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# ALLIED HEALTH: THE HIDDEN HEALTH CARE WORKFORCE

*Addressing the Long Term Need for Qualified,  
Culturally Competent Allied Health Professionals*

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 The  
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Endowment

# Allied Health: The Hidden Health Care Workforce

## Addressing the Long Term Need for Qualified, Culturally Competent Allied Health Professionals

### Summary of Barriers Identified by the Healthcare Workforce Coalition

#### Educational Capacity

California's public institutions of higher education provide the bulk of accredited health professions training opportunities for Californians seeking a career in the allied health field. Long-term planning for the development of a qualified, diverse allied health workforce requires that budget cuts be prioritized in a way that will not cripple California's ability to train allied health professionals within these institutions. Preserving the public educational institutions' capacity to train professionals to enter high-demand jobs, such as health care, will facilitate California's economic recovery and help to meet the long-term, increased need for health care services in the state.

#### Faculty Shortages

Recruiting a sufficient supply of faculty to teach health professions programs at any level is difficult, primarily because a higher salary can be earned practicing than teaching. Educational capacity and faculty shortage issues must be addressed concurrently because expanding capacity in programs alone will not be effective unless there is sufficient faculty to serve the programs.

#### Clinical and Experiential Training

Despite many hospitals partnering with educational institutions to provide the clinical training component for allied health, there are still an insufficient number of clinical training opportunities. Specific reasons include preceptor-to-student ratio requirements, as well as state-approval requirements for training programs to operate.

*For recommendations, please see page 6.*

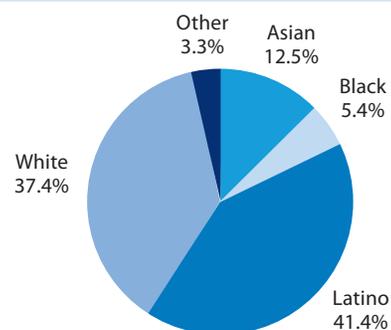
### Introduction

The impact of current economic conditions in the nation and the state is evident even in health care, an industry once thought to be recession-proof. Although the current condition of California's economy has caused many health care professionals to postpone retirement or increase work hours, ameliorating the health care worker shortage in the short-term, policymakers and others must be cognizant of the need to develop a sufficient supply of qualified, culturally competent allied health professionals to meet the long-term demands for health care services in California. Allied health includes professions such as clinical laboratory scientists, radiological technologists, and respiratory therapists, among many others.

According to the California Department of Finance, by the year 2020, California's population is expected to increase by 10 million people, with more than 6 million residents projected to be 65 years of age or older. This increase in the 65 and over population represents a 75.4 percent increase since 2000. As California's population ages, older people will be retiring and leaving the workforce, while at the same time, increasing the demand for health care services.

Furthermore, California has the most ethnically diverse population in the nation, with projections indicating that it will become even more diverse in the coming decade. The Latino population is projected to rise from 32.4 percent in 2000 to 41.4 percent in 2020. Asians are the state's second fastest growing racial/ethnic group and are projected to increase from 11 percent to 12.5 percent in the next 10 years. California's ethnically *non-white* population will comprise almost two-thirds of the state's population by 2020.<sup>1</sup> These statistics underscore the need to develop a culturally competent allied health workforce pipeline that will be able to provide quality, appropriate care to the state's increasingly diverse patient population.

Projected 2020 California Demographics



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The importance of preparing a highly-skilled, culturally competent health workforce is also vital to the efforts being undertaken on a national level in regard to health care reform. In anticipation of this reform, California must have a pipeline of allied health workers in place to meet an increased demand for services. A sufficient allied health workforce supply will facilitate better access to primary care, thereby easing emergency department patient loads, and reducing the costs associated with delivering care.

To address health professional shortages, hospitals have invested substantial cash and in-kind resources toward workforce education and training programs. The state has also allocated significant resources with efforts such as the Governor's Nurse Education and Allied Health Initiatives. These investments have been vital and are critical to addressing the shortages, but become increasingly challenging in the current economic climate.

