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**CRITICAL ROLES:
CALIFORNIA'S ALLIED HEALTH WORKFORCE
FOLLOW-UP REPORT**



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Critical Roles: California's Allied Health Workforce

2014 Follow-Up Report

Background

In February 2011, the California Hospital Association (CHA) Workforce Committee released a report titled *Critical Roles: California's Allied Health Workforce*. Based on a survey of more than 125 hospitals and health systems, the 2011 report includes detailed information on allied health workforce vacancy rates, as well as retirement estimates for select allied health occupations. The report also puts forth a number of recommendations to address the long-term need for allied health professionals in California.

In 2013, CHA once again surveyed hospitals statewide in order to gather up-to-date data regarding the demand for health professionals in the short term, and to identify hospital workforce concerns in the coming years. The findings of the 2013 survey are contained in this follow-up report.

Selected Occupations

The 2013 survey included supplemental questions on the following 11 health occupations:

- Cardiovascular and Interventional Radiology (CVIR)
- Clinical Laboratory Scientist (CLS)
- Computed Topography (CT)
- Licensed Clinical Social Worker (LCSW)
- Magnetic Resonance Imaging (MRI)
- Medical Coder
- Pharmacist
- Physical Therapist
- Radiological Technologist
- Respiratory Therapist
- Ultrasound Technologist

Recommendations

Following is a summary of the CHA Workforce Committee's key messages to lawmakers, stakeholders and others regarding the future of health workforce development in California.

- In the coming decades, health professionals will be required to have a more complex set of skills. As the health care industry transforms due to implementation of the Affordable Care Act (ACA), health professional education and training programs also need to evolve and innovate in order to meet the current skill demands of health employers.
- Hospitals statewide have been doing their part to increase the number of trained physicians, nurses and allied health professionals by creating and heavily investing in workforce development partnerships. However, as gaps in funding for education grow more severe and reimbursements to health care providers continue to shrink, hospitals will not be able to increase investments to fill these gaps. Partners statewide must collaborate and coordinate in order to strategically leverage the resources that are available for workforce planning and development.
- Employer engagement at the early stages of collaboration and planning is critical to ensuring that strategies and investments are aligned with the workforce demands of the health care industry.
- Training resources must be directed toward occupations that are in high demand by health employers, as opposed to simply targeting resources toward jobs that require minimal training and preparation.



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Why are allied health occupations so critical?

When most people think about the health care workforce, they think about doctors and nurses who provide care directly to patients. Many health care professionals, however, work at the bedside or behind the scenes to provide laboratory, imaging and other critical services needed to diagnose and treat patients. Implementation of the ACA, coupled with an aging population that will soon be retiring from the health workforce and increasing the demand for services, requires that both near- and long-term strategies be developed in order to avoid severe workforce shortages. A comprehensive strategy must include a plan for addressing the need for allied health professionals, who are essential to the health care delivery team.

Clinical laboratory scientists (CLS), for example, are an integral part of the health care team. These professionals conduct a wide range of diagnostic assessments, from simple blood tests to genetic testing, to help physicians determine treatment plans. Workforce shortages in the clinical laboratory can cause delays in diagnosis and increase patients' length of stay. Today, 40 percent of the CLS workforce in hospitals responding to the survey is over the age of 55.

Imaging professionals, such as radiological technologists and diagnostic sonographers, use X-rays, magnetic resonance imaging (MRI) and ultrasound equipment to help health care providers view inside the human body. The advanced technology used in diagnostic imaging has enabled physicians to diagnose and treat patients quickly and efficiently. However, health care providers face challenges finding enough qualified professionals, especially in the specialty areas of MRI and ultrasound.

Although not part of the allied health category, hospital pharmacists are vital to the delivery of quality health care. Hospital pharmacists are concerned with the drug and disease management of patients and work collaboratively with other health care professionals to devise the most appropriate drug treatments.

The occupations described here, along with the others included in the survey, make up the support system for health care delivery. Workforce shortages or skill gaps in these professional areas impact hospital efficiencies and threaten timely access to care.

Survey Key Findings

- » Statewide average vacancy rate was highest for medical coders at 5.3 percent.
- » Ultrasound technologist average statewide vacancy rate was second highest at 4.9 percent.
- » Vacancy rates differ across various regions of the state.
- » Pharmacist and physical therapist vacancies have the greatest impact on access to care when openings exist.
- » Of respondents, 40 percent of the clinical lab scientist workforce is age 56 or older; 30 percent of coder workforce is age 56 or older.
- » Regarding issues impacting health workforce shortages, hospitals are most concerned about the implementation of health care reform.

