Help Wanted:
Making a Difference in Health Care
Part 1

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EXECUTIVE SUMMARY

Introduction

Help Wanted: Making a Difference in Health Care is one of four modules in a series of occupational information resources designed to foster improvement of recruitment and retention in the health care industry. This report focuses on occupational and labor market information for health industry administrators, educators, and government policy makers.

Other modules in this series are directed to workforce and economic development specialists building training partnerships or career development facilitators assisting students and adults with career exploration and decision making:

- *Careers Under Construction* provides process guidelines and resources for development of career ladder programs for any industry.
- *Health Care Careers* profiles 48 health care careers that require education or training up to and including a Bachelor's degree.
- Three posters suitable for career centers and classrooms examine the work values, interests, wages, and education characteristics of health care careers.
  - *Find A Match for Your Interests in the Health Care Industry*
  - *Health Care Industry Careers—Room to Learn and Grow!*
  - *Satisfy Your Values in Health Care Careers!*

Modules may be ordered from the Publications and Information Unit of the Labor Market Information Division at (916) 262-2162, or downloaded from www.calmis.ca.gov.

Background

Like the rest of the nation, California is experiencing a Registered Nurses (RNs) shortage that is expected to widen in the next two decades. Registered Nurses constitute the largest group of health care providers in California. Demand for nurses is expected to increase from 198,200 in 2000 to over 250,400 in 2010. The supply of RNs is not keeping up with the demand. The current capacity of California's education and training institutions to graduate RNs and LVNs does not meet California's needs. Over 50 percent of RNs licensed in 2001-02 came from other states or countries.

Not only is California facing a nursing shortage, other caregivers are anticipated to be in short supply over the next 20 years. Nationwide, about 13 percent of all wage and salary jobs created between 2000 and 2010 will be in the health services industry.

Background (continued)

Nine out of the 25 occupations projected to grow the fastest in California by 2010 are in health services. An aging RN population is retiring, dissatisfied RNs are leaving the profession, and nursing school enrollments have declined over the last six years.

Scope of report

Focus group participants from the health service industry, government health service policy makers, and educators selected five health care occupations experiencing shortages in California that showed potential for career ladder development:

Occupations selected

- Registered Nurse (RN)
- Licensed Vocational Nurse (LVN)
- Medical Assistant (MA)
- Nursing Aide (NA)
- Home Health Aide (HHA)

Our analysis compares shared qualities and identifies gaps between the five occupations to facilitate the evaluation of existing and prospective career ladders in health care.

Collaboration needed

The focus groups considered collaboration essential to resolve the following challenges:

- Remedial education for language, reading, and math deficiencies.
- Statewide standardization of nursing curriculum.
- Access to education—taking the classroom to the workplace.
- Articulation or coordination between education partners to alleviate unnecessary curriculum redundancy and accelerate pace of completion.
- Standardized assessments to evaluate competencies achieved and those needing further training.

Tools

The Occupational Information Network (O*NET) skills database and tools allow quantitative analysis of occupational characteristics and objective comparisons between occupations. Comparison results can be an indicator of occupations suitable for career ladder development. These characteristics are grouped under six areas: Skills, Knowledge, Abilities, Interests, Work Values, and Work Activities. In each of the six areas, the top characteristics required for RNs were identified and their ratings compared to corresponding ratings in the allied health occupations. An occupational fit between the occupations was assessed using a “fit formula” determined by O*NET developers.

Gap analysis summary

Our analysis of average work requirements for RNs and comparisons made to the four selected health occupations show the following:

Skills
The best overall skills fit to RNs are LVNs. According to O*NET, their largest skills gap appears in the area of instructing. Second in skills fit were Medical Assistants who also show marked gaps in instructing, coordination, and critical thinking when compared with the RN profile.

Knowledge
Medical Assistants and LVNs show similar knowledge gaps compared to RN levels. The areas of greatest gap in knowledge are education and training, therapy and counseling, chemistry, and administration and management. Candidates for career ladder programs from these two occupations who can individually demonstrate knowledge in these areas will make the best participants in bridging programs.

Abilities
According to O*NET ratings, MAs show the closest fit to RNs in abilities compared to other health care occupations in focus. However, authors of this report believe many of the LVN ability ratings in O*NET too conservative, given the complexity and breadth of their tasks. For this reason, an overall abilities gap analysis was not included in this report. The O*NET content team at the U.S. Department of Labor is currently reassessing LVN ratings at California's request.

Work Activities
The best overall fit to the RN in this category is the LVN. The second best fit is the MA. The most notable gaps are in the areas of training and teaching others; communicating with supervisors, peers, or subordinates; and updating and using relevant knowledge.

Exhibit 11.2 identifies "Good Fit" designations for the focus health care occupations compared with the required levels for RNs. Also highlighted are across-the-board gaps.

