



Developing the California Health Care Workforce of Tomorrow

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The health care workforce shortage is a growing California crisis as the state's population increases and grows older. There are shortages in nearly all the health professions, including the approximately 200 allied health occupations. More than 50 of California's 58 counties include a certified Health Professional Shortage Area (HPSA) and many of these are within low-income communities.

Exacerbating the problem, many minorities are under-represented in the professions. For example, Latinos constitute a significant and growing percentage of the state's general population, yet are very poorly represented within the health care professions. African Americans, Southeast Asians and Native Americans are also greatly under-represented.

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Executive Summary

The California Health Care Workforce Crisis

The health care workforce shortage is a growing California crisis as the state's population increases and grows older. There are shortages in nearly all the health professions, including the approximately 200 allied health occupations. More than 50 of California's 58 counties include a certified Health Professional Shortage Area (HPSA) and many of these are within low-income communities.

Exacerbating the problem, many minorities are under-represented in the professions. For example, Latinos constitute a significant and growing percentage of the state's general population, yet are very poorly represented within the health care professions. African Americans, Southeast Asians and Native Americans are also greatly under-represented.

Increasing Diversity is a Way to Address the Shortage of Health Care Professionals and Improve Care Access and Quality

The major studies on the issue indicate that a workforce more closely mirroring California's racial and ethnic diversity will bring greater care access and improved quality. Physicians of color typically provide more care for the poor and uninsured, and more frequently practice in areas with shortages of providers, than their non-minority peers. They are also more likely to understand cultural values that impact health behaviors, health care system use and treatment compliance. As such, building a more diverse cadre of physicians, nurses, dentists, and allied health professionals is a crucial strategy for improving the health of underserved communities.

As California becomes more and more culturally diverse there is another reason for addressing the diversity issue: minorities represent a very large pool of talent, one that can no longer be ignored or undeveloped. The future health and vibrancy of the California economy will depend on the educational attainment, skills and earning power of these segments of the state's population.

Policy and Systems Factors Explain Our Failure to Build a More Diverse Workforce

Our failure to attract, train and employ more under-represented minorities (URM) in the health care system is due to multiple factors, many related to problems with the education/training system: failures and disparities within K-12 schools, lack of sufficient academic enrichment and support programs, too few guidance counselors and mentors, enrollment barriers at health professions training institutions, limits on the training capacity of these institutions and diminished financial aid in an era of rising costs.

There is Broad Consensus on an Action Agenda

Several major studies of these health care workforce issues have been conducted in recent years, among them national-perspective efforts by the Sullivan Commission and the Institute of Medicine, and state-specific analyses from the University of California and the California Budget Project. These and other studies were reviewed in preparing this paper, along with dozens of interviews with experts and stakeholders.

Across the many studies and groups engaged with the issue, there is remarkable consensus on an action agenda:

Health professions educational institution (HPEI) reforms

- More of California's HPEI need to adopt strong mission statements and policies in support of increased diversity within their student bodies.
- More institutions need to change their admissions decision-making to reflect a broader range of acceptance criteria, including experience with and/or intent to serve underserved communities, language and cultural competency, and other qualitative complements to the quantitative criteria now being used.

- More steps need to be taken in order to ensure that the institutional environment as a whole supports the achievement of diversity goals. These steps include more URM faculty, URM representation on decision-making bodies and academic support for URM students.
- Accreditation bodies, government and private donors should work to ensure that HPEI reforms are implemented and apply financial and/or other sanctions when they are not.

Increased investment in health professions education

- Resources are needed in order to expand the capacity of HPEI to train more health professionals. Without more faculty, facilities and other training resources none of the other strategies for addressing the workforce shortage and diversity problems can be successful.

Career counseling and academic support

- Best-practice standards for academic interventions, support, and counseling need to be developed and applied through new or enhanced programming at the K-college levels and, in particular, at schools with large URM student bodies.

Career promotion

- A large-scale effort to market health care careers to young Californians is needed. It should focus on the elementary, middle, and high school levels, with particular attention to California students' diverse abilities, cultural and language competencies, and career expectations.

Financial aid

- State and local sources of financial aid should work toward investment increases in student financial aid, increases that are commensurate with increases in the cost of health care profession education.

- More funding is needed to enhance training opportunities for under-represented minority students. Information about these aid opportunities needs to be effectively disseminated to high school and college counselors as well as students and their families.
- Expanded grant, scholarship, and loan-forgiveness programs for URM training are needed in all the health careers where the cultural and linguistic competencies of the workforce are out of balance with the state's population characteristics.

Centralized data

- Establish a centralized location for health care workforce data analysis, forecasting, and reports.

Background/Objectives

For more than two decades health and education specialists have been concerned about our inability to attract, train and employ more under-represented minorities in the health care workforce. The lack of diversity within the health professions is, of course, a problem in its own right but when viewed within the context of the growing health care workforce shortage the problem takes on even added urgency.

Concern about the lack of diversity has spurred action on a number of fronts and some progress has been made in addressing it. Yet, with demands on the health care system increasing, and recent decreases within minority representation in some professions (after some years of increases), it is clear that efforts must be re-doubled.

Toward this end, The California Wellness Foundation (TCWF) has launched a new effort to raise awareness about the diversity issue and the need to act. As part of the public education campaign, Ogilvy Public Relations Worldwide commissioned Field Research Corporation (Field) to develop this paper. The paper is intended to be a resource for the public education campaign by providing basic background information on the issue.

Our specific objectives in writing the paper are to:

- Define the problem along with its scope, severity and impacts,
- Identify the main causes, especially systemic and institutional barriers to the participation of under-represented minorities (URM) in the professions,
- Report on the solutions that have been proposed as well as important steps already taken, and,
- Explore what a California action agenda might look like.

Methods

The sources for the paper are approximately 30 semi-structured in-depth interviews with experts and stakeholders conducted between December 2005 and March 2006.

In addition, we conducted a review of the literature, one that drew extensively from the work of a number of recent comprehensive efforts to study the problem. The following reports have been of primary importance:

- *Missing Persons: Minorities in the Health Professions*, a report prepared by The Sullivan Commission on Diversity in the Health care Workforce. The Commission, established in 2003, was an outgrowth of a grant from the W.K. Kellogg Foundation to the Duke University School of Medicine. Named for former U.S. Secretary of Health and Human Services, Louis W. Sullivan, M.D., the Commission was composed of 16 leaders from the health, business, higher education and legal sectors.
- *In the Nation's Compelling Interest: Ensuring Diversity In the Health Care Workforce*, the report from a study undertaken by the Institute of Medicine (IOM). The IOM study examined institutional and policy-level strategies for increasing diversity within the health professions.
- *Strategies for Improving the Diversity of the Health Professions*, a report produced by the Center for California Health Workforce Studies at the University of California San Francisco in collaboration with the Education Policy Center at the University of California Davis. The study entailed a thorough analysis of the problem as well as an assessment of interventions designed to address it.
- *Planning for California's Future: The State's Population is Growing, Aging, and Becoming More Diverse*, a briefing paper on California population trends prepared by the California Budget Project.
- *Keeping California's Edge: The Growing Demand for Highly Educated Workers*, a projection of the state's needs for college-educated workers over the next two decades prepared by the Campaign for College Opportunity.
- *Workforce Needs and Enrollment Planning*, a study conducted by the University of California Office of Health Affairs Universitywide Health Sciences Committee. It was designed to guide health sciences enrollment planning for UC's seven health sciences campuses.

Work on the project was directed by Larry L. Bye, Senior Research Director/Vice President of Field Research Corporation. Ms. Susan Starbird, a Field Research associate, conducted the literature review and drafted the paper. Gloria Hwang, Survey Supervisor at Field, conducted a number of the expert and stakeholder interviews; other interviews were conducted by collaborators at Ogilvy Public Relations Worldwide (Sacramento), Young Communications Group (Los Angeles) and Nakatomi & Associates (Los Angeles).

