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ENVIRONMENTAL SCAN

HEALTHCARE

South Central Region

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CENTER OF EXCELLENCE **South Central Region**

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An Initiative of





Mission: The Centers of Excellence, in partnership with business and industry, deliver regional workforce research customized for community college decision making and resource development.

Vision: We aspire to be the premier source of regional economic and workforce information and insight for community colleges.

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Centers of Excellence, Economic and Workforce Development Program

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New and replacement jobs in healthcare occupations in the South Central Region are projected to grow by 20 percent, or over 13,000 jobs through 2014.

– Source: EMSI Complete Employment, 3rd Quarter 2009

Executive Summary

This report presents an overview of the healthcare industry for the California Community Colleges South Central Region/Region 6. This includes eight community colleges across all or part of four counties, including San Luis Obispo, Santa Barbara, Ventura, and northern Los Angeles Counties.

Any discussion or assessment of the healthcare industry must be made with due consideration to the current recession. This recession is said to have started in 2008, and is now widely accepted to be impacting all parts of the economy.¹ Current economic conditions force the careful evaluation of any short or long-term data projections. This is the “grain of salt” with which this report, its data, and narrative should be considered.

In the South Central Region, the healthcare industry is a major economic contributor, generating over \$21 billion in revenue and wages in 2006. The healthcare industry employs over 74,300 workers in the region with average annual earnings of \$52,008 per worker. In spite of the current recession, the healthcare industry is projected to produce almost 8,000 new job openings in the South Central Region by 2014, an increase of 11% over current levels of employment. New and replacement jobs in healthcare occupations are projected to increase by over 13,000 jobs for an overall increase of 20% through 2014. Although replacement jobs are not an indicator of industry growth, the number of projected replacement jobs in the region will increase the demand for well-trained, qualified healthcare workers.² The high, long-term demand for qualified workers is resulting in severe shortages in several important healthcare fields. For example, the demand for physical therapist assistants and occupational therapist assistants is projected to increase 25% through 2014.³

Based on the data and assessment presented in this report, including current college programs, skill and training gaps, and projected long-term industry need, the following recommendations can be made with some degree of confidence:

- Promote expansion and/or development of programs in the occupations with the greatest projected growth in the region. This may include: medical records technicians and coding specialists (and related HIT and HIM occupations); registered nurses (including specialists); medical and clinical laboratory technicians and scientists; pharmacy technicians; physical therapists; psychiatric technicians; occupational therapists; and radiological technicians.
- Increase outreach and recruitment in health occupations fields.
- Encourage greater region-wide coordination in health occupations education and training.
- Improve regional data collection from healthcare industry.

¹ National Bureau of Economic Research, 2008

² EMSI Complete Employment, 3rd Quarter 2009, Allied Health Employment Trends & Opportunities for the Central Region 2008, California Labor Market Information 2007

³ EMSI Complete Employment, 3rd Quarter 2009

Introduction

The Economic and Workforce Development Program, through the Center of Excellence initiative identifies industries and occupations with unmet employee development needs and provides community colleges information to allow for a response to industry workforce needs. The mechanism for providing information is through environmental scanning – gathering both internal (college) and external (industry and workforce organizations) data to help colleges make informed decisions about their program offerings and use of resources.

This is an environmental scan report of the healthcare industry in the South Central Region. This particular industry was selected because:

- It provides significant employment opportunities in the Region (over 74,000 workers in 2009);
- It is projected to grow 11% through 2014;
- Jobs in healthcare are generally good paying jobs;
- Regional colleges and local workforce investment boards are interested in the needs of the healthcare industry; and
- Regional colleges are already providing educational training programs to meet its needs and may be able to modify and/or expand their capacity to respond.

This environmental scan includes an overview of the industry, recognition of current economic impact, employer needs and challenges, community college current capacity, and recommendations on how to respond.

Industry Overview

Healthcare in the current recession. Any discussion or assessment of any industry at this time (Fall 2009) must be made with due consideration to the current recession. This recession is said to have started in 2008, and is now widely accepted to be impacting all parts of the economy.⁴ Current economic conditions force the careful evaluation of any short or long-term data projections. This is the “grain of salt” with which this report, its data, and narrative should be considered.

Industry growth and importance in the United States. Despite the recent economic turmoil cited above, healthcare continues to be one of the nation’s and state’s largest and fastest growing industries. Despite the current economic downturn, **nationwide**, total annual expenditures on healthcare were expected to reach \$2.4 trillion in 2008 and are projected to grow to nearly \$4.3 trillion by 2017; an annual average increase of about 7% per year.⁵ Overall industry job growth is expected to expand by 21.7% through 2016.⁶ This continues a decades-long trend of industry growth and exacerbates current healthcare occupation shortages, particularly among nurses.⁷

The healthcare industry in the South Central Region employs over 74,300 workers with average annual earnings of \$52,008.

– Source: EMSI

⁴ National Bureau of Economic Research 2008

⁵ U.S. Department of Health and Human Services 2007

⁶ U.S. Bureau of Labor Statistics 2007

⁷ U.S. Bureau of Labor Statistics 2006, Health Resources and Services Administration 2006

In California, healthcare employs over 1.1 million people in hospitals, clinics, and home health occupations and accounts for over \$169 billion in annual expenditures.⁸ During the next six years, all health care occupations, in nearly every region of the state, are expected to see significant growth. Many of these occupations are currently experiencing severe shortages of qualified personnel, particularly in nursing. According to Economic Modeling Specialists (EMSI, 2009) and the State of California Occupational Trends and Outlook Report (2007), among the health care occupations projected to grow the fastest through 2013 are: Registered Nurses 16%; Medical Laboratory Technicians 12%; Physical Therapist Assistant 24%; Home Health Care Workers 21%; Medical Assistants 19%; Certified Nurse Aides 14%; and Medical Records Technicians 12%.