This brief is intended to stimulate dialogue among legislators, their staff, industry, education and other stakeholders regarding the development of innovative strategies to address the need for allied health professionals long-term, so when the economy does recover California will have a qualified, culturally competent allied health care workforce to replace the multitudes who will eventually retire.

### California Hospital Association Healthcare Workforce Coalition

In recognition of the allied health workforce shortage, the California Hospital Association (CHA) created the Healthcare Workforce Coalition. The CHA Healthcare Workforce Coalition's mission is to create and lead a statewide, coordinated effort to develop and implement strategic solutions to the shortage of specified non-nursing allied health professionals. Members of this broad coalition include CHA member hospitals and health systems, as well as various stakeholders, including representatives from the University of California (UC), California State University (CSU), California Community Colleges, California Labor and Workforce Development Agency, UC San Francisco Center for the Health Professions, Connecting the Dots Initiative, Campaign for College Opportunity, Office of Statewide Health Planning and Development, and the California Primary Care Association, among others.

The Healthcare Workforce Coalition has spent the last year researching, identifying and analyzing the root causes of the shortages. This brief has been developed based on the results of this work. While the recommendations contained here do not necessarily require legislation, they do require the attention of policymakers when it comes to funding California's public institutions of higher education and workforce development in the state.

### Specific Allied Health Care Workforce Needs

In December 2007, CHA surveyed its hospital and health system members to determine which health professions have the greatest impact on access to care and hospital efficiencies when vacancies exist. The survey results indicated that in allied health, the top two positions, aside from nurses, are clinical laboratory and medical imaging professionals. The survey also revealed that hospitals are adversely impacted by a shortage of pharmacists. Although pharmacists are not considered part of allied health, a shortage of just one hospital pharmacist can hinder hospital efficiencies and access to care. Therefore, this brief will focus on specific shortages in clinical laboratory and medical imaging, as well as in hospital pharmacy.

#### Clinical Laboratory Scientists and Medical Laboratory Technicians

The shortage of clinical laboratory scientists (CLS) and medical laboratory technicians (MLT) is one of the most pressing workforce issues currently facing hospitals. These workers are an integral part of the patient care delivery team, conducting a wide range of diagnostic tests from simple blood tests to genetic testing. Test results are utilized by physicians to determine treatment plans for patients, thereby directly affecting patient care.

#### Medical Imaging Technologists

Radiological technologists (RT) within the hospital imaging environment perform specialized services using highly diverse modalities such as X-ray, computed tomography (CT), magnetic resonance imaging (MRI), positron emission tomography (PET), ultrasound, and fluoroscopy. These professionals provide diagnostic, therapeutic and interventional services in both inpatient and ambulatory settings. RTs are commonly utilized in imaging-based areas including radiology, echocardiography, electrophysiology,

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catheterization labs, mammography, radiation therapy, and nuclear medicine. In addition to patient care, these professionals are very important for organizations participating in imaging research.

### Hospital Pharmacists

The role of the hospital pharmacist is vital to the delivery of quality health care. Hospital pharmacists are concerned with the drug and disease management of patients in acute-care health facilities. They work collaboratively with other health care professionals to devise the most appropriate drug treatment for patients. In some cases, they are involved in setting up clinical trials, evaluating new medications, re-evaluating current medications and providing medication therapy recommendations that are the safest and most effective for individual patient needs.

Qualified pharmacy technicians can support pharmacists, allowing them to fulfill their most important role of drug utilization and clinical pharmacy. Their role is complementary to the pharmacist's and does not replace the pharmacist's judgments providing medication therapy. The pharmacy technician classification is an understudied category with little reliable data. Therefore, for the purposes of this document, the focus will be on the pharmacist shortage specifically, reserving consideration of pharmacy technician issues for discussions related to increasing qualified and skilled technicians.