Six experts kindly agreed to review initial drafts of the paper: Lupe Alonzo-Diaz, executive director of the Latino Coalition for Healthy California; Lonnie R. Bristow, former president of the American Medical Association; Katherine A. Flores, director of the UCSF Fresno – Latino Center for Medical Education and Research; Angela L. Minniefield, deputy director of the Health Care Workforce & Community Development Division of the Office of Statewide Health Planning and Development; Abdi Soltani, executive director of the Campaign for College Opportunity; and Sandra Smoley, former Secretary, California Health and Human Services Agency.

The Problem, Its Scope and Impacts

California and the nation have failed to train an ethnically and culturally diverse health care workforce. At the same time, we are not producing enough health care professionals to meet societal needs, a shortage that is expected to worsen as the population grows and becomes older. The diversity and workforce shortage problems are related. Most basically, they are related because the California population is becoming significantly more ethnically diverse; as a result, if some way is not found to attract more under-represented minorities to the health care workforce, California will be without a health care workforce. Equally important: both problems impede access to care, limit its quality and increase already serious disparities in health outcomes.

In the view of most experts and researchers, diversity promotion is essential if we are to solve the workforce shortage problem. Addressing diversity also offers other important benefits — greater educational opportunity and attainment, jobs and economic development in communities that urgently need them and the strengthening of the economy as a whole.

This section of the white paper outlines the two problems and their inter-relationship. We begin by presenting data on the workforce shortage as well as the forecasted growth in patient demand. The section concludes with a review of data on the extent of the diversity problem and its impacts on health care access, quality, and outcomes.

Growing Patient Demand

In coming decades California's health care demands will place increasing stress on its health care infrastructure. Between 2000 and 2020, the state's population will increase by 10 million people, a growth rate of 28.8 percent, according to the California Budget Project¹.

As the population grows, its character will also change. While California is younger than the nation overall, with a median age of 34.1 in 2003 compared to 36.0 in the US, older Californians are the state's fastest-growing age group, projected to increase by 71.3 percent between 2000 and

2020. By 2020, more than six million of the state's residents are projected to be age 65 and older, or one in seven Californians. An older population puts more demand on health care services.

The state's chronic disease profile also puts heavy demands on its health care infrastructure. One in seven adult Californians has diabetes. One in eight Californians lives with asthma. The state is second only to New York in cumulative AIDS cases, with 134,000 reported cases. Forty percent of California children are regarded as physically unfit, 30 percent are obese, and 23 percent of adults are obese. Among the many resulting workforce pressures are increased doctor visits and lab work, increased demand on pharmacies, increased needs for health condition management, long-term care, and other services. And as the pressures increase, the disparities in access to quality health care widen.

According to UC's *Workforce Needs and Enrollment Planning*², "As the state's population increases, ages, and diversifies, California faces unique and formidable challenges in maintaining and improving the health of its people. Over the coming decade these challenges will grow substantially unless effective strategies to improve access to health services are adopted."

Health Care Workforce Shortages

Statewide shortages of providers already exist in several of the professions. Shortages loom in others. In addition, current regional supply imbalances are expected to become worse in the years ahead. Demand for health care workers is expected to grow at such a pace that health care will be the state's third-hottest market for college-educated workers by 2022, according to the Campaign for College Opportunity³.

It is well known that employers compete for nurses, especially as minimum nurse-to-patient ratios are enacted. There is also a seller's market in most of the other health care professions. Workforce statistics are not available for all of the 200-plus professions; a few examples are presented below, based on workforce forecasts issued by the UC Center for the Health Professions.

Physicians: The physician workforce is aging and retiring, and California will face a shortfall of approximately 17,000 doctors by 2015.

Nursing: California is already ranked 49th in the supply of nurses with 542 nurses per 100,000 population, versus a US average of 780 per 100,000. Depending on the data source, California is estimated to face a shortage of between 60,000 and 120,000 RNs by 2020.⁴

Pharmacists: According to the Aggregate Demand Index-Pharmacy Manpower Project, California is one of five states with the highest number of unfilled positions for pharmacists. In 1998, a ratio of 51.3 pharmacists per 100,000 gave California a rank of 48th among the states.

Dentists: While California has historically enjoyed a greater number of dentists per capita than the national average (68.3 per 100,000, versus 60.4 in 1999), 20 percent of California communities have a shortage of dentists, and 32 of California's 541 Medical Service Study Areas have no dentist at all.

Optometrists: California has historically enjoyed a greater number of optometrists per capita than the national average (11.1 per 100,000, versus 8.7, according to UC data). In rural as well as some urban areas, however, there are insufficient numbers to meet current demand.

Public Health: At a time when public health threats, such as West Nile virus, SARS and bio-terrorism risks are on the rise, shortages in the number of public health professions are the norm. The greatest demand, particularly in rural counties, is for epidemiologists, health educators, environmental health scientists, clinicians, microbiologists, program administrators, and dieticians. According to one of the UC studies "the current public health workforce is seriously deficient in training, preparation, and size."

The Allied Health Professions: Data are limited for the 200 different allied health professions⁵, partly because data are not compiled from the dozens of private institutions that educate them. This group now numbers more than 11 million workers, according to the UCSF Center for the Health Professions⁶. Of the top 30 fastest growing jobs in the U.S. from 2000 through 2010, more than half are expected to be allied health jobs — from entry-level assistant and aide positions in direct patient care, to health information technicians, clinical laboratory scientists and speech-language pathologists and audiologists.

Despite this growth, there are serious shortages in many of these occupations and the shortages are expected to get worse. For example, in the early 2000's there was an estimated shortage of 10,000 to 35,000 certified nursing assistants and home health aides. In 2001, there was a 17 percent vacancy rate for diagnostic imaging professionals in the West. In addition, the state Employment Development Department has forecasted a 24 percent growth in demand for radiographers and 18 percent growth for nuclear medicine technologists between 2000 and 2010.

According to UCSF, California currently trails national averages in the following allied occupations:

- Medical assistants per 100,000: 233 in the U.S., 217 in California
- EMTs and paramedics per 100,000: 63 in the U.S., 46 in California
- Respiratory care practitioners per 100,000: 29 in the U.S., 26 in California
- Clinical laboratory workers per 100,000: 102 in the U.S., 76 in California (43rd in the US).

Another indicator of shortages is the poor geographic distribution of health care professionals. Many urban neighborhoods, and most rural communities, have major difficulties recruiting and retaining adequate numbers of health care personnel to meet local needs. Fifty-one of California's 58 counties have at least one designated Health Professional Shortage Area (HPSA).

The poor, the chronically ill, the un- or under-insured and those living in HPSAs are particularly hard hit by lack of access to quality, affordable health care. But because all Californians pay for the care of those who have limited access, everyone is impacted by the increased costs.

Under-representation of Minorities

By 2000 California was already a "majority minority state." The California Budget Project forecasts⁷ that between 2000 and 2020, Whites' representation in the population is expected to shrink from 47.1 percent to 33.7 percent, while Latinos are expected to increase from 32.6 percent in 2000 to 43.0 percent in 2020. Asians' share of the population is projected to rise from 11.0 percent to 12.7 percent in 2020. (The

African-American population is likely to remain relatively unchanged, from 6.5 million in 2000 to 6.7 million in 2020).

People of color dominate California's future patient population, and the state's future workforce. In California, 25 percent are foreign-born; 40 percent speak a language other than English at home⁸. The state's prime working age population (aged 25–64) is projected to grow at a healthy rate between 2000 and 2020, rising slightly faster than the state's overall population (29.1 percent compared to 28.8 percent). Latinos will comprise 42.1 percent of prime age workers in 2020, Whites 33.6 percent, Asians 13.7 percent, Blacks 6.8 percent.⁹

The demand for culturally and linguistically competent providers is growing. Yet projections of the ethnic and racial composition of California's future health care workforce show that minorities are likely to be greatly underrepresented, especially in proportion to their numbers in the state's general population.