In the South Central Region, the healthcare industry is a major economic contributor, generating over \$21 billion in revenue and wages in 2006. The healthcare industry employs over 74,300 workers in the region with average annual earnings of \$52,008 per worker. In spite of the current recession, the healthcare industry is projected to produce almost 8,000 new job openings in the South Central Region by 2014, an increase of 11% over current levels of employment. New and replacement jobs in healthcare occupations are projected to increase by over 13,000 jobs for an increase of 20% through 2014. Although replacement jobs are not an indicator of industry growth, the number of projected replacement jobs in the region will increase the demand for well-trained, qualified healthcare workers.⁹ The high, long-term demand for workers is resulting in severe shortages in several important healthcare fields. For example, the demand for physical therapist assistants and occupational therapist assistants is projected to increase 25% through 2014.¹⁰

Current economic circumstances may cause some of these numbers to be revised in the short term. However, over the long-term, data indicates healthcare job growth and demand for services is only temporarily impeded by economic conditions.¹¹

The impact of the current recession. Healthcare was traditionally one of those industry's considered to be somewhat insulated from economic fluctuations, i.e. "recession proof".¹² However, in the current economic climate, that does not seem to be the case. Despite the fact that healthcare is one of the few industry sectors to see any job growth in the last year (see Industry and Occupational Overview), there are signs of deepening trouble for the industry. The items listed below are compiled from a variety of sources and document the escalating economic troubles for the healthcare industry in California and the South Central Region:¹³

- Patients are putting off medical care because of job losses, job insecurity and high out-of-pocket expenses. As a result, the number of paying patients and profitable elective procedures is down.
- Like all organizations with an investment portfolio, healthcare organizations are losing money on investments. To operate, they need to regularly borrow money. Yet now, when they need working capital the most, the credit markets are all but frozen.
- In California, low Medical reimbursements for poor patients and the state budget crisis are making matters worse.

⁸ California Employment Development Department 2006, California Healthcare Foundation 2006

⁹ EMSI Complete Employment, 3rd Quarter 2009; Allied Health Employment Trends and Opportunities for the Central Region 2008; LMID 2007

¹⁰ EMSI Complete Employment, 3rd Quarter 2009

¹¹ U.S. DHHS, National Healthcare Expenditures Report 2008

¹² Business Week, March 25, 2008

¹³ California Hospital Association 2009; California Nurses Association 2009; American College of Physicians, November 2008; Los Angeles Times January 14, 2009 and January 31, 2009; SeekingAlpha.com January 7, 2009

- Most alarming to healthcare and hospital administrators, healthcare advocates and patients are the financial, economic and government crises all hitting at once.
- Despite job gains in healthcare cited earlier, large health insurers are reporting significant layoffs. Companies cutting jobs include WellCare, Cigna, United Health Group, and Aetna – all of which operate in California.

Industry and Occupational Overview

The facts and trends cited above must be considered when reviewing the long-term occupational outlook for the healthcare industry in the South Central Region. However, several expert analyses have concluded that *in the long-term*, once the recession has been weathered, healthcare will continue to be a growth industry.¹⁴

In the long-term, healthcare occupations are projected to be among the fastest growing occupations throughout the South Central Region. Statewide data supports this trend in that education and health services was one of only two industry divisions to post job gains during the month of March 2009.¹⁵ Additionally, even as the recession deepened, in a year over year comparison (March 2008 to March 2009), educational and health services was the only industry division to post gains over the course of the year.¹⁶

Given these many caveats, the charts and tables below provide an overview of the healthcare industry and occupational outlook in the South Central Region. Healthcare and social assistance make up a North American Industry Classification System (NAICS) super sector at the two-digit level. At a more defined five-digit NAICS code level there are a total of 22 industry sectors specific to healthcare. The following table presents basic healthcare industry information based on these 22 industry sectors.

Exhibit 1 – Healthcare Industry Growth in the South Central Region

The healthcare industry currently employs over 74,300 workers in the South Central Region. This number is expected to grow by 11% through 2014 to add almost 8,000 new jobs.

Basic Information	
2009 Industry Jobs	74,347
2014 Industry Jobs	82,339
Total Change	7,992
Total % Change	10.75%
Current Average Earnings per Worker	\$52,008

South Central regional data lags slightly compared state and national projections; the healthcare industry is expected to grow by 11% in the region, 12% at the state level and 13% nationally. The following chart and table present top occupations in the healthcare industry.

¹⁴ Center on Budget and Policy Priorities, December 2008; Standard and Poor’s Economic Analysis, 2008