Hospital Investments in Workforce Development

- » Pre-licensure nurse clinical training, nurse residencies, transition to practice and specialty training
- » Allied health pre-licensure clinical training
- » Hospital-based clinical laboratory scientist training programs
- » Dedicated faculty
- » Scholarships for health professions students
- » Intern and externships
- » Youth employment and development programs
- » Tuition reimbursement and incumbent worker training

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California Hospitals Make Significant Investments in Workforce Development

Hospitals throughout California make significant contributions to health workforce development. These contributions are both financial and in-kind in nature.

Hospital investments and contributions ensure that there is an adequate supply of health professionals to serve California's patient population. They also make lasting, positive impacts on local communities and regional economies. For example, the Youth Employment and Development (YED) program at one Southern California hospital provides mentoring and hospital work experience to high school students who receive high school credits and a paycheck for working in various departments at the medical center. Nearly all YED graduates complete high school and go on to college, and more than two-thirds pursue a health-related field of study.

Across the state, many programs that are solely supported by local hospitals make tremendous impacts on the lives of individuals, families and communities. These programs include clinical training for nurses and allied health professionals, as well as contributions of time and resources dedicated to the thousands of interns and high school students that spend time in hospitals each year gaining valuable work experience and career exposure. One system in the greater Sacramento region alone supports 3,000 students each year.

While it is difficult to put an exact price tag on the total value of these contributions, CHA estimates that California hospital investments in the future health workforce are in the tens of millions of dollars annually.

Survey Methods

Survey Components

The primary component of the survey, covering the period from October through December 2012, contained a set of questions that asked respondents to report staffing data (head count, new hires, separations, vacancies and per diem use, by position). Not all of the results from the primary survey component will be included in this report. Instead, this report will focus on key findings considered to be top indicators of health workforce needs, such as vacancy rates.

The primary survey component was distributed to

approximately 200 hospitals statewide, with 171 total facilities responding to the staffing questions, or 35 percent of all licensed beds in general acute care and related facilities in California.

In addition, the survey included a special set of supplemental questions that asked respondents to report on key workforce issues, including

the impact that vacancies have on patient care and hospital efficiencies, the age profile of selected allied health workers, the most difficult positions to fill and the perceived impact of environmental issues such as an aging workforce and health care reform. Representing approximately 29 percent of the total licensed beds at general acute care hospitals in California, 120 hospitals responded to at least one or more of the supplemental questions.

“ Across the state, many programs that are solely supported by local hospitals make tremendous impacts on the lives of individuals, families and communities. ”



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Survey Respondents

The rural versus non-rural geographic distribution of hospitals that responded to both components of the survey closely matches that of general acute care hospitals across the state. A comparison of distributions based on facility size, however, shows some important differences.

Small hospitals are underrepresented among survey respondents for both survey components. Hospitals with fewer than 100 beds represent just 16.4 percent of all primary survey respondents, and 18.9 percent of supplemental survey respondents, compared to 33.2 percent of all general acute care hospitals in the state. This means both survey components skew toward larger facilities, in particular for hospitals with 300 – 399 total beds. Hospitals of this size accounted for 20.5 percent of respondents to the primary survey component and 22.4 percent of respondents to the supplemental survey component, but represent just 12.2 percent of facilities across the state.

This is important to keep in mind, as smaller hospitals are often disproportionately, negatively impacted by regional health workforce shortages due to budgetary constraints that limit the size and scope of the workforce programs that they can support. Future surveys will need to ensure survey participation by hospitals of all sizes.

From a regional perspective, hospital members of the Hospital Association of Southern California (HASC) are somewhat underrepresented among respondents to both survey components. In the supplemental survey component, most of this imbalance is skewed toward hospital members of the Hospital Association of San Diego and Imperial Counties (HASDIC), with more hospitals by percentage of membership responding. In the primary survey component, most of the imbalance is skewed toward hospital members of the Hospital Council of Northern and Central California (HCNCC).

Survey Analysis

Survey analysis was conducted by the University of California, San Francisco, Center for the Health Professions.



Summary of Findings

Vacancy Rates

Table 1 illustrates the total vacancy rates by occupation.¹ Total vacancy rates for both coder and ultrasound technologist are considerably higher in comparison to other positions. Five of the 11 occupations have a higher than average vacancy rate.