The National Picture

Studies by the Institute of Medicine (IOM) and the Sullivan Commission¹⁰ are in agreement on the extent of disparities. Those critically under-represented in the health care professions are African Americans, American Indians, Alaska Natives, Hispanic/Latino populations and some Asian Americans (e.g., Hmong and other Southeast population segments) and Pacific Islanders (e.g., Native Hawaiians.)

For example, according to the Sullivan Commission, African-Americans, Latinos, and Native Americans comprise 25 percent of the US population but only 9 percent of the nation's nurses, 6 percent of its physicians, and 5 percent of its dentists. These groups comprise only 10 percent of

"All health professions fall well short of 'population parity' measured against the proportion of URM in the overall US population..."

— UC

baccalaureate nursing faculties, 8.6 percent of dental school faculties, and 4.2 percent of medical school faculties; they are also extremely underrepresented in the student bodies of health professions schools.

Latinos now comprise over 12 percent of the US population, but only 2 percent of registered nurses, 3.4 percent of psychologists, and 3.5 percent of physicians. One in eight individuals in the United States is African American, yet less

than one in 20 dentists or physicians are African American. The negative impacts of projected nursing shortages are exacerbated by the severe under-representation of African American and Latinos in the nursing workforce.¹¹

According to the Sullivan Commission, the nation's upcoming medical school graduating classes for 2007 include only 2,197 Black, Hispanic, and Native Americans out of a total of more than 16,000 students. The picture in nursing and dentistry is similar, according to the Commission.

While data for the category "Asians" sometimes suggests overrepresentation, analysts were quick to point out that one or two cultures are highly represented but other groups, such as Southeast Asians, are under-represented. When it comes to receiving care, it is a mistake to consider all as Asians, noted one observer¹²,

given how language and cultural differences impede access to quality care for some population segments. Enrollment of minority students in health professions education institutions (HPEI) increased slightly between the 1960s and 1980s. However, enrollment of minority students in the institutions has failed to keep up with the growth of minority populations, particularly in medicine where minority enrollment is now declining. In the UC system, increases in under-represented minorities are seen only in schools of public health.

A UC study found that medical schools nationwide saw an increase in the number of URM matriculates in the early 1990s followed by a decrease later in the decade. The decrease was due to declines in both applications and rates of acceptance.

URM representation in HPEI differs across the various professions. Nursing, public health and pharmacy have seen a modest but steady rise in the proportion of matriculates and enrollees who are under-represented minorities. Other professions, such as medicine, experienced initial increases followed by subsequent decreases in the late 1990s. Dentistry experienced a steady decrease in the proportion of URM matriculates over the entire decade.

"Diversity in the health workforce will strengthen cultural competence throughout the health system. Cultural competence profoundly influences how health professionals deliver health care. Language is a critical component, with two out of ten Americans speaking a language at home other than English."

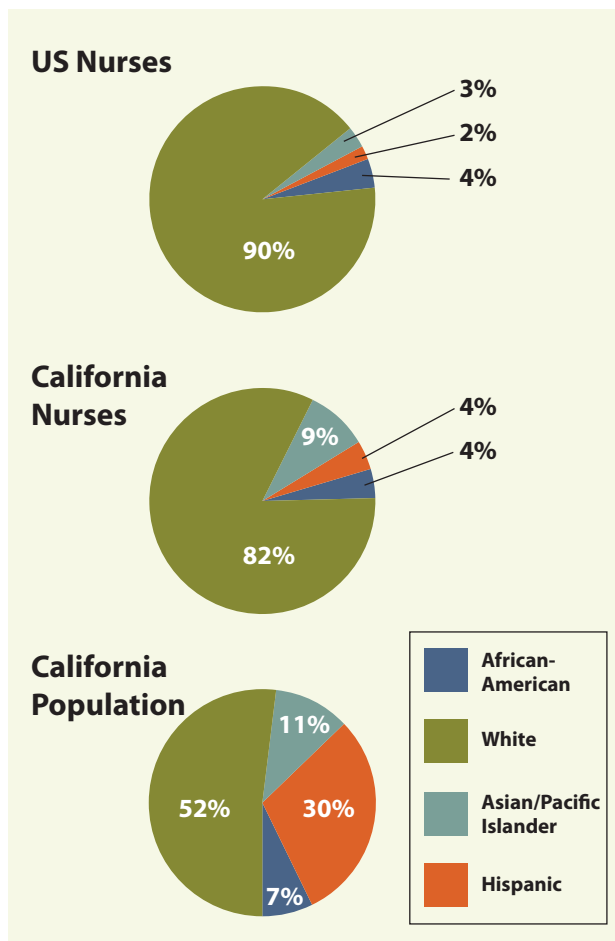
— The Sullivan Commission

The California Picture

Medical schools in California experienced much larger decreases in URM matriculation than did schools elsewhere during the 1990s. The percentage of URM matriculates in allopathic medicine decreased from a high of 21.9 percent in 1992 to 15.6 percent in 2000¹³, UCSF reported.

An extreme case is dentistry in California, which experienced a steady decrease in the proportion of URM matriculates, with the already exceptionally low proportion of URM students falling from 6.7 percent to 3.6 percent during the decade of the 1990s. (Given the overall size of the URM population in California this amounts to ten times below population parity.)

UCSF's California Workforce Initiative illustrated the imbalance between the race/ ethnicity of California nurses and the state's general population in 1996¹⁴:



The Sullivan Commission summarized the situation: "If the trends continue, the health workforce of the future will resemble the population even less than it does today... that decline could be catastrophic."

The Impacts

It has been widely documented that low socio-economic status is associated with lower literacy, and this, combined with the language barriers and lack of cultural competency often facing URM patients, leads to disparities in the access, affordability, and quality of care.

These gaps are significant. Income plays its part in Californians' ability to pay for care: among Californians aged 19–64, 23 percent lack any form of health insurance, and nearly one-fifth of California's children live in poverty.

The burdens of illness vary among ethnic groups, as well. For example, death rates from diabetes are 151 percent higher among African-Americans and 113 percent higher among Latinos than among Whites. Latinas are at the highest risk of cervical cancer, accounting for a third of invasive cervical cancer diagnoses.

The UC, Sullivan Commission and Institute of Medicine studies all came to the same conclusion: minority patients are more likely to select health care professionals of their own background when given a choice, and are more satisfied with the care when they do. This can improve health outcomes in circumstances where minorities are particularly susceptible, such as diabetes, cervical cancer, or obesity.

A growing body of evidence indicates that a racially and ethnically diverse cadre of health professionals is beneficial on multiple levels. URM providers increase access to care for underserved Californians because they:

- tend to practice in minority and low-income communities more than their non-minority peers,
- are able to provide care that recognizes and accounts for the cultural beliefs and mores of their patients,

"From a marketing and economic standpoint it makes sense to have representatives of the population serving the population. It reduces both the monetary and health costs of misunderstandings and inability to navigate the health care system. It makes institutions proactive instead of reactive in caring for patients."

— Angela L. Minniefield, OSHPD

- reduce the number of misunderstandings in critical health care discussions (one study found an average of 31 translation errors in conversations between English- and Spanish-speakers¹⁵),
- serve as role models and mentors for racially and ethnically diverse students who may not have access to other health professionals; and,
- contribute to the fields of health and medicine by ensuring that the priorities of underserved communities are considered in decisions regarding research, funding, and education.

Finally, increased URM presence and leadership will raise the cultural competencies of everyone. The result, advocates argue, will be a better health care system in the United States.

Causes

Recruitment of more under-represented minorities into health care careers is part of the solution to California’s health care workforce shortage, but several systemic barriers make it difficult. These barriers are largely responsible for our failure to attract, train and employ more under-represented minorities in health care fields. In this section of the paper we examine the most important ones.