¹⁵ EDD News Release 09-22, April 17, 2009

¹⁶ EDD News Release 09-22, April 17, 2009

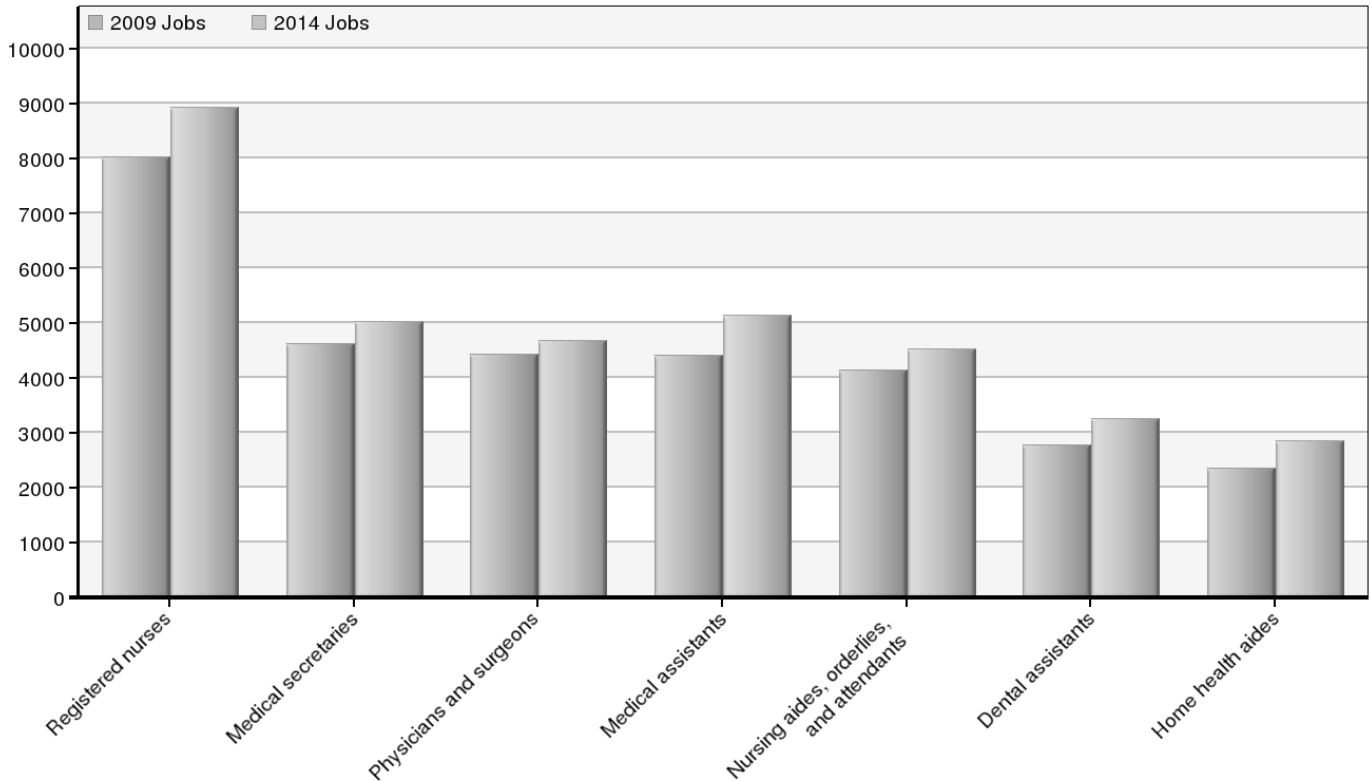
Exhibit 2 – Top Occupations in the Healthcare Industry

SOC Code	Name	2009 Jobs	2014 Jobs	Change	% Change
29-1111	Registered nurses	8,020	8,923	903	11%
43-6013	Medical Secretaries	4,612	5,028	416	9%
29-1069	Physicians and Surgeons	4,419	4,664	245	6%
31-9092	Medical assistants	4,401	5,141	740	17%
31-1012	Nursing aides, orderlies, and attendants	4,140	4,519	379	9%
31-9091	Dental assistants	2,773	3,251	478	17%
31-1011	Home health aides	2,350	2,837	487	21%

Source: EMSI Complete Employment – 3RD Quarter 2009

The occupations in the table above have been identified as the top occupations in the healthcare industry in the South Central Region based on total jobs and jobs change. Four occupations stand out in terms of growth through 2014: home health aides, 21% growth; medical assistants, 17% growth; dental assistants, 17% growth; and registered nurses, 11% growth. This same information is graphically displayed in the chart that follows.

Exhibit 3 – Top Occupations in the Healthcare Industry 2009-2014



The table and chart below detail the largest healthcare industries in the South Central Region. For the purposes of this report, “industries” in this context is used to describe the specialty sub-areas of the healthcare industry overall. So, in this discussion, hospitals are an “industry” separate from physician’s offices, nursing care facilities, and so on.