Table 1: Vacancy Rates by Occupation

Position	Vacancy Rate
Coder	5.3%
Ultrasound Technologist	4.9%
Clinical Laboratory Scientist	3.6%
Pharmacist	3.3%
Physical Therapist	3.3%
MRI Technologist	2.9%
CT Technologist	2.8%
Radiologic Technologist	2.2%
LCSW	2.2%
Respiratory Therapist	1.3%
CVIR Technologist	1.2%
All Employees (avg.)	3.2%

¹ The vacancy rate is calculated as follows: number of vacancies reported as of the pay period closest to December 31, 2012/ (head count as of the pay period closest to December 31, 2012 + number of vacancies reported as of the pay period closest to December 31, 2012).

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Table 2 displays total vacancy rates by position, within the regional hospital associations. The data show some variation in reported vacancy rates for positions across the different regional associations, both in terms of the comparative rates across positions and the positions with the highest reported rates.

Hospital members of HASC reported comparatively high vacancy rates for CLS, CT, MRI, physical therapist and ultrasound technologist positions, with the highest vacancy rates in ultrasound, MRI and coding. Among hospital members of HASDIC, vacancy rates were highest for physical therapists, pharmacists and CT technologists. HCNCC reported the highest vacancy rates in coding and ultrasound, mirroring the statewide averages.

Impact of Vacancies

Hospitals were asked to rank the impact of staff vacancies (by position) on both patient care and hospital efficiency on a scale of 1 to 7 where 1 is equal to "no impact," 4 is equal to "somewhat negative impact," and 7 is equal to "very negative impact." Figure 1 shows the average ranking for each position (impact on patient care vs. impact on hospital efficiency). Overall, vacancies for physical therapists, pharmacists and respiratory therapists have the most negative impact on both patient care and hospital efficiency.

Table 2: Current Vacancy Rates by Hospital Association Region

Position	HASC		HASDIC		HCNCC	
	Number	Rate	Number	Rate	Number	Rate
Coder	24	5.5%	6	3.0%	28	6.4%
CLS	56	4.2%	12	2.8%	59	3.4%
CT Tech	14	4.5%	4	3.5%	15	1.9%
CVIR Tech	0	0.0%	1	1.3%	1	0.8%
MRI Tech	8	5.8%	1	1.6%	3	1.4%
Pharmacist	28	2.8%	15	3.6%	40	3.6%
Physical Therapist	35	5.1%	17	4.1%	40	2.4%
Rad Tech	22	2.8%	4	1.0%	23	2.2%
Respiratory Therapist	29	1.5%	3	0.4%	30	1.4%
LCSW	4	1.5%	5	2.0%	7	2.4%
Ultrasound Tech	22	6.0%	8	3.0%	26	5.0%

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For most positions, there is little difference in how hospitals perceive the impact of staff vacancies on patient care compared to hospital efficiency. This is underscored by the fact that, for most positions, the impact of staff vacancies on patient care and hospital efficiencies is strongly, positively correlated. The obvious exception to this is for coders; hospitals reported the perception that vacancies for coder positions have a more negative impact on hospital efficiency compared to patient care.

Age Profile of Allied Health Workforce

Table 3 (next page) shows the age profile for each position. For many of these positions, the age profile appears to be similar. The exceptions are CLS and coders. The data indicate that approximately 40 percent of the CLS workforce among respondents is 56 years of age or older; for medical coders, the share is 30 percent. Conversely, the data describing all other positions,

except MRI technologists, indicate that approximately 55- 60 percent of the workforce is age 45 or younger.

Retirement eligibility figures for CLS indicate that there will be a significant number of vacancies in this occupation if a majority of those eligible actually retire. Based on