Disadvantaged Students Arrive at the Career Threshold Unprepared

“To address racial and ethnic disparities in the health professions means to confront fundamental social inequities in educational and life opportunities in the US.”

— UC

“The problem of under-representation of many minority groups in the health professions is the end result of profound disparities in educational opportunities and support, beginning at the earliest schooling stages,” according to UC researchers.¹⁶ “To address racial and ethnic disparities in the health professions means to confront fundamental social inequities in educational and

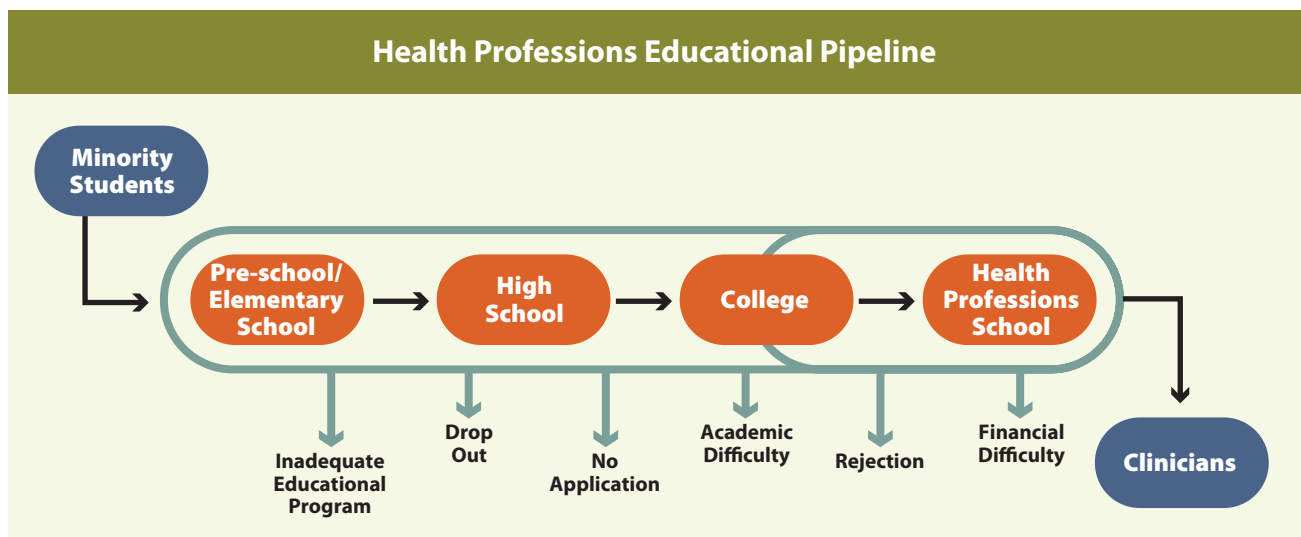
life opportunities in the US,” they concluded.

Evidence that K–12 schools are failing California’s poor and working-poor families can be found in lower-quality education, lower standardized test scores, and greater dropout rates. This particularly impacts certain minority groups, such as English language learners. According to the California Budget Project, 2005 results from standardized tests given to California’s 2nd through 11th graders show that 25 percent of Latino students and 27 percent of African American students scored at the “proficient and above level” in English, compared to 58 percent of Whites and 62 percent of Asians. Further complicating the problem, 91 percent of the state’s high schools have more students per teacher than the national average¹⁷.

California sends a smaller percentage of high school students for four-year colleges than any other state but Mississippi.

— UC

The following diagram¹⁸ of “leakage” along the long educational pipeline leading to a health profession dramatically illustrates the challenges students face.



Adapted in UC’s *Strategies* (p.9) from Fig. 2-1 of “HCOP: Evaluation of the Health Careers Opportunity Program Summer Programs,” Houston & Associates, 1994

The UC researchers arrived at this conclusion: “Health professions programs that enroll students at the college level face a ‘feeder’ educational pipeline characterized by rates of high school dropout for African Americans that are double that for Whites, and dropout rates for Latinos that are four times greater than those for non-Latino Whites. Moreover, those under-represented minorities graduating from high schools are much less likely than other students to have experienced challenging, college-preparatory curricula. In view of these profound disparities in educational achievement throughout the educational pipeline, it is hardly surprising to find that African Americans and Latinos are extremely underrepresented in health professions schools.” The same could also be said for other underrepresented groups, particularly Southeast Asians, Pacific Islanders, and Native Americans.

“There’s a limit to how much we can squeeze from the pipeline now,” observed Lonnie Bristow, M.D.¹⁹, retired American Medical Association president. “So many URM are ill-prepared for studies in health care careers. This is partly because we rely on local communities to fund schools, so some districts do a rotten job and others an excellent one.”

California Tomorrow summarized the problems in the following way: “Low income students and students of color overwhelmingly attend secondary schools with significantly fewer resources than wealthier, predominantly White suburban schools... Schools with high concentrations of students of color and language minority students disproportionately have insufficient numbers of books for students, fewer qualified teachers... fewer laboratories for studying college preparatory science and fewer counselors.”²⁰

URM Face Admissions and Enrollment Barriers

URM students are far less likely to apply, gain admission, graduate and enter health professions than their non-URM counterparts. Part of the problem lies at the doors of public educational institutions with policies that prevent preferential treatment of any group in college admissions, institutions that also have reached their limit in terms of training capacity.

Admissions Problems

Special consideration of race and ethnicity in admissions decisions was an important tool for maintaining URM

enrollment in health professions schools. But a series of court challenges nationwide, plus a Constitutional Amendment (Proposition 209) passed by California voters in 1996, has eroded these policies in the public institutions that educate approximately three-fourths of California’s college students²¹.

In the late 1990s the effect of the above legislation, plus a UC Regents policy decision on admissions, was immediately apparent: it is blamed for the decline in percentage of URM medical school matriculates (from 21.9 percent of matriculates in California in 1992 to 15.6 percent in 2000²².

In an effort to comply with the new admissions climate, educational institutions are increasing reliant on quantitative criteria such as GPA and standardized test scores, which are known to harm admissions prospects for students coming from impoverished K–12 backgrounds. “Standardized test scores are generally good predictors of subsequent academic performance,” stated the IOM, but they “do not measure the full range of abilities that are needed to succeed in higher education.” Nor are GPA or test scores predictive of professional performance, at least for physicians, whose academic and career performance has been extensively compared.²³

Capacity Problems

Data about program capacity is limited, in particular for the private institutions among California’s 500 accredited colleges and universities. It’s clear, however, that in many cases, California’s public HPEI — the 145 campuses comprising the community college, CSU and UC systems — cannot accommodate the demand for health professions education.

For example, less than 5 percent of applicants to UC’s medical schools eventually enroll there; because California’s medical schools cannot accommodate the numbers of Californians applying for training, more California students are trained out of state than in the state. UC has not added health professions education facilities in more than a generation and is prevented from expanding facilities at the urban campuses now housing these programs. The difficulty of filling faculty positions, particularly with URM faculty, accentuates the problem.

UC has capped public health admissions due to limited faculty and space; it also has a backlog of medical school applicants. Enrollment growth is stunted in California nursing programs for the same reasons. In fact, California’s 100 nursing programs educate approximately half the RNs needed to meet the state’s demand; a sizeable proportion obtain initial licensing out-of-state, including overseas.

“There’s enough interest in nursing that there are waiting lists everywhere... the bottleneck is that there aren’t enough nursing faculty,” said George Zamora of The California Endowment’s Ethnic Diversity Project²⁴. For example, for the 8,749 new nursing student positions available for the 2004–5 academic year, 8,574 students enrolled (98%) but 14,181 applicants were turned away due to lack of capacity²⁵.

“To reach population parity, California would need 40 percent of matriculants to be URM’s.”