Exhibit 4 – Healthcare Industry Breakdown in the South Central Region

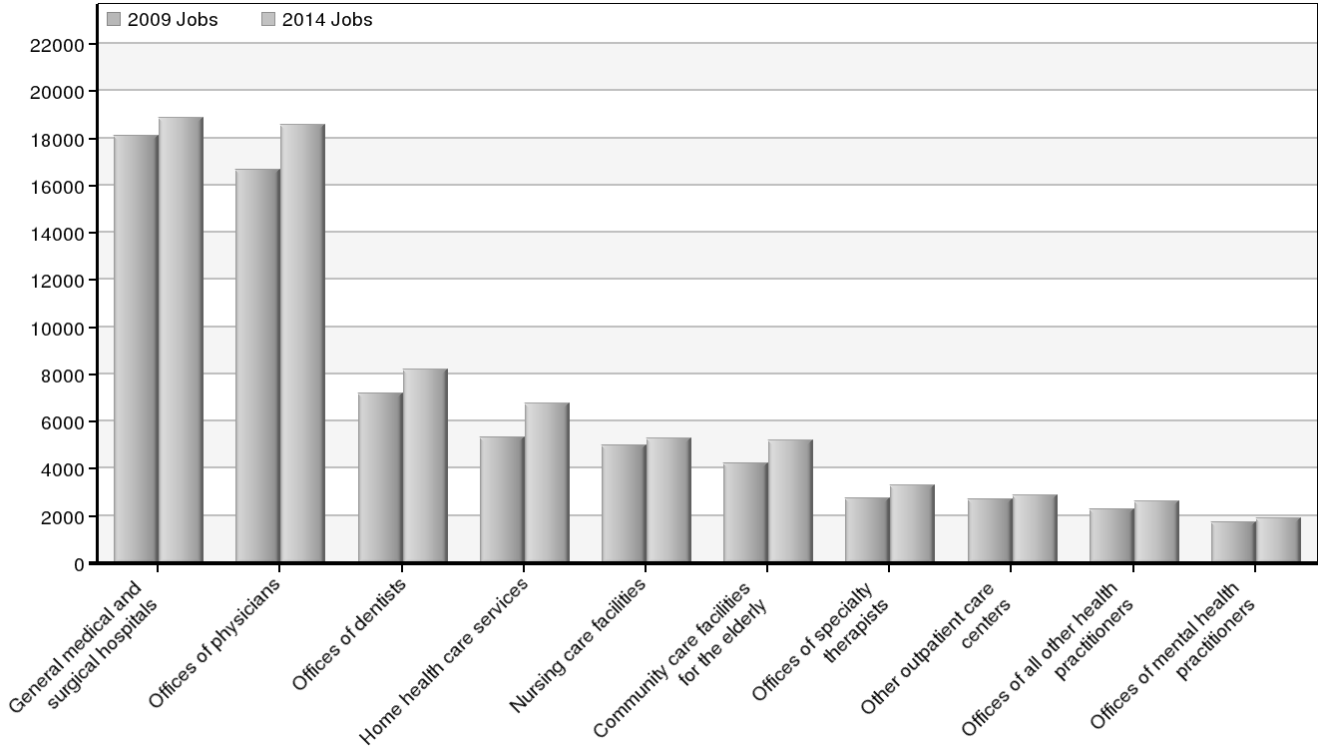


Exhibit 5 – Healthcare Industry Breakdown, Growth & Wages 2009-2014

NAICS Code	Description	2009 Jobs	2014 Jobs	Current EPW
62211	General medical and surgical hospitals	18,090	18,856	\$60,373
62111	Offices of physicians	16,666	18,592	\$75,841
62121	Offices of dentists	7,199	8,227	\$45,070
62161	Home health care services	5,324	6,758	\$26,088
62311	Nursing care facilities	5,003	5,306	\$30,996
62331	Community care facilities for the elderly	4,250	5,191	\$28,270
62134	Offices of specialty therapists	2,737	3,316	\$38,816
62149	Other outpatient care centers	2,726	2,882	\$57,548
62139	Offices of all other health practitioners	2,266	2,610	\$42,086
62133	Offices of mental health practitioners	1,741	1,918	\$46,742
62191	Ambulance services	1,719	1,628	\$42,679
62131	Offices of chiropractors	1,316	1,364	\$43,681

NAICS Code	Description	2009 Jobs	2014 Jobs	Current EPW
62151	Medical and diagnostic laboratories	1,005	1,062	\$61,752
62321	Residential mental retardation facilities	908	880	\$22,951
62132	Offices of optometrists	829	929	\$36,972
62399	Other residential care facilities	794	807	\$23,841
62322	Residential mental and substance abuse care	568	669	\$30,136
62142	Outpatient mental health centers	408	518	\$37,686
62221	Psychiatric and substance abuse hospitals	282	323	\$43,144
62199	All other ambulatory health care services	187	147	\$45,312
62231	Other hospitals	172	213	\$62,087
62141	Family planning centers	157	145	\$31,586
	Total	74,347	82,339	\$52,008

Source: EMSI Complete Employment - 3rd Quarter 2009

General medical and surgical hospitals and offices of physicians currently employ a total of 34,756 workers, or 47% of all healthcare industry workers in the South Central Region. Home health care services, nursing care facilities and community care facilities for the elderly account for 14,577 workers, representing an additional 20% of the healthcare industry jobs in the Region.

In 2009 there were 65,919 healthcare **occupational** jobs versus the 74,347 healthcare **industry** jobs. **Industry** jobs include custodial and all support occupations that serve the industry; **occupational** jobs are those that are specific to healthcare professions categorized under the Standard Occupational Classification (SOC) System. Please see **Appendix B** for a comprehensive list of healthcare occupations, growth projections, educational requirements and wage data.

Workforce Issues and Challenges

In compiling the data needed to prepare this assessment, the Center of Excellence has identified three major workforce issues and challenges that will impact the industry in both the near and long-term. These three issues are discussed below.

The economy – In the short term, over the next one-three years, the current state of the economy will be the biggest workforce challenge facing the healthcare industry overall. Many healthcare providers, particularly hospitals, will be fighting to survive financially. As discussed earlier, the recession is impacting healthcare several ways: patients and prospective patients losing their health insurance coverage; increased use of emergency rooms; slow or inadequate MediCal reimbursements; loss of financial stability due to reduced value of investment portfolios; and a reduced ability to access credit. These challenges will impact access to care, hiring decisions, operations, and possibly even long-term survival.

Access to a pool of well-trained, qualified applicants in specific fields – In the long-term, once the economy recovers, the healthcare industry will still be facing serious shortages in key skill occupations. But *long-term* growth and demand are only one half of the equation. The other half is about the number of replacement workers needed to fill *current* jobs. To illustrate this challenge, below are shown six of the highest growth healthcare jobs in the South Central Region along with projected openings due to growth as well as openings due to replacements. As can be seen, future need plus replacements significantly increases the demand for qualified employees in each occupation.

Occupation	New jobs 2009-2014	Replacement jobs 2009-2014	Total, new and replacement jobs
Registered nurses (SOC 29-1111)	1,310	970	2,280
Nursing aides (SOC 29-1012)	477	233	710
Medical assistants (SOC 29-9092)	803	300	1,103
Home health aides (SOC 29-1011)	625	144	769
Medical records/health info techs (SOC 29-2071)	75	120	195
Medical laboratory technicians (SOC 29-2012)	33	42	75

Source: EMSI Covered Employment - Fall 2008

The chronic shortage of registered nurses epitomizes the long-term challenges for industry and regional community colleges. First, all regional community college nursing programs are at 95-100% capacity, essentially maximum capacity.¹⁷ And, maximum capacity has expanded in nearly every program over the last 10 years. Given current program completion rates (regionally, about 250 graduates per year), regional programs will not be able to meet regional industry needs to fill new and replacement positions.

Cultural competence – Most colleges and districts in the South Central Region have enjoyed dramatic growth in the numbers of traditionally underserved and underrepresented groups.¹⁸ The greatest growth has been in the Latino population. Currently, nearly half of all South

¹⁷ California Board of Registered Nursing, 2006-07 Annual School Report

¹⁸ California Community Colleges Data Mart 2008

Central community colleges have Latino populations at or above 25%, as detailed below (based on identified ethnicity):

Region 6 Community College District	Total non-white enrollment	Total Latino/Hispanic enrollment
Allan Hancock CCD	59%	33%
San Luis Obispo CCD	40%	20%
Santa Barbara CCD	48%	27%
Santa Clarita CCD	52%	26%
Ventura County CCD	52%	34%

Source: California Community Colleges Student Demographics Report 2007-2008.