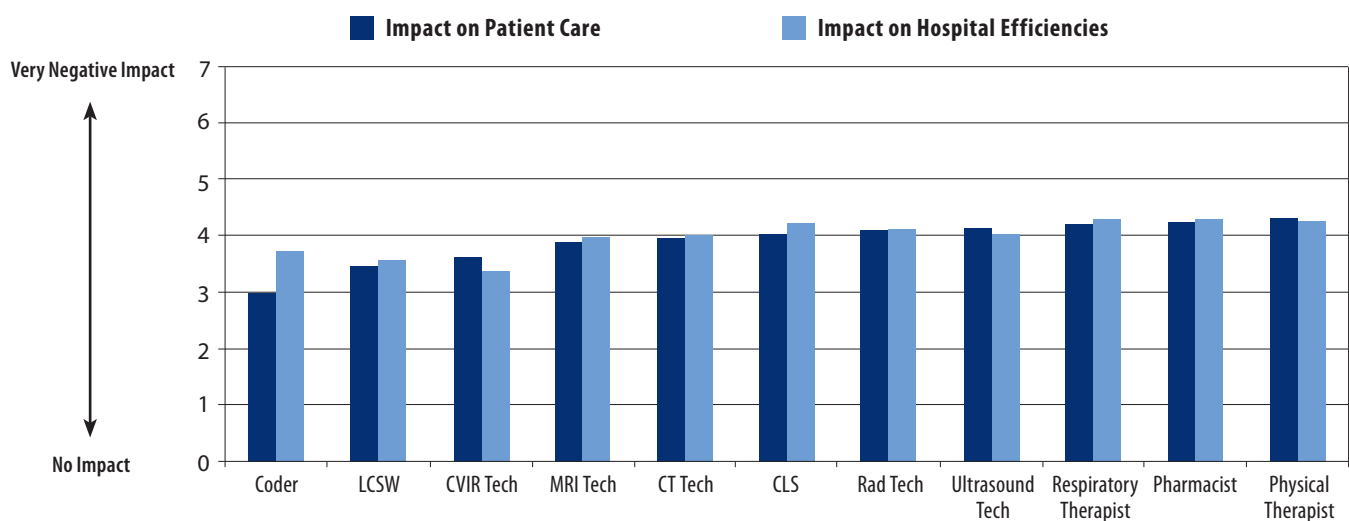
the reported head count, the percentage of CLSs 56 years of age or older equates to more than 1,200 CLS positions. This is alarming because there are a limited number of CLS training programs in California, many of which are hospital-based and serve relatively few students. According to a recent survey of both academic and hospital-based CLS training programs, only

211 graduates were produced in 2013.² Such a small number of graduates each year will make it difficult to meet the demand for this critical occupation.

“ Retirement eligibility figures for CLS indicate that there will be a significant number of vacancies in this occupation if a majority of those eligible actually retire. ”

² Information obtained through a direct survey of approved CLS programs in California. Survey conducted by Timothy Bates, UCSF, Center for the Health Professions.

Figure 1: Impact of Vacancies on Patient Care vs. Hospital Efficiencies, Average Rank by Position



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Furthermore, in the original 2011 survey, rural hospital respondents rated CLS vacancies as having the greatest adverse impact on hospital efficiencies and access to care, while at the same time the CLS average age was highest in rural facilities. These findings validate longstanding claims that the shortage of clinical laboratory professionals must be addressed statewide, but the findings also bring about a renewed urgency for focusing on the need to develop innovative solutions for addressing the CLS shortage.

Positions Most Difficult to Fill

Hospitals were also asked to indicate any positions that are considered difficult to fill. Several hospitals reported that they were having difficulty filling positions in more than one occupation, including licensed clinical social workers (and related behavioral therapists), audiologists, ultrasound technologists, pharmacists, occupational therapists and respiratory therapists. The primary reason given for why positions were difficult to fill was a lack of candidates with appropriate experience. A few hospitals reported challenges finding candidates who were bilingual in Spanish and English.

Table 3: Age Distribution by Occupation

Position	Distribution (%) by Age Group					Reported Head Count
	25-35	36-45	46-55	56-65	Over 65	
Respiratory Therapist	25.9	33.3	25.8	13.4	1.6	2,875
Physical Therapist	24.1	34.4	23.0	14.0	4.5	1,899
CVIR Tech	29.2	27.9	21.5	18.5	3.0	233
Pharmacist	23.4	32.2	26.7	14.4	3.3	3,358
CT Tech	18.3	36.2	29.2	14.7	1.6	627
Ultrasound Tech	23.7	30.6	32.1	12.3	1.2	1,080
Rad Tech	22.9	31.4	28.9	13.4	3.4	2,331
MRI Tech	10.8	31.5	42.0	14.1	1.6	305
Coder**	9.0	24.0	36.4	24.4	6.2	915
CLS*	10.1	18.0	31.0	30.5	10.4	2,941

* 40.9 percent of the clinical lab scientist workforce is age 56 or older

**30 percent of coder workforce is age 56 or older

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Environmental Concerns Impacting Workforce

Hospitals were asked to rank their concern regarding specific environmental issues on a scale of 1 to 7, where a ranking of 1 represents “not concerned,” a ranking of 4 represents “somewhat concerned” and a ranking of 7 represents “very concerned.” The environmental issues included the following:

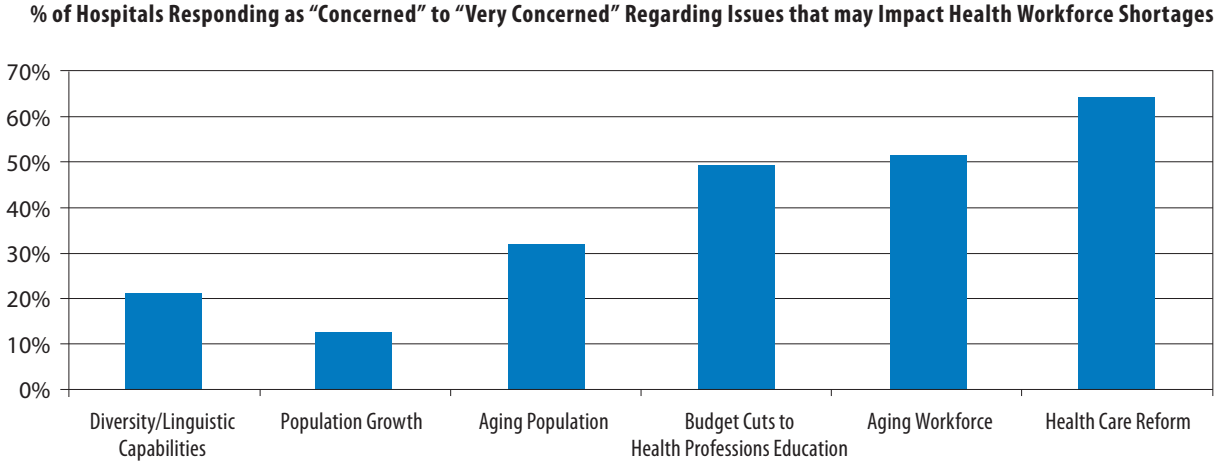
- An aging health care workforce
- Population growth in the region
- An aging population in the region
- Cultural diversity and linguistic needs
- Impact of health care reform
- Impact of budget cuts on health professions education

Figure 2 illustrates the percent of hospitals that were “concerned” to “very concerned” about the environmental issues listed above. Clearly, hospitals are most concerned with the potential impact of health care reform as it relates to health care workforce supply. This makes sense given the complexity of implementing reform combined with expectations that it will affect almost every facet of health care systems.

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Figure 2: Hospital Concerns Regarding Environmental Issues Impacting Health Workforce



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Conclusion

Evolving care models resulting from implementation of the ACA will drive demand for health professionals in new ways. The health care teams and delivery models of the future may look different than they do now. One thing is certain: health professionals will be required to have a more complex set of skills in the future. As the health care industry transforms due to implementation of the ACA, health professional education and training programs also need to evolve and innovate in order to meet the current skill demands of health employers.

Hospitals are critical partners in developing a solid health workforce. Hospitals statewide have been doing their part to increase the number of trained physicians, nurses and allied health professionals by creating and heavily investing in workforce development partnerships. Even the most financially stressed rural hospitals contribute both financial and in-kind support to help develop the health workforce needed to serve their communities. However, as gaps in funding for education

grow more severe, hospitals will not be able to increase investments to fill these gaps. Partners statewide must collaborate and coordinate in order to best leverage the resources that are available for workforce planning and development. With significantly diminishing funding from all sources, yet an increasing demand for services, it is now more important than ever that workforce development resources are targeted toward occupations that are in high demand by health employers, as opposed to simply focusing resources on occupations with minimal requirements or shorter investments of time.

Moving forward, and especially in light of health care reform, it is more critical than ever that all partners, including the state, the Legislature, education and industry collaborate and coordinate effectively around planning and resources. CHA looks forward to our continued work with policymakers and the state, as well as other health workforce partners, as solutions are developed and implemented.

“ *Hospitals statewide have been doing their part to increase the number of trained physicians, nurses and allied health professionals by creating and heavily investing in workforce development partnerships.* ”

Acknowledgements

CHA thanks the members of the CHA Workforce Committee for their contributions to this report. The committee's mission is to create and lead a statewide, coordinated effort to develop and implement strategic solutions to the shortage of specified allied health professionals. Allied health includes professions such as clinical laboratory scientists, radiological technologists and respiratory therapists, among many others.

Special thanks to Timothy Bates, analyst for the UCSF Center for the Health Professions, for his work in analyzing the data gathered from the survey. Timothy's expertise and knowledge were essential to the development of this report.

CHA would also like to extend a very special thank you to Teri Hollingsworth of HASC for administering the Allied Health Workforce Survey, without which this report would not be possible.

For more information about this report or the CHA Workforce Committee, please contact Cathy Martin, CHA vice president of workforce, at (916) 552-7511 or camartin@calhospital.org.



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