— UC

The crisis in laboratory technician training is also illustrative. Despite California’s critical need for lab techs, training programs have actually closed²⁶. “While program closure has been a national trend,” UCSF noted, “California has been left with comparatively fewer programs in clinical laboratory science. There are eight programs remaining in California. This is not enough to meet the current demand for medical technologists/clinical laboratory scientists in the state, nor will it meet anticipated demand due to retirement among an aging clinical laboratory science workforce. Access to programs in the state is particularly limited in less populated areas...” The study found that the high cost of operating the programs is a contributing factor.

Today’s burden on California’s public postsecondary colleges and universities is projected to increase, according to the California Budget Project. “Through 2013 — the latest year for which the Department of Finance has made a projection — the three segments — the University of California (UC), the California State University (CSU), and the California Community Colleges (CCC) — are expected to add more than 700,000 undergraduates between 2000 and 2013. (In contrast, between 1990 and 2003, the three segments added approximately 192,000 undergraduates.)²⁷

Demand for college-educated labor will outpace supply because, to some extent, population groups with relatively lower levels of postsecondary educational attainment are growing faster than those with higher levels. The California Budget Project reported that Latinos constituted 43.1 percent of all 20–to–24-year-olds in 2000, but were only 12.6 percent of the students receiving bachelor’s degrees from UC and only 18.3 percent of those receiving bachelor degrees from CSU. In contrast, Whites constituted 35.9 percent of the 20–to–24-year-old population, but represented 40.5 percent of students receiving UC bachelor degrees and 43.2 percent of students receiving CSU bachelor degrees. Enrollment and graduation rates must increase among Latinos and Blacks, in

particular, if California is to meet the future workforce needs of its employers.

California’s workforce demands through 2022 require 1.8 million more college-educated workers, according to the Campaign for College Opportunity²⁸ (an annual growth rate of 2.5–3 percent), with a sizeable portion of these associate-level or postsecondary matriculates in health care professions.

The Campaign put it succinctly: “No other industry sector faces educational needs with as large an impact on the life of Californians — literally — as health care. Among workers in the top 45 occupations requiring an Associate degree, Bachelor’s degree, or higher, 446,000 will work in this sector...” Their report emphasizes that this workforce will be substantially dependent on community colleges and similar private institutions to supply 317,000 RNs, 78,000 LVNs, 36,000 dental hygienists, and approximately 150,000 other allied health professionals by 2022.”

Against this backdrop, advocates were dismayed when federal Title VII Health Careers Opportunity Program (HCOP)²⁹ funding was drastically reduced from \$35.6 million in 2005 to \$3.9 million in 2006. This was a significant blow to HPEI serving disadvantaged students, as HCOP funded recruitment, financial aid, and academic support programs in medicine, public health, dentistry, physician assisting, optometry, pharmacy, podiatry, chiropractic and clinical psychology.

The program survives but at a fraction of its earlier size, and California HPEI are no longer funded at all. “The cut is severely detrimental for a successful program with a longstanding reputation and partnership with HPEI in California,” stated OSHPD executive Angela Minniefield. “The lost of this funding will just exacerbate a problem that is already out of control.”

Low-income Students Face Formidable Financial Barriers

It has been widely documented that education costs are rising³⁰ while financial aid has diminished. Because URM students are more likely than non-URM students to come from low-income families, they are disproportionately affected by these rising costs and the adverse trend in financial aid availability.

The Sullivan Commission noted that in 2001, the median income for White families was 40 percent higher than that of Blacks and 39 percent higher than that of Latinos. “Even the

most talented students from these minority families tend to view the cost of professional education as overwhelming and insurmountable... Failure to address the cost problem increases the growing diversity gap between the health professionals and the populations they serve.”

One out of four high school graduates scoring at the top of their class, but coming from a low-income family, did not go to college. UC reported, “Students from low socio-economic status (SES) backgrounds are more likely to apply to college when offered financial aid, and more likely than higher SES families to report that access to financial aid influenced their decision to enroll.” The type of financial aid also matters: student loans are not as helpful to low-income under-represented minorities as grants, scholarships, and loan forgiveness programs.

“The burden of financing an education in the health professions has put the dream of becoming a health professional beyond the reach of far too many qualified, Under-Represented Minority students.”

— The Sullivan Commission

While virtually all of California’s low-income students eligible for four-year state institutions are guaranteed Cal Grants, fewer students take advantage than anticipated, possibly because they are unaware of the available aid opportunities. And

financial aid based on economic need alone does not selectively target under-represented minorities because the majority of low-SES Americans are White, and it does not benefit middle-income URM.

In the past, under-represented minorities benefited from financial aid opportunities specifically benefiting minorities. But as pointed out by Travis Reindl, director of state policy analysis at the American Association of State Colleges and Universities, hundreds, if not thousands, of scholarship and fellowship programs historically used race as a criterion. He told the New York Times in March 2006³¹ that as many as half of the four-year colleges in the United States have modified such programs or are considering doing so.

Lack of Leadership

Strong leadership is required to overcome the policy and systemic barriers outlined in the various studies. But *lack* of this leadership — in educational institutions, among the entities that accredit them, among legislators and other

policymakers, and among health care employers — is partly blamed for the continuing problem.

Most observers interviewed emphasized that institutional culture change begins internally, with top leadership. As one argued: “The medical and dental schools that have made the greatest strides have often done so because a person of color is named dean and takes a passionate personal interest in the issue and this has opened up many slots.”

Schools Lack Sufficient Career Counseling

Poor academic preparation, pressure to leave school and go to work, and lack of knowledge about career options lead many URM students to have low expectations about careers. These barriers could be mitigated, at least somewhat, by career counseling, but today there are too few counselors in California schools to make much impact.

In order to raise expectations URM students and their families need to be introduced to the broad range of career options, the financial aid available, and the earnings opportunities associated with professional careers. Parents are often ill equipped to offer this assistance and encouragement because they are poorly informed themselves. Informed, well-resourced counselors of URM students would make a difference, whether they are formal guidance counselors or informal mentors, such as coaches, after-school program staff, or community professionals. But the average high school counselor in California is expected to serve 790 students, the worst ratio in the nation, and there are still too few mentoring programs to meet the needs of students.³² In the words of Cornelius Hopper, M.D., a leader in the field, “Too many students of color were not given good career advice in high school or college. Thus, the pipeline was closed off before candidates could even get started.”³³

Mentors are especially helpful to first-generation students, to help them navigate college-prep class enrollment, testing, and the college admissions process. Tufts medical student Veronica Abernathy³⁴, who is a minority herself, put it this way: “Mentors are critical. Without a strong support network, even if candidates are interested in a career in the field and make it into school, they face such strong isolation that it becomes increasingly difficult to complete the process.” Indeed, UC data show that while numbers of African Americans and Latinos graduating from college is slowly increasing, dropout rates, graduation rates, and board exam passage are still issues for these students.

Solutions

The studies we reviewed are in broad agreement about how to solve the health professions diversity problem. Following are highlights from more than 60 recommendations crucial to California, organized thematically.

Expand Educational Institution Capacity

In order to meet its needs, California needs to be able to “grow its own” health care professionals. More training opportunities are needed across the board, from community college to university and postgraduate levels.

California Tomorrow³⁵ asserted that community colleges offer the best solution for the growing crisis of undereducated young Californians. Noting that today’s community colleges are “dangerously and damagingly under-funded,” ranking 45th in the nation in per-student funding, the organization calls on state policymakers to assure colleges’ funding at levels commensurate with “the urgent societal task they are undertaking.”

In the UC system, there is a recognition that some way must be found to increase enrollment at its existing schools of medicine, nursing, pharmacy, and public health. In addition, UC needs to add new programs in both medicine and nursing.

Increase Student Financial Aid

URM students need more financial aid, of the right varieties: grants, scholarships, and loan forgiveness programs. Those working to address the problem in the UC system argued for maintaining growth in financial aid so that it matches the rate of growth in the cost of higher education. They also called for more emphasis on grants and paid, on-campus internships, as opposed to student loans.