California’s Latino population currently represents 35% of the state’s population and will rise to 52% by 2050.¹⁹ And, despite increasing numbers of Latino and Hispanic students enrolled in community colleges, Latinos in the healthcare industry, particularly high skill jobs, remain seriously underrepresented. According to the California Wellness Foundation, Latinos have very low representation in the high skill health occupations. For example, only four percent (4%) of physicians and registered nurses and six percent (6%) of nurse practitioners in California are Latino.²⁰

A study conducted by Dr. Alvaro Garza, Director of Health and Policy Research at the Latino Center for Medical Education and Research (2006), indicated that a major deficit of California’s healthcare system is the lack of diversity in the healthcare workforce. In *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare* (2003), the Institute of Medicine recommended increasing the proportion of underrepresented racial/ethnic minorities among health professionals. The study noted that the race/ethnic concordance between patient and healthcare provider is associated with greater patient participation in care processes, higher patient satisfaction and greater adherence to treatment. Also, minority health professionals are more likely than non-minorities to practice in underserved communities.

Regional Education and Training Resources

The California Community College Chancellor's Office and its Economic and Workforce Development Program has established the Regional Health Occupation Resource Center initiative to provide education and training programs to meet emerging demands for health care delivery. The purpose of the Health Care Initiative is to provide education and training programs to meet emerging demands for health care industry workers; to determine needs, facilitate development of innovative solutions and to locate resources to implement planned responses; to evaluate and initialize health-related educational programs.

Over the last 40 years, South Central Region community colleges have made a concerted effort to develop programs that meet industry needs for highly qualified healthcare professionals, and student needs for access to education and training that enable lifelong career success. As a result, the region’s community colleges offer a wide range of certificate and degree-track programs, as well as transfer programs in a wide range of health occupations, as detailed in **Appendix C**.

¹⁹ U.S. Census Data 2006; California Department of Finance Projections 2008

²⁰ California Wellness Foundation 2006; Association of Hispanic Healthcare Executives 2005

Training and Skill Gaps

Factors Limiting the Supply of the Allied Health Workforce in California and the South Central Region. A major study published in November, 2007 (Campaign for College Opportunity, Closing the Healthcare Workforce Gap in California: The Education Imperative), examined the issues and challenges associated with ensuring a qualified health workforce in California. The intent of the paper was to present a comprehensive analysis of the factors affecting demand and supply of allied health professions, review current policies designed to address health workforce development, and to propose policy recommendations. The paper identified eight factors that are limiting the supply of the allied health workforce in California. Four of these factors directly relate to conditions impacting colleges in the South Central Region:

- *Educational Capacity Constraints:* Limited educational capacity in allied health educational programs is restricting health workforce supply. Several factors contribute to capacity constraints, including the high relative costs of health education programs, a lack of clinical placements, and faculty shortages. Moreover, the community college system is struggling to provide services across all programs in the face of limited funding, rapid student growth and increasing student needs. These capacity constraints are not limited to the allied health programs themselves, but also to the range of math, science, and English classes, including basic skills education, necessary for entry into and success in healthcare programs.
- *Educational System Inefficiencies:* A lack of bridges between academic health programs means waitlisted and other qualified students are not being given the opportunity to move into empty seats in other health programs. Furthermore, difficulties navigating the California educational system are potentially limiting the supply of allied health professionals. Confusion over transfer requirements and a lack of system-wide agreement on program pre-requisites and curriculum pose significant barriers to students, who by necessity must turn to multiple colleges to complete their educational programs.
- *High Attrition Rates in Allied Health Educational Programs:* The supply of allied health professionals is greatly limited by poor student outcomes. Students are not succeeding because they are ill prepared to navigate the educational system, balance school and life demands, and achieve academically, especially in math and science courses. Data on a recent cohort of California Community College nursing graduates showed that 25% graduated behind schedule and 25% did not graduate at all. Additionally, a lottery or a “first come first serve” system is typically used to allocate seats in impacted programs, without adequate attention on improving the preparation of incoming students.
- *Lack of Student Supports:* Lack of student supports, from financial aid to counseling, is a huge factor in poor student outcomes. Access to financial aid is even more critical as many students in community colleges have families to support and must continue to work while pursuing education. Interviewed stakeholders stressed that students need “wrap around” support services, such as tutoring, counseling, health insurance and childcare, to be successful.
- *Limited Awareness of Certain Allied Health Professions:* Lack of knowledge about certain health careers is a significant factor limiting supply. Limited exposure to health careers through outreach programs and a lack of counselors and mentors in the middle schools and high schools were commonly cited as reasons for this lack of awareness.

- *Retention Challenges in the Workplace:* Health care is a demanding sector and many new graduates are entering the workforce ill equipped to handle the corresponding pressures and expectations, resulting in high turnover rates.
- *Lack of Robust Allied Health Workforce Data:* Effective workforce planning and policymaking relies on robust data and analysis. In California, there is a dearth of allied health workforce data. Without improved data collection, it will be very challenging for policy makers and educators to effectively design strategies to increase the supply of allied health workers.
- *Education and Licensing Requirements:* Supply of allied health workers can be limited by higher minimum education requirements and tighter regulations.

Training and skill gaps in the South Central Region. The factors identified above are impacting the South Central regional colleges and their ability to meet the growing demand in certain healthcare occupational areas. Based on the current health occupations programs and the current and projected needs by industry for qualified workers, the following are the identified training and skill gaps in the South Central Region:

- The region's seven existing nursing programs are not able to fill projected regional needs for nearly 2,400 new and replacement registered nurses through 2013. As discussed earlier, regional nursing programs have already gone through capacity expansion and are still unable to meet the current and projected need.
- Physical therapists and physical therapist assistant positions are projected to grow by 18 and 24% respectively over the next five years, yet, there are no programs supporting this training in the region. Notably, while the need appears to be critical, actual job count is relatively low which would suggest a regional, rather than individual college response.
- Only one pharmacy technician program region-wide while the demand for pharmacy technicians is projected to grow 17%. New positions will require 199 new pharmacy techs while replacements will require another 175 qualified workers.
- The region will need 359 new and replacement dental hygienists by 2013, but there is currently only one active program in the region. This is problematic as the start-up cost for a dental hygienist program is upwards of \$500,000 for a 12 station laboratory, materials, and faculty.
- The region's five home health aide programs are not all offered on a consistent, year-round basis. Home health aide jobs are projected to grow 19% through 2014 with new positions expected to increase by 625 and replacement jobs requiring another 144 qualified workers.