## Issues and Barriers Linked to Allied Health Workforce Shortages

Educating and training an adequate, well-distributed supply of allied health professionals in California is challenging because the issues and barriers linked to the shortages are highly complex. This brief focuses on the top-ranking barriers identified by CHA's Healthcare Workforce Coalition. These barriers include an insufficient number of accredited educational programs and limited "slots" within those programs (educational capacity), faculty shortages and an inadequate number of clinical training sites.

Additional barriers that were identified by the coalition include fewer programs in rural and remote areas, limited distance learning opportunities in allied health, and a lack of visibility and awareness of the allied health professions among young people.

### Educational Capacity

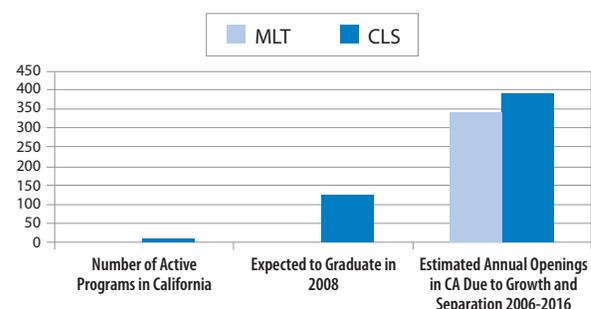
One of the most critical barriers to increasing the allied health workforce supply is the insufficient number of accredited educational programs in California. This is well-illustrated within the CLS profession. The ratio of CLS supply versus projected need through 2016 is at a critical level. According to *Closing the Health Workforce Gap in California: The Education Imperative*,<sup>2</sup> the gap for CLS is at the top of the list within allied health, with a projected shortfall of 559% in the next decade.

With 13 programs in California, four academic and nine hospital-based,<sup>3</sup> producing approximately 119-125 graduates annually,<sup>4</sup> it will be difficult to fill the estimated 390 openings for CLS positions annually for years 2006-2016.<sup>5</sup> (See Diagram 1.)

California has recently implemented licensure for MLTs to help mitigate the impact of the CLS workforce shortage. In California, MLTs can perform phlebotomy and moderately complex testing, and supervise lower-level laboratory workers. However, even with the addition of the MLT classification, the CLS workforce shortage continues to be severe because MLTs cannot perform more complex testing. California currently has only one formal, accredited MLT training program, although additional programs are slated to open in the fall of 2009 and will seek accreditation as soon as possible.

The issue of a limited number of educational programs with respect to radiological technology is most prevalent within the specialty areas. Hospitals and other health care providers identify medical imaging as one of the areas most difficult to fill because there are very few formal, accredited training programs for the specialties. One area where this is especially problematic is in diagnostic medical sonography.

**Diagram 1: Clinical Laboratory Workforce Programs Graduates vs. Projected Need (California)**



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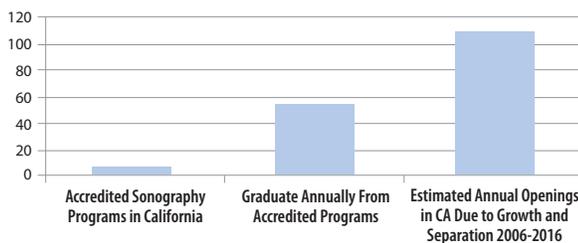
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Sonographers can enter the profession in multiple ways. California currently has a total of 22 sonography programs, but only seven are accredited. Therefore, a large number of graduates come from numerous non-accredited programs.

The distinction between accredited programs and non-accredited programs is important to understand. While the number of schools offering sonography programs has increased in recent years, hospital imaging directors are reluctant to hire graduates from the many non-accredited programs because their skills do not meet hospital needs.

Diagram 2 shows the number of accredited sonography program graduates annually at 54,<sup>6</sup> while the Employment Development Department, Labor Market Information Division projects annual openings of 110.<sup>7</sup> Similar issues exist with regard to the other imaging specialties such as MRI, CT, nuclear medicine, and cardiovascular interventional radiology. This means that hospitals will have to provide their own on-the-job training, which is challenging for hospitals that are already understaffed.