Several studies focused on federal initiatives to improve financial aid. The Sullivan Commission urged Congress to “substantially increase funding to support diversity programs within the National Health Service Corps, and Titles VII and

VIII of the Public Health Service Act. Such funding should also provide for collection of data on diversity.” The President and Congress should also increase funding for the National Center for Minority Health and Health Disparities Loan Repayment Programs, with a special emphasis on programs for under-represented minorities, according to the Commission.³⁶

The Sullivan Commission also called for scholarships, loan forgiveness programs, and tuition reimbursement strategies to students and institutions, in preference to loans, and for continued business, foundation, and other private support for HPEI to implement their recommendations.³⁷ IOM recommendations echo those of the Sullivan Commission.³⁸

Strengthen the Pipeline to Health Professions Schools

According to experts, interventions need to start early and focus on the retention of URM in the educational pipeline from the elementary grades on through college and graduate school levels.

K-12 Education

Students at all levels need opportunities for academic enrichment in the sciences. This should be actively promoted and supported by institutions of higher education, youth-serving nonprofits, hospitals and other health care organizations working in partnership with businesses and K-12 schools.

Among many observers there was consensus on the importance and urgency of acting early:

- “We have to emphasize the importance of introducing science and math in grade school because by the time they get to high school it’s too late if they don’t already have the foundation.” — *Sandra Smoley, former secretary of the California Health and Human Services Agency*
- “It’s important to introduce URM to health care careers in middle school so they can obtain the curriculum

before they're at risk of dropping out." — *Angela Minniefield, deputy director of Health care Workforce and Community Development at the Office of Statewide Health Planning and Development (OSHPD)*

- "We need to fix the problem at the sixth, seventh, and eighth grade levels, and that will require re-motivating kids that age, and their parents, and giving them the kind of teachers they'll need." — *Lonnie Bristow, M.D., retired president, American Medical Association*

High school guidance counselors need more resources to assist under-represented minorities in finding college preparatory schools and programs, taking entrance exams and applying to colleges. These efforts should intensify as education progresses. HPEI should support socio-economically disadvantaged college students who express an interest in the health professions, and provide them "with an array of support services, including mentoring, test-taking skills, counseling on application procedures, and interviewing skills," advised the Sullivan Commission³⁹.

High schools across the state have partnered with HPEI to cultivate students' interest in health care careers as well as the necessary skills to succeed. Among the successful programs are those at Francisco Bravo Medical Magnet High School (East Los Angeles), the Saturday Science Academy for 4–18-year-olds at Charles R. Drew University of Medicine and Science (Los Angeles), and Sunnyside High School Doctor's Academy Program (Fresno).

Best practices for recruiting ethnically diverse students for allied health programs are suggested by Gary Sayed, PhD, Dean of the Charles R. Drew University of Medicine and Science College of Allied Health.⁴⁰ In addition to the Saturday Science Academy, his HPEI offers:

- an urban campus accessible from African-American and Hispanic neighborhoods,
- aggressive recruitment at community colleges,
- curriculum coordination and transfer agreements with community colleges,
- participation in the Allied Health Careers Opportunity Program (AHCOP),
- alumni-assisted recruitment,

- strong relationships with high school and college counselors, and
- advertising, and direct mail promotional campaigns.

College and Post-Graduate Education

California Tomorrow⁴¹ has developed a number of recommendations to strengthen the ability of community colleges to meet the needs of students from low income, URM and immigrant backgrounds. These include:

- Increasing access to financial aid,
- Continuing and extending book grants,
- Providing more bilingual and immigrant-specific support services,
- Ensuring effective and inclusive counseling services with adequate staffing, and, (Gold)
- Educating families about how to support first-generation college students.

UC has urged the funding of rigorously evaluated demonstration projects targeting early educational stages (e.g., academic health center/K–12 school partnerships.) The Council on Graduate Medical Education has called for interventions addressing the high secondary school drop out rates of under-represented minorities in order to promote more college enrollment. Others have called for more research to better understand the full range of cultural, linguistic, societal, economic, and systemic barriers to academic achievement for URM at all educational levels.

Even graduate students require support, as shown by the number of post-secondary HPEI that dedicate students' first year of study to acquiring the survival skills that will enable them to complete school and maintain a professional career.

Establishing proven best practices for academic support and development remains a challenge for schools, colleges, and program funders. "Standards of achievement and outcome measures are needed to determine which K–12, post-secondary, and post-baccalaureate programs should be considered as models for increasing academic achievement of URMs," concluded the Council on Graduate Medical Education.

Change Admissions Policies and Practices

Several recommendations addressed the over-reliance on quantitative admissions criteria:

- The Sullivan Commission: decrease admissions committees' reliance on standardized tests (such as the Dental Admissions Test and the Medical College Admissions Test), while continuing their use to diagnose where qualified applicants may need academic enrichment or support.
- The IOM: "Admissions should be based on a comprehensive review of each applicant, including an assessment of attributes that best support the mission of the institution (e.g., race/ethnicity, background, experience, multilingual abilities). Admissions models should balance quantitative data (i.e., prior grades and standardized test scores) with these qualitative characteristics."
- UC: recruit students "with a record of service and commitment to caring for the underserved and improve training to prepare students for such service."⁴²
- The Sullivan Commission: "The Association of American Medical Colleges, the American Association of Colleges of Nursing, the American Dental Education Association, and the Association of Academic Health Centers should promote admissions policies and procedures that: a) enable a more holistic, individualized screening process; b) ensure a diverse student body with enhanced language and cultural competency; and, c) increase the pool of minority applicants."⁴³
- The Council of Graduate Medical Education: Acknowledging that quantitative performance measures are not always predictive of future professional success, the Council argues that "qualitative criteria used in medical school admissions and residency placement decisions should be documented and assessed to determine which ones are most predictive of successful outcomes."

The difficulty of achieving these and related admissions reforms is acknowledged in UC's recommendation⁴⁴ to establish a national clearinghouse to help HPEI in the formulation of flexible admissions policies that comply with judicial rulings and state and federal laws.

Improve Climate for Diversity at Individual Institutions

The studies we reviewed challenged HPEI and health care employers to undertake internal reform measures designed to improve the climate for diversity.

Health care employers are partners in assuring cultural and linguistic competence throughout the system.

"Health systems should set measurable goals for having multilingual staff and should provide incentives for improving the language skills of all health care providers," according to the Sullivan Commission.⁴⁵

"There should be increased recognition of under-represented minority health professionals as a unique resource for the design, implementation, and

evaluation of cultural competence programs, curriculums, and initiatives."⁴⁶ Leadership development, diversity training, and mediation policies are also needed. Management should be assigned to oversee application of these policies, gather data and monitor progress, install incentives for compliance, and track career patterns of graduates, they further argued.

In the community colleges of California, California Tomorrow advocated development of:

- Standards for cultural competency,
- Wide-scale, intensive professional (faculty) development programs focused on issues of diversity,
- A statewide clearinghouse for information and professional development assistance on these issues,
- Plans to diversify faculty, staff and administrators, and,
- More full-time ESL teachers and adequate ESL offerings to meet the needs of students.

"To increase diversity in the health professions, the culture of health professions schools must change. Our society is experiencing a significant and rapid demographic shift. The culture of our nation is changing. So too must the culture of our health institutions. As colleges, universities, health systems, and others examine these recommendations, they must also examine the practices of their own institutions."