The Center of Excellence surveyed hospitals and medical centers in each county in the South Central Region and which employ allied health workers.²¹ The survey resulted in responses from 10 facilities and organizations. The survey was conducted by phone and in-person interviews. Responses were obtained from administrators, executives, and human resource managers. The purpose of this initial survey was to discover for which occupations employers had unmet workforce development needs, compare employers' input to labor market data and to strategically select occupations for further study. Hospitals and medical centers were surveyed

²¹ COE, South Central Health Industry Survey 2009

because they employ most, if not all, of the allied health occupations considered. COE acknowledges that the sample may not be representative of all types of employer needs.

Responses from the 10 facilities and organizations were very different, suggesting different staffing patterns, job requirements, recruiting methods, availability of training programs in the proximity of the facilities, and job applicants' preparedness levels. Despite a lack of clear trends in the responses, data indicates there is no reason to expect that the South Central Region will experience a lower rate of demand in allied health occupations than that reported for the state of California in "Closing the Health Workforce Gap in California: The Education Imperative" discussed earlier in the earlier sections of this report.

In general, the survey results confirmed the trends seen in the data presented earlier. Findings from the survey include:

- The current state of the economy is severely impacting the fiscal health of hospitals, as well as impacting retirements, recruiting, and hiring across a broad spectrum of occupations.
- Healthcare providers all expressed a need for access to a qualified, *local* pool of prospective employees, regardless of the area of specialization.
- Reduced value of investment portfolios is having a negative fiscal impact across the healthcare industry, forcing cutbacks in infrastructure improvements, new equipment, expansion, and hiring.
- New coding classification system and the transition to computerized record keeping will have a major impact on the need for medical records technicians, coding specialists, health information technicians (HIT), and health information managers (HIM).
- The nursing shortage, including the need for registered nurses and highly specialized nurses continues to be a challenge across the region. Specialties most in demand regionally include OB/GYN, emergency room, and surgical nurses.
- Occupations that are most difficult to recruit include:
 - Medical records technicians and coding specialists (and related HIT and HIM occupations);
 - Registered nurses (including specialists);
 - Medical and clinical laboratory technicians and scientists;
 - Pharmacy technicians;
 - Physical therapists;
 - Psychiatric technicians;
 - Occupational therapists;
 - Radiological technicians.
- Outreach and recruitment for allied healthcare careers is lacking throughout the region. What is of particular interest to the industry is career exploration starting at the middle school level.

Current Response to Industry Needs

The California Community Colleges have several ongoing initiatives designed to support the growth and development of the healthcare industry in the South Central Region.

Centers of Excellence (COE) – The Centers of Excellence, in partnership with business and industry, deliver regional workforce research customized for community college decision making and resource development. The COE initiative statewide has completed a number of studies focusing on allied health and the healthcare industry. These environmental scan reports can be found at www.coecc.net. The South Central Region Center of Excellence has completed regional occupational scans for physical and occupational therapist aides and assistants and home health aides and personal and home care aides. These reports can also be found at the Center of Excellence website referenced above.

Regional Health Occupations Resource Center (RHORC) – The South Central Region RHORC is hosted by Santa Barbara City College (SBCC). Its mission is to advance economic development activities in support of the health care industry through outreach, education, training, and services that contribute to continuous workforce development, technology deployment, and business development throughout the South Central Region. As host for the RHORC, SBCC is well-positioned, geographically, to serve the eight community colleges and the hundreds of healthcare industry partners within the borders of the 12,000 square mile area that encompasses the Region.

Colleges – All colleges in the South Central Region have healthcare industry advisory boards comprised of industry, college, and community representatives. These advisory boards are essential in helping colleges identify emerging trends in healthcare delivery, including new occupations, updated skill standards, and revised methodologies.

Workforce Investment Boards – The Ventura County Workforce Investment Board has chosen allied health as a particular area of study and to that end has created a select task force of educators and high level industry executives to address specific workforce challenges. This model is being shared with the recently formed Workforce Collaborative of California Central Coast, a multi-county consortium of Workforce Investment Boards serving three South Central regional counties (San Luis Obispo, Santa Barbara and Ventura) as well as Monterey County.

Recommendations/Conclusion

Based on the data and assessment presented in this report, including current college programs, skill and training gaps, and projected long-term industry need, the following recommendations will help South Central regional colleges consider their current and future responses to the needs of the healthcare industry.

1. Promote expansion and/or development of programs in the occupations with the greatest projected growth in the region. This includes:

- Medical records technicians and coding specialists (and related HIT and HIM occupations)
- Registered nurses (including specialists);
- Medical and clinical laboratory technicians and scientists;
- Pharmacy technicians;

- Physical therapists;
- Psychiatric technicians;
- Occupational therapists;
- Radiological technicians.

2. Increase outreach and recruitment in health occupations fields. Recent budget cuts have severely restricted community college activities in outreach and recruitment. Without outreach, career exploration, and recruitment, it will be difficult to fill the seats currently available in healthcare occupational programs, much less fill seats in expanded programs.

3. Encourage greater region-wide coordination in health occupations education and training. The current economy and limited financial support from the state and federal governments will restrict the expansion of regional college health program in the near-term. Until the resources are available to expand programming, and in order to meet student and industry demand, colleges must coordinate their efforts to recruit and place students in available programs.

4. Improve regional data collection from healthcare industry. There are currently no consistent sources of healthcare industry data being generated in the region. Consistent and accurate data will help colleges update curricula, target program development into areas of greatest need, upgrade industry skill standards and, in general, deliver instruction that best meets the needs of students, industry, and the healthcare consumer.

These recommendations, based on needs assessment and training and skill gaps in the South Central Region correspond to the recommendations detailed in the report by the Campaign for College Opportunity cited earlier in this report.