**Diagram 2: Diagnostic Sonography Programs, Graduates, and Estimated Annual Openings in California**



### Faculty Shortages

Recruiting a sufficient supply of faculty to teach health professions programs at any level is difficult primarily because practitioners earn higher salaries than teachers. To address faculty shortages in nursing, many hospitals have released staff to serve as adjunct faculty, while still paying their wages and benefits. This release also requires a backfill of the position in the hospital.

Faculty shortages are especially an issue for California's schools of pharmacy. There is considerable difference in the salary of practicing pharmacists and non-tenured faculty, leaving little incentive for graduates, who may have significant educational debt load, to enter into teaching.

Educational capacity and faculty shortage issues must be addressed concurrently because expanding capacity in programs alone will be ineffective unless there is sufficient faculty to serve the programs.

### Clinical and Experiential Training

Many allied health professions require completion of a clinical training component. The clinical requirement varies in length depending on the profession. Generally speaking, educational programs partner with hospitals and other health care providers to provide the clinical training opportunities necessary for students to obtain certification and/or licensure in a given profession. Hospitals provide clinical rotations and preceptors for clinical training, while educational institutions provide the curriculum and accreditation for the program.

Despite existing partnerships, however, there are an insufficient number of clinical training opportunities to meet demand. While the reasons for this may vary, specific issues include state-approval requirements for training programs to operate, preceptor-to-student ratio requirements, and, more recently, the economic climate leading to hiring freezes, thus reducing staff supply to dedicate to training.

Licensure as a CLS in California requires obtaining a bachelor's degree and completion of a 12-month internship training program approved by the California Department of Public Health's Laboratory Field Services (LFS). The application and review process for becoming an approved training site can take some time, delaying a hospital's ability to train. The approval process can also deter smaller hospitals, which have significantly limited resources, from becoming clinical sites.

In imaging, the current lack of clinical training opportunities for complex specialties makes it difficult for professionals to obtain advanced training. This issue is aggravated by reluctance on the part of some training programs to share clinical training sites.

Pharmacy also suffers from an insufficient number of experiential training opportunities. Experiential training of 1,500 hours is necessary for students to complete their education and training, and graduate with a pharmacy degree. Reasons for a limited number of training opportunities include the time commitment required to offer experiential training, and a lack of trained preceptors. (Preceptors must be trained per school of pharmacy accreditation requirements.)

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### Recommendations

#### Preserve and Protect Funding for California's Institutions of Higher Education

California's unprecedented budget crisis is forcing policymakers to make very difficult decisions regarding funding for programs and services in the state. In this current economic environment, budget cuts are necessary and inevitable.

However, funding for California Community Colleges, CSUs, and UCs must be protected. These institutions provide the bulk of accredited health professions training opportunities for Californians seeking a career in the allied health field. Unfortunately, many of these programs are small compared to the other programs offered, and therefore tend to be more vulnerable to budget cuts. Once allied health programs are closed down, they are very difficult and expensive to revive. Long-term planning requires that budget cuts be prioritized in a way that will not cripple California's ability to educate and train allied health workers in the coming decade, when the need will be most critical.

Although the health care industry is not immune to the effects of an ailing economy, it is a sector projected to have high growth in the next 10 years. According to the US Department of Labor, Bureau of Labor Statistics, "Health care will generate 3 million new wage and salary jobs between 2006 and 2016, more than any other industry."<sup>8</sup> Preserving the public educational institutions' capacity to train professionals to enter high demand jobs, such as health care, will facilitate California's economic recovery and help to meet the long-term, increased need for health care services in the state.

Furthermore, these institutions prepare the most diverse populations of students in California. Indeed, these students are representative of its culturally diverse patient population. It is imperative that the state preserve its investment in these institutions to ensure the creation of a culturally competent, well-qualified allied health care workforce that can meet future demand.