— The Sullivan Commission

Diversity should be a core value in the health professions, stated The Sullivan Commission. “Health professions schools should ensure that their mission statements reflect a social contract with the community and a commitment to diversity among their students, faculty, staff, and administration.”⁴⁷

Addressing the concept of community benefit, in which an institution fulfills social obligations, usually in exchange for financial advantages, the IOM stated, “Health professions education institution governing bodies should develop institutional objectives consistent with community benefit principles, objectives that support the goal of increasing health care workforce diversity. This includes efforts to ease financial and non-financial obstacles to URM participation, and to increase involvement of diverse local stakeholders in key decision-making processes.”⁴⁸

Set Up Accountability Mechanisms to Ensure Diversity

Several reports called for the development of external systems to ensure that HPEI and other stakeholders are held accountable for achieving diversity goals. For example, the IOM called on educational institutions and relevant public and private groups to:

- Develop institutional objectives consistent with community benefit principles that support the goal of increasing health-care workforce diversity,
- Enforce these efforts through program accreditation,
- Explore the development of new standards to implement community benefit principles as they relate to increasing health-care workforce diversity,
- Develop a mechanism to inform the public of progress toward diversity efforts, and,
- Convene major community benefit stakeholders to inform them about community benefit standards and their relationship to diversity.

In a sweeping recommendation, The Sullivan Commission recommended⁴⁹ passage of comprehensive state and federal legislation ensuring: (a) the development of a diverse and culturally competent workforce, and (b) the strengthening of health care institutions that serve minority and underserved populations. The Commission further called for policies that

will put teeth into the accreditation process for medicine and other health professions. Accrediting bodies should be required to “embrace diversity and cultural competence as requirements for accreditation.”⁵⁰

The IOM⁵¹ called on accreditation bodies to:

- Formulate and enforce diversity-related standards,
- Develop explicit policies articulating the value and importance of culturally competent health care and the role of racial and ethnic diversity in achieving this goal,
- Develop standards and criteria that encourage and support URM student and faculty participation,
- Include criteria and standards to assess the success of diversity-enhancement efforts,
- Include under-represented minorities and others with expertise in cultural competence and diversity on accreditation bodies and advisory groups, and, importantly,
- Apply sanctions if diversity-related standards are not met.

Specifically, the IOM urged accreditation bodies to establish standards for the numbers and percentages of URM candidates, students admitted and graduated, time to degree, and numbers and levels of URM faculty. The IOM also suggested that state licensure boards for nurses, physicians and dentists consider requiring continuing education in cultural competence as a condition of licensure.

California's Response

This section of the paper highlights some of the most important recent actions that have been taken to address the problem in California.

Employers and Educational Institutions

Recent legislation has been adopted to promote the development of more health care professionals through the expansion of training and professional development opportunities. However much of it fails to address needs beyond those in the nursing field.

The [California Nurse Education Initiative](#)⁵² of 2005 is a five-year, \$90 million effort to expand nursing education. It emphasizes partnerships between schools and health care facilities, recruitment of more qualified instructors and development of new pathways to nursing careers through high school and college level academic support programs and apprenticeships.

The [California Nurse Workforce Initiative](#)⁵³ of 2002, a \$60 million effort, relies on strong regional partnerships, such as with the Private Industry Council of San Francisco, to address statewide shortages of professional nurses. It supports development of career ladder programs and workplace reform pilot projects.

The [Caregiver Training Initiative](#)⁵⁴ of 2001 encourages local and regional partnerships. The strategies of the \$25 million initiative are to increase the number of health caregivers in California through innovative approaches to recruiting, training and retaining workers in the health care industry.⁵⁵

[Statewide Employment and Training Services](#): Special programs statewide help workers find jobs in high-need and high-wage sectors of the economy, with \$7.6 of the \$17.9 million allocated to nursing programs.

[Workforce Investment Act and Wagner Peyser Act](#)⁵⁶: \$13 million to support statewide nursing job-training and education initiatives.

The [Health Manpower Pilot Projects Program](#)⁵⁷ provides an opportunity for health care related organizations to test and evaluate new roles for health care professionals and new health care delivery approaches.

The [Song-Brown Family Physician Training Program](#) grants state funds to family practice residency, nurse practitioner, physician assistant, and registered nursing training programs in order to increase numbers and improve distribution of these professionals in underserved areas of the state.⁵⁸

The [Health Careers Training Program](#)⁵⁹ promotes public and private sector collaborations to develop health careers for unemployed, targeted layoff and dislocated workers.

The [Shortage Designation Program](#)⁶⁰ seeks to increase access to health care for underserved populations. Funding is from the federal government. The assistance goes to qualifying clinics, hospitals, and other health facilities in shortage areas.

The [University of California Regents](#) recently allocated \$5.2 million to fund new bachelor's level and graduate level programs in nursing at UCLA.⁶¹

Student Financial Aid

A number of state and federal programs, or proposed programs, strive to offset students' financial burdens through grants, scholarships, loans, or internships.

The [Health Professions Education Foundation](#)⁶², a California non-profit public benefit corporation, provides scholarship and loan repayment assistance in order to increase the number of dentists, dental hygienists, nurse practitioners, certified nurse midwives, and physician assistants providing direct patient care in medically underserved areas. It provides associate and baccalaureate degree nursing scholarships to increase the number of RNs serving in medically underserved areas. It also provides allied health care scholarships to increase the number of trained professionals in 14 categories who provide direct patient care in medically underserved areas. An Assembly

Bill (AB 702)⁶³ approved in 2005 expands the criteria for scholarship and loan repayment programs in the Registered Nurse Education Program to include individuals who commit to teaching in California nursing schools.

The National Health Service Corps/State Loan Repayment Program (SLRP)⁶⁴ seeks to increase the number of primary care physicians, dentists, physician assistants, nurse practitioners, nurse midwives, and mental health providers practicing in designated Health Professional Shortage Areas. SLRP repays educational loans of health professionals, who in turn obligate themselves for direct patient care in public or private non-profit entities for two to four years.

The Allied Health Reinvestment Act⁶⁵ (HR 215), referred to the House Subcommittee on Health as of February 2005, will amend the Public Health Service Act to promote the allied health professions. It would encourage individuals to complete high quality training by providing additional funding for their studies. A coalition of approximately 30 organizations is working to get this legislation passed.

The College Opportunity Act of 2006 (SB 1709), introduced in February 2006, requires promotion of college to middle and high school students and their families, counseling for 11th graders to prepare them for college and high-level accountability for graduation results. It calls for the development of a decade-long enrollment plan based on population growth forecasts and anticipated workforce needs. It sets the goal of a substantial gain in rates of degree and certificate completion and authorizes increased state investment in higher education each year over the course of the next decade. It also stipulates a policy of moderate and predictable fee increases tied to increasing financial aid for students in need.

AB 2086⁶⁶, introduced in February 2006, encourages Northern California community college districts to work with tribal colleges to assist indigenous peoples in gaining access to nursing and teacher preparation programs. Also introduced in February 2006, AB 2313 would provide loan repayment for nurses in underserved areas.

Adopted in 2005, the California Physician Corps Program provides student loan forgiveness to URM physicians practicing in areas deficient in primary medical care. Also adopted in 2005, SB 102⁶⁷ authorizes the Employment Training Panel to allocate funds for licensed nurse training programs targeted to individuals who are currently working as nurse assistants.

Strengthening the Pipeline

Public and private partnerships have formed to assist students along the educational pipeline through integrated approaches involving career promotion, academic support, financial aid, and training opportunities.

For example, in the 2006–07 state budget, California's governor has proposed using discretionary funds from the Workforce Investment Act, allocated each year from the US Dept. of Labor, to support policies that decrease the nursing shortage.⁶⁸ \$35.8 million has been proposed for training of nurses and other health care workers, with the focus on low-income, out-of-school, and otherwise qualifying individuals aged 14 to 21. The proposal stipulates an integrated, multi-faceted approach involving all of these approaches.

Private foundations have undertaken a number of initiatives. The California Wellness Foundation is making a large investment in promotion of health care careers to young people via a Web site, featuring information (including career pathways and stepping-stones), assistance (including online financial aid applications), and support. TCWF has also made a series of grants to community-based organizations, including the Strategic Concepts in Organizing and Policy Education, Stanford Medical Youth Science Program, Chicano/Latino Medical Student Association, California Rural Indian Health Board, and The Health Professions Education Foundation.