The eight colleges in the South Central Region have significant resources for allied health education and training. As mentioned previously, Santa Barbara City College is currently serving as the host for the South Coast Regional Health Occupations Resource Center (RHORC), an Economic and Workforce Development initiative funded through the State Chancellor's Office. Late last year, the Region, lead by the RHORC collaborated on an American Reinvestment and Recovery Act (ARRA) grant application to the Department of Labor – the South Coast Allied Health Training Expansion. While not funded, this collaborative effort demonstrated strong and successful partnership across the Region and created a solid framework and foundation for future work.

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Appendix A: How to Utilize this Report

This report is designed to provide current industry data to:

- Define potential strategic opportunities relative to an industry’s emerging trends and workforce needs;
- Influence and inform local college program planning and resource development;
- Promote a future-oriented and market responsive way of thinking among stakeholders; and,
- Assist faculty, Economic Development and CTE administrators, and Community and Contract Education programs in connecting with industry partners.

The information in this report has been validated by employers and also includes a listing of what programs are already being offered by colleges to address those workforce needs. In some instances, the labor market information and industry validation will suggest that colleges might not want to begin or add programs, thereby avoiding needless replication and low enrollments.

About the Centers of Excellence

The Centers of Excellence (COE), in partnership with business and industry, deliver regional workforce research customized for community college decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor’s Office, California Community Colleges, Economic and Workforce Development Program. The total grant amount (grant number 08-305-022 for \$205,000) represents funding for multiple projects and written reports through the Center of Excellence. The Centers aspire to be the premier source of regional economic and workforce information and insight for California’s community colleges.

More information about the Centers of Excellence is available at www.coecc.net.

Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor’s Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

Appendix B: Healthcare Occupations in the South Central Region 2009-2014

The following table presents healthcare occupations in the South Central Region based on the Standard Occupation Classification (SOC) utilized by the Bureau of Labor Statistics. Data includes SOC code, occupational title, 2009 jobs, job growth through 2014, median hourly earnings, and educational requirements.

SOC Code	Description	2009 Jobs	2014 Jobs	Median Hourly Earnings	Educational Level
29-1111	Registered nurses	11,747	13,057	\$36.24	Associate's degree
39-9021	Personal and home care aides	5,888	6,802	\$9.72	Short-term OJT
31-1012	Nursing aides, orderlies, and attendants	5,210	5,687	\$12.49	Postsecondary vocational award
29-1069	Physicians and surgeons	4,918	5,195	\$68.28	First professional degree
31-9092	Medical assistants	4,835	5,638	\$14.50	Moderate-term OJT
31-1011	Home health aides	3,220	3,845	\$10.75	Short-term OJT
31-9091	Dental assistants	2,870	3,354	\$15.75	Moderate-term OJT
29-2061	Licensed practical and licensed vocational nurses	2,660	2,858	\$22.53	Postsecondary vocational award
29-1051	Pharmacists	1,403	1,587	\$56.69	First professional degree
29-2021	Dental hygienists	1,334	1,566	\$42.89	Associate's degree
29-2052	Pharmacy technicians	1,144	1,343	\$17.22	Moderate-term on-the-job training
29-1123	Physical therapists	1,077	1,271	\$34.07	Master's degree
31-9099	Healthcare support workers, all other	917	983	\$15.95	Short-term on-the-job training
29-2041	Emergency medical technicians and paramedics	916	1,035	\$12.74	Postsecondary vocational award
29-2071	Medical records and health information technicians	884	959	\$15.39	Associate's degree
29-2034	Radiologic technologists and technicians	823	869	\$28.92	Associate's degree
31-9011	Massage therapists	769	698	\$11.82	Postsecondary vocational award
29-1127	Speech-language pathologists	693	758	\$27.56	Master's degree
29-1011	Chiropractors	692	714	\$23.94	First professional degree
29-1199	Health diagnosing and treating practitioners, all other	667	729	\$20.67	Bachelor's degree

SOC Code	Description	2009 Jobs	2014 Jobs	Median Hourly Earnings	Educational Level
31-9095	Pharmacy aides	667	646	\$10.05	Short-term on-the-job training
29-2099	Healthcare technologists and technicians, all other	663	711	\$19.57	Postsecondary vocational award
29-1021	Dentists, general	617	665	\$59.97	First professional degree
29-2055	Surgical technologists	590	648	\$20.46	Postsecondary vocational award
29-2053	Psychiatric technicians	583	606	\$20.59	Moderate-term on-the-job training
31-9096	Veterinary assistants and laboratory animal caretakers	560	641	\$11.10	Short-term on –the-job training
29-2012	Medical and clinical laboratory technicians	559	592	\$17.53	Associate’s degree
29-1122	Occupational therapists	531	619	\$34.48	Master’s degree
31-1013	Psychiatric aides	530	595	\$11.31	Short-term on-the-job training
29-2056	Veterinary technologists and technicians	529	687	\$16.62	Associate’s degree
29-2011	Medical and clinical laboratory technologists	519	537	\$34.84	Bachelor’s degree
29-1126	Respiratory therapists	487	537	\$29.40	Associate’s degree
29-1031	Dietitians and nutritionists	470	503	\$24.49	Bachelor’s degree
31-2022	Physical therapist aides	466	566	\$11.78	Short-term on-the-job training
29-1131	Veterinarians	458	552	\$38.79	First professional degree
29-1129	Therapists, all other	446	491	\$18.84	Bachelor’s degree
29-2081	Opticians, dispensing	442	469	\$15.44	Long-term on-the-job training
29-1071	Physician assistants	392	438	\$36.24	Bachelor’s degree
31-9094	Medical transcriptionists	350	374	\$16.98	Postsecondary vocational award
29-9099	Healthcare practitioners and technical workers, all other	333	356	\$33.28	Postsecondary vocational award
29-1041	Optometrists	304	327	\$33.18	First professional degree
31-9093	Medical equipment preparers	276	299	\$13.24	Short-term on-the-job training
31-2021	Physical therapist assistants	255	315	\$30.31	Associate’s degree
29-1081	Podiatrists	254	282	\$20.04	First professional degree