#### Preserve and Protect Funding for California's Regional Occupational Programs (ROP)

Regional Occupational Programs (ROP) are funded primarily by the state through average daily attendance. The purpose of the ROP is to prepare students to enter the workforce with the skills

and competencies necessary to succeed and pursue advanced training in higher educational institutions. They provide high-quality learning opportunities to a diverse population of high school and adult learners for employment, skill upgrades, career changes and/or advanced education. Programs are linked directly to business and industry, and provide work-based learning opportunities for students. Students obtain access to a broad array of training opportunities, expensive technical equipment, and specially trained and experienced instructors.

ROPs are currently experiencing budget cuts that have caused programs to contract and/or close altogether, including some that provided training in allied health. Again, the Healthcare Workforce Coalition recognizes that in this climate, budget cuts are inevitable. However, it should be noted that in this time of high unemployment, ROPs provide the type of education and training opportunities that students and adult learners need to get jobs in high-demand industries, including allied health. As ROP funding is considered, the Healthcare Workforce Coalition strongly urges legislators and the Governor to protect funding for these valuable programs.

#### Incentivize Public-Private Partnerships for Allied Health Workforce Education and Training

CHA commends Governor Schwarzenegger for his leadership in creating the Allied Health Initiative, a \$32 million public-private partnership formed to bring regional industry and education leaders together for the purpose of developing and expanding effective allied health workforce education and training partnerships. This initiative, funded through the federal American Recovery and Reinvestment Act and Workforce Investment Act, is modeled after the successful Nursing Education Initiative, which created a multi-agency taskforce to address California's critical shortage of registered nurses.

Public-private partnerships have proven very effective in addressing the need to expand programs, increase faculty supply, and provide additional clinical training sites. For example, in response to the community health crisis of a nurse shortage in the greater Sacramento region, Sutter Health partnered with Los Rios Community College District's Contract Education and Sacramento City College's nursing program to create the extended campus of city college's associate degree nursing program, the Sutter Center for Health Professions (SCHP). This successful partnership addressed simultaneously the need for expanded capacity in the program, faculty and clinical training.

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In these economically challenging times, it is difficult to determine if such allocations, such as the Allied Health Initiative, will continue. However, the Healthcare Workforce Coalition recommends that this allocation be renewed in 2011 with a specific emphasis on allied health workforce development in occupations of high need with an emphasis on building critical skills.

### **Eliminate Geographic Barriers so Statewide Shortages Can Be Addressed**

Regional approaches and solutions to workforce shortages are known to be the most effective. There are many success stories from throughout the state that illustrate the success of partners coming together to address a regional workforce demand.

However, there are still many regions of the state that are geographically challenged to engage in strategic regional workforce planning and partnerships because of their remote location and/or their lack of access to local health professions education programs.

The Healthcare Workforce Coalition is seeking increased opportunities for distance learning so additional students can enroll in health professions programs statewide. Utilizing technology to allow expanded access to didactic portions of education, not only increases access to educational programs, but also increases the likelihood that students will remain in their communities. This is especially important in rural and underserved areas that often struggle to find a qualified workforce reflective of the population it serves. Increased opportunities for distance learning can also open the door to allied health for citizens of regions that are experiencing shifting economies, such as the timber industry, and others.

With regard to simulated laboratories, the Healthcare Workforce Coalition encourages analyzing the use of sim-labs as a means of providing training for allied health. While utilized in nursing, it is still unclear how sim-labs may play a positive role in allied health education and training.

### **Ensure Clear Pathways With Adequate Support for Students to Move Toward Completion, Certification and/or Licensure**

Currently in California, there are many pipeline programs that prepare middle and high school students to work in the health professions. Many of the models are schools-within-a-school, where the curriculum is geared toward preparing students for a career in the health and medical science sectors.

