ucdmc.ucdavis.edu/cht*

UC Irvine: Since 2001, UC Irvine has done approximately 5,000 telemedicine consultations, predominantly in neurology and psychiatry. Grand rounds in urology and anesthesia are videoconferenced to partner sites. Pediatric subspecialties are a focus, including nationwide consults in stuttering treatment. The campus also has two major grant-funded projects in telemedicine serving developmentally disabled patients and testing telemedicine's reliability for clinical trials. A new medical education building, created with substantial funding from Proposition 1D, features a telemedicine center to train future doctors.

UCLA: UCLA telemedicine programs include teledermatology, teleophthalmology, stroke care and home health care for patients with chronic illnesses. The Psychiatry Department will be expanding a program to provide mental health services in underserved areas and will work with existing UCLA health care service sites to expand telehealth care to low-income Los Angeles families. Programs will focus on delivering preventive visits and coaching sessions, as well as clinical services. Home health monitoring will capture blood pressure, glucose and weight on a periodic basis for patients with congestive heart failure and/or diabetes. The Perinatal Group provides telemedicine care for high-risk pregnancies; and a UCLA-developed lensless cell phone microscope, which could alter the direction of global health, will be tested in Africa as a telemedicine tool.

UC Merced: UC Merced's Valley Telehealth Partnership is a collaborative effort to increase access to medical specialists. Six sites have received high-speed connections, equipment and training. Up to 20 sites could be added next year. *http://vtp.ucmerced.edu*

UC San Diego: UC San Diego researchers recently published results in The Lancet of their NIH-funded study examining the ability of telemedicine to provide emergency care to stroke patients. Neurology is a key telemedicine focus and mental health services also are a priority with specialty consultations provided to community clinics. Plastic surgeons are providing services both nationally and internationally using telemedicine. Six new initiatives to connect underserved populations in rural San Diego, Riverside and Imperial counties with tertiary care providers are also under way. UC San Diego operates the Southern California Telemedicine Learning Center, providing training and educational resources for practitioners, administrators and allied health professionals. *http://telemedicine.ucsd.edu*

UC San Francisco: UCSF has implemented a multifaceted telehealth program including a number of initiatives to improve access to specialty care for

underserved areas of San Francisco as well as Northern California. UCSF faculty working at San Francisco General Hospital are providing video consultations and store and forward consultative services to Community Health Network Clinics, as well as interpreter services to improve communication with patients. Telemedicine programs support HIV/AIDS outreach focused on African-American men. Automated telephone systems are being used to assist diabetic patients in managing their care, and video consultations are provided by a number of other clinical services–including monthly tumor boards to review cases, and teleconsultations by the School of Pharmacy to patients in ambulatory clinics. A number of departments conduct monthly educational sessions using videoconferencing for physicians and students at UCSF Fresno and other programs. In addition, the School of Nursing has used teleconferencing to provide distance education programs for Spanish-speaking nurses in the Central Valley.