The California Dental Pipeline Program, a partnership between The Robert Wood Johnson Foundation and the California Endowment, provides \$6.3 million to address the oral health needs of California's underserved communities. Four dental schools in California were funded to:

- Recruit and retain an increased number of URM students,
- Reform dental school curricula to integrate community-based practice experience and courses in cultural competence, public health and the social and behavioral sciences, and
- Create a state and national policy agenda that will increase the number of URM in the dental work force.

In an effort to increase the linguistic and cultural competencies of health care providers, California's Welcome Back Initiative has assisted 4,000 internationally trained,

but California-resident, health care professionals to obtain professional credentials and licensing which will allow them to work in the US.

Issue Advocacy/Education

A number of organizations are engaged in issue advocacy and education at both the federal and state levels. Examples include California Tomorrow and the Campaign for College Opportunity. California Tomorrow⁶⁹ strives to create more and better college opportunities for the state's increasingly diverse student population. Much of its focus is on building support for the community college system.

Educators hold high hopes for The College Opportunity Act (SB 1709), as described on page 28, which is endorsed by a coalition of the California Roundtable, a leading business group, the Mexican American Legal Defense and Educational Fund and the Community College League of California.

Persistent Problems

Despite all of these responses, little progress seems to have been made on some of the toughest issues, which are:

Admissions barriers. URM enrollments continue to lag in all the health care professions except public health, in part due to the removal of policies that once opened doors to minorities.

Career counseling and academic support. Until middle school, high school and college students are provided with college-preparatory courses and programs, the skills to apply for and succeed in college and an understanding of the variety and financial promise of health care careers, the situation will continue to stagnate.

Financial aid. Overcoming financial barriers for students of low socio-economic status requires a broad array of financial tools, and a coordinated effort to put help in the hands of those who most need them (for training in all the professions). These barriers include generally widening income disparities, increased cost of education (direct tuition, ancillary expenses, and opportunity costs), and the decreased purchasing power of financial aid.

Building diversity-friendly institutional climates. Many HPEI have not adopted the mission statements, policies, and procedures needed to ensure greater URM participation. Without more action at the HPEI level progress will continue to be limited.

Lack of consolidated data. Difficulties collecting and compiling data on the wide range of health care careers, with their widely differing educational trajectories, make it hard for advocates and researchers to know where things stand. This is especially problematic for the 200+ allied health professions, which are licensed by different entities.

An Action Agenda for California

There is remarkable consensus on an action agenda across the IOM, Sullivan and other major studies as well as the experts and stakeholders that we interviewed:

Health Professions Educational Institution (HPEI) Reforms

- More of California’s HPEI need to adopt strong mission statements and policies in support of increased diversity within their student bodies.
- More institutions need to change their admissions decision-making to reflect a broader range of acceptance criteria, including experience with and/or intent to serve underserved communities, language and cultural competency, and other qualitative complements to the quantitative criteria now being used.
- More steps need to be taken in order to ensure that the institutional environment as a whole supports the achievement of diversity goals. These steps include more URM faculty, URM representation on decision-making bodies and academic support for URM students.
- Accreditation bodies, government and private donors should work to ensure that HPEI reforms are implemented and apply financial and/or sanctions when they are not.

Increased Investment in Health Professions Education

- Resources are needed in order to expand the capacity of HPEI to train more health professionals. Without more faculty, facilities and other training resources none of the other strategies for addressing the workforce shortage and diversity problems can be successful.

Career Counseling and Academic Support

- Best-practice standards for academic interventions, support, and counseling need to be developed and applied through new or enhanced programming at the K–college levels and, in particular, at schools with large URM student bodies.

Career Promotion

- A large-scale effort to market health care careers to young Californians is needed. It should focus on the elementary, middle, and high school levels, with particular attention to California students’ diverse abilities, cultural and language competencies, and career expectations.

Financial Aid

- State and local sources of financial aid should work toward investment increases in student financial aid, increases that are commensurate with increases in the cost of health care profession education.
- More funding is needed to enhance training opportunities for under-represented minority students. Information about these aid opportunities needs to be effectively disseminated to high school and college counselors as well as students and their families.
- Expanded grant, scholarship, and loan-forgiveness programs for URM training are needed in all the health careers where the cultural and linguistic competencies of the workforce are out of balance with the state’s population characteristics.

Centralized Data

- Establish a centralized location for health care workforce data analysis, forecasting, and reports.

Appendix

Resources Consulted

The following is a list of individuals interviewed for the study.

Individual Interviewed	Organization	Title
Veronica Abernathy	Tufts University, School of Medicine	Medical Student
Lupe Alonzo-Diaz	Latino Coalition for a Healthy California	Executive Director
Ignatius Bau	The California Endowment, Culturally Competent Health Systems	Director
Xylina Bean	King/Drew Medical Center	Director
Jury Candelario	Asian Pacific AIDS Intervention Team	Division Director
Valerie Coachman-Moore	Coachman-Moore & Associates	Consultant
Yasmine Delahoussaye	Los Angeles Valley College	Vice President, Student Services
Clyde Evans	Association of Academic Health Centers	Former Vice President
Jose Ramon Fernandez-Pena	Welcome Back Initiative and San Francisco Bay Area Regional Health Occupations Resource Center	Statewide Coordinator and Director
Calvin Freeman	Calvin Freeman and Associates	Consultant
Romalyn Galacgac	Asian Pacific Health Care Venture	Program Coordinator
Ron Garcia	Stanford School of Medicine	Director of Center of Excellence
Frank Gilliam	UCLA Center for Community Partnerships	Associate Vice Chancellor
Paul Glassman	Pacific School of Dentistry, California Initiative Dental Pipeline Program	Associate Dean and Director
Natalee Greene	Union Bank of California	Vice President
Marge Grey	Office of the Chancellor, California State University	Assistant Vice President
Wayne Herriford	Catholic Health Care West	Director of Human Resources
Cornelius Hopper	The California Endowment	Board Member
Russell Lim	UC Davis School of Medicine	Associate Clinical Professor/ Director of Diversity Education and Training
Tomás A. Magaña	Children's Hospital and Research Center at Oakland, FACES for the Future	Co-Founder and Co-Director

Individual Interviewed	Organization	Title
Martin Martinez	California Pan-Ethnic Health Network	Policy Director
Lisa Nordlander	Sutter Health	Director, Spiritual Care Services
Justin Rico Oyola	Equal Justice Society	Associate Director of Projects and Coalitions
Sora Park-Tanjasiri	Cal State Fullerton	Professor
Marilyn Pollard	California Rural Indian Health	Director
Harold Reaves	Private Practice	Physician
Lola Sablan-Santos	Chair, Council on Multicultural Health, California Department of Health Services (CDHS) Office of Multicultural Health	Executive Director
Gary Sayed	Charles R. Drew University	Dean of the College of Science and Health
Eva Schiorring	Center for Student Success	Senior Researcher
Cindy Sherwood-Green	Sacramento Employment Training Agency	Workforce Development Manager
Abdi Soltani	Campaign for College Opportunity	Executive Director
Louis Sullivan	Co-Chair, Sullivan Alliance	Former Secretary, U.S. Department of Health and Human Services
Diane Tomada	Health Professions Education Foundation	Interim Executive Director
Bernadeen Valdez	California Department of Health Services, Office of Multicultural Health	Health Education Consultant Specialist
Monique Voss	Health Professions Education Foundation	Program Director
Martin Waukazoo	Native American Health Center	Director
Tyree Weider	Los Angeles Valley College	President
Phaizon Wood	Project GRAD Los Angeles	Vice President
George Zamora	The California Endowment, Work Force Diversity	Program Associate

Endnotes

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