Examples include California Partnership Academies, which are high schools focused on smaller learning communities with a career theme, 55 of which focus on health. These academies have industry partners and provide mentoring and internships. Another exemplary model is the FACES of the Future program at Oakland Children's Hospital. FACES is a three-year internship program that introduces underrepresented minority high school students to the health professions, assists them in entering educational programs of their choice, and equips them with the necessary personal skills to succeed in their chosen profession.

California also has a state chapter of the national Health Occupations Students of America (HOSA) program. HOSA is national student organization supported by the U.S. and California Departments of Education that supplements and compliments health occupations education curricula. HOSA provides students in secondary, postsecondary and collegiate programs with opportunities to develop personal, leadership, and careers skills needed by health care providers.

According to the San Diego Science Alliance, *Latino Health & Science Career Connections May 2007 Report*,<sup>9</sup> the success of health pathway and pipeline programs depends on the contribution of many players. Among the needs for ensuring successful outcomes for students is developing stronger partnerships that facilitate continuity of coursework and ease student transitions to post-secondary education. This issue is consistent with concerns expressed by the CHA Healthcare Workforce Coalition.

To ensure that health academy students do not fall through one of the many cracks in the pipeline, the coalition recommends the development of a framework of support for students as they move toward graduation, certification and/or licensure. Strong advising that ensures students have clear expectations of academic requirements early on (and remediation if necessary) can mitigate attrition rates and prevent some students from falling through the cracks. Case management is essential to ensuring the students have support in other areas of life that have the potential to derail their educational goals.

Pipeline and pathway programs are important because these students reflect the wide diversity in California. These students are the culturally competent health workforce pipeline of the future. However, all too often, these students never make their way into the health professions because the system currently lacks the support and infrastructure to ensure a clear path toward their goal.

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### Conclusion

Although numerous studies have analyzed allied health workforce shortages and articulated the need for action, efforts to implement recommendations have been hindered by the lack of a coordinated effort involving various stakeholders and by budget constraints. Current budget conditions aside, California needs to develop long-term, innovative and coordinated strategies for addressing the looming allied health workforce shortage. This brief is intended to serve as a catalyst for discussions regarding next steps toward development and implementation of those strategies.

### Acknowledgements

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### References

- <sup>1</sup> California Department of Finance, US Census 2000, Population estimates. [www.census.gov/Press-Release/www/releases/archives/population/010048.html](http://www.census.gov/Press-Release/www/releases/archives/population/010048.html).
- <sup>2</sup> Health Workforce Solutions LLC. (2007). *Closing the Health Workforce Gap in California: The Education Imperative*. San Francisco, CA: Hargreaves, R., Cherner, D., O'Neil, E., Solomon, K., Semerdjian, J.
- <sup>3</sup> Bates, T. & Chapman, S. A. (April, 2007). Clinical Laboratory Science (Medical Technology) [Abstract]. *Tracking the Supply of Health Professions Education Programs in California*, 30-33. University of California, San Francisco, Center for the Health Professions: Health Workforce Tracking Collaborative.
- <sup>4</sup> American Medical Association. (2009). *Health Professions Data Book, 2008-2009*.
- <sup>5</sup> State of California, Employment Development Department, Labor Market Information Division. [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov).
- <sup>6</sup> American Medical Association. (2009). *Health Professions Data Book, 2008-2009*.
- <sup>7</sup> State of California, Employment Development Department, Labor Market Information Division. [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov).
- <sup>8</sup> United States Department of Labor, Bureau of Labor Statistics. (2009). [www.bls.gov/oco/cg/cgs035.htm#addinfo](http://www.bls.gov/oco/cg/cgs035.htm#addinfo).
- <sup>9</sup> San Diego Science Alliance (May 2007). *Latino Health & Science Career Connections*. [www.calendow.org/uploadedFiles/sdsa\\_final\\_report\\_1.pdf](http://www.calendow.org/uploadedFiles/sdsa_final_report_1.pdf).

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