SOC Code	Description	2009 Jobs	2014 Jobs	Median Hourly Earnings	Educational Level
29-9011	Occupational health and safety specialists	237	257	\$31.63	Bachelor's degree
29-2032	Diagnostic medical sonographers	193	206	\$32.13	Associate's degree
29-2031	Cardiovascular technologists and technicians	186	202	\$23.71	Associate's degree
29-2051	Dietetic technicians	148	158	\$14.40	Moderate-term on-the-job training
29-1022	Oral and maxillofacial surgeons	143	154	\$47.88	First professional degree
29-1023	Orthodontists	128	138	\$48.90	First professional degree
29-1121	Audiologists	126	140	\$26.29	First professional degree
29-1029	Dentists, all other specialists	106	113	\$42.24	First professional degree
29-2033	Nuclear medicine technologists	95	98	\$32.79	Associate's degree
29-1024	Prosthodontists	94	101	\$37.35	First professional degree
29-2091	Orthotists and prosthetists	93	98	\$19.15	Bachelor's degree
31-2012	Occupational therapist aides	83	97	\$14.07	Short-term on-the-job training
29-1124	Radiation therapists	71	79	\$37.67	Associate's degree
31-2011	Occupational therapist assistants	66	80	\$25.38	Associate's degree
29-9091	Athletic trainers	63	72	\$20.85	Bachelor's degree
29-2054	Respiratory therapy technicians	54	53	\$22.18	Associate's degree
29-1125	Recreational therapists	47	49	\$21.42	Bachelor's degree
29-9012	Occupational health and safety technicians	40	44	\$19.66	Postsecondary vocational award
	Total	65,919	73,543	\$26.37	

Source: EMSI Complete Employment - 3rd Quarter 2009

Appendix C: South Central (South Coast) Health Occupations Training Programs

**Health Occupations Training Programs:
South Coast California Community Colleges**

	Cuesta	Allan Hancock	Santa Barbara	Ventura	Oxnard	Moorpark	College of the Canyons	Antelope Valley	Hartnell Distance Learning
Acute Care Nurse Aide	C	C (F,S)	C (F,S)						
Cancer Information Management			C/D (F,S)						
Certified Nursing Assistant (CNA)	C	C (F,S)	C (all)	X & distance			C (all)	C (all)	
Certified Nurse Assistant- Mentor Prog.		X I	X I						
Critical Thinking							X (F,S)		
Dental Assistant		C/D (F,S)			C/D IP				
Dental Hygienist	IP				D (F,S)				
Diagnostic Medical Sonography (DMS)			C 6/05						
EKG Interpretation			X	X		X (summer)			
EKG Monitor	C	C (S)		X (F)					
Emergency Medical Technician (EMT)	C (all)	C	C (F,S)	X (all) recert. Smr	C	C(F,S) recert. Smr	C (all)	C (all)	
Health Care Interpreter			C Contg Ed						
Health Information Technician			D	D	D (F,S)			D	
Home Health Aide		C (S)	C (F,S)	C			C (F,S)	X	
Hospice Training			C Contg Ed						
IV Cert		C	C				C (F,S)	C (F,S)	
Licensed Vocational Nurse	C/D	C/D	C/D				On Hold C/D (varies)	C/D (varies)	
LVN to RN	X		X	X			C/D (S)	Smr	
Medical Assisting Clinical	C/D	C/D (F,S)		C/D (all)			C (F,S)	X (F,S)	

I D4c / Student Success

C=Certificate IP=In progress D=Degree X=Offered I=Inactive (F) = Fall (S) = Spring (Smr) = Summer (All) = F,S,Smr

	Cuesta	Allan Hancock	Santa Barbara	Ventura	Oxnard	Moorpark	College of the Canyons	Antelope Valley	Hartnell Distance Learning
Medical Coding Specialist (Advanced)	C	X							
Medical Financial Management	C		X (F,S)						
Medical Lab. Tech (distance learning)									D
Medical Reimbursement		X (F,S)	X						
Medical Transcription				X			X (F,S)		
Medical Unit Coordinator	C	C							
Nursing (Critical Care)				I			X & on-line	X	
Nursing (Emergency)	C (online)								(online)
Nursing (Gerontological)							X (F,S)	X	
Nursing (Obstetrical/L&D)	I					X	X (F,S)		
Nursing (Pediatric)							X (F,S)		
Nursing (Perioperative Surgical)									
Obstetrical Nurse Externship	C (F)								
Paramedic	C/D	C/D		C/D (F)					
Perioperative/Operating Room Nurse	C (Smr)		I			Spring	X (F,S)	X	
Personal Care Attendant (PCA)		C (F,S)	C				C		
Pharmacy Technician		C/D							
Physical Assessment				X			X (F,S)		
Phlebotomist	C			IP			C (S)	C	
Psychiatric Technician	C/D								
Radiography Technologist & Technician			D			D		D IP	
Registered Nurse	D/C	D	D	D (F,S)		D	D (F,S)	D	

I D4c / Student Success

C=Certificate IP=In progress D=Degree X=Offered I=Inactive (F) = Fall (S) = Spring (Smr) = Summer (All) = F,S,Smr

	Cuesta	Allan Hancock	Santa Barbara	Ventura	Oxnard	Moorpark	College of the Canyons	Antelope Valley	Hartnell Distance Learning
Home Health LVNs/RNs			I						
RN Refresher				I					
Respiratory Care								D	
Restorative Aide		C (S)	X						
Sonography (see DMS)									
Speech-Language Pathology Assist							D, IP		
Surgical Nursing (see Perioperative)									

C=Certificate IP=In progress D=Degree X=Offered I=Inactive (F) = Fall (S) = Spring (Smr) = Summer (All) = F,S,Smr

Certification Testing

	Cuesta	Allan Hancock	Santa Barbara	Ventura	Oxnard	Moorpark	College of the Canyons	Antelope Valley	Hartnell Distance Learning
C.P.R. for Health Professionals		X	X	X	X	X		X	
Certified Nursing Assistant (CNA)	X	X	X	X			X		
National Review Emergency Medical Technician (NREMT)	X	X	X	X		X	X	X	

Updated: 1/9/07

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