Interests and work values

As health care providers re-engineer the workplace, they need to be attentive to retaining the essential work values that attract workers to a health care occupation as well as enhancing the opportunity for other work values to be more fully realized.

Interests and work values (continued)

Assessment of applicants is critical; not only to ensure applicants meet academic requirements, but also to ensure their interests and work values are congruent with RN and LVN occupations. Nursing training is demanding physically, emotionally, and academically. If applicant work values and interests are inconsistent with the occupation, the result may be perfunctory performance or attrition.

Applicants may have focused on nursing because of media attention to the nursing shortage. Media attention is helpful to recruitment efforts; however, applicant attraction to the occupation should be founded on the individual's interests and work values.

Work Values

Registered Nurses and LVNs can expect to fulfill the work values O*NET defines as *Relationships* and *Achievement*. Registered Nurses and LVNs will find only limited opportunity to fulfill the work values *Independence, Recognition*, or *Support*. *Working Conditions* in the nursing industry are demanding, and applicants should give considerable thought to their ability to adjust to the industry working conditions. Likewise, health care providers need to monitor employee perception of working conditions and implement processes for continual improvement of working conditions that would appeal to a wider audience.

Interests

The O*NET data suggest that the O*NET interests *Social,* and to a lesser degree *Realistic,* are necessary for potentially satisfying employment in any of the five occupations. If a student, job seeker, or employee has little interest in *Investigative* activities, the individual is likely to be unsatisfied in the LVN or RN occupations.

Educators and employers can use interests and work values assessment tools to assist students and applicants make a compatible job-person match leading to employee retention and a healthier workplace. The cost of such assessment is small compared to the cost of recruitment and the wasted potential from training attrition.

Recommendations

Clearly defined career paths or lattices would enhance the recruitment and retention of RNs and other health care workers. Potential health care workers need some assurance and incentive to invest their time, energy, and money into further education that leads to RN and other professional and technical positions in health care. As workers take foundation coursework for entry occupations, they need to know and understand that a variety of opportunities will be available over time.

Career growth opportunities may not always be gained simply by climbing "up the ladder." Workers already employed in the health care industry in administrative or operations support positions provide another source of workers who might be interested in lateral movement to direct care positions with appropriate training. They already possess an understanding of the industry culture and have a history of competency in their occupation.

Upward mobility programs are known under various labels– bridging programs, career ladders, career paths, career clusters, or career lattices. Regardless of name, once a structure and function for career development are established, participants can more easily see their own career potentials and begin planning their steps accordingly.

Upward mobility programs that bring learning to the workplace or provide childcare encourage greater employee participation. Employees often are unable to forego wages while returning to school and must continue working while learning.

Coordination, Collaboration, and Certification

The National Health Care Skill Standards project and O*NET both provide common language and concepts for collaboration to build career paths, ladders, and lattices. Developing well-defined career paths within health services requires collaborative and coordinated efforts between many entities: health care service organizations, labor unions, educational facilities, professional associations, employment and training agencies, and government licensing, certifying, and policy-making agencies.

Recommendations (continued)

Image – A Marketing Issue

Health care recruiters face a paradoxical marketing and image challenge. The news media bring the public reports of RN shortages, RN strikes, and legislation increasing the ratio of RNs to patients to improve quality of care. Television series dramatize large hospitals and emergency rooms with the focus on physicians, surgeons, and, to a lesser degree, RNs. Where are the television shows about the NAs, the HHAs, and the numerous other allied health professions? These professions make the news when there are abuses, neglect, fines, and long-term care facility shutdowns. There are no television shows covering the day-to-day heroics and caring performed by persons in these occupations. A group of HHAs in New York wrote and starred in a musical called *HeartWork* in an effort to generate respect for the work they do.

Many individuals are unaware of the range of positions available in health care. They know about the top jobs from television shows and may feel those occupations beyond reach of their abilities or resources. The health services industry needs to develop outreach programs and a media campaign to inform the public of the variety of occupations in health care and the opportunity to start at the bottom and educate oneself up the health care career ladder or lattice.

PREFACE

Customer requests

The Employment Development Department's (EDD) Labor Market Information Division (LMID) receives numerous requests for occupational data, analysis, and customized reports on various industries. Recent requests focused on occupational clusters and career ladder information for the health care industry. Requests for information spanned local wage and staffing patterns to projections by occupation and industry. Requests to develop health care and other occupational career ladders or lattices led to this project.

Study purpose

The purpose of the four units of this study is to research, interpret, and distill labor market information on health care occupations for students, educators, government policy makers, workers, and the health care industry:

Resource	Intended Audience
Help Wanted: Making a Difference in Health Care Compare and analyze skills requirements for selected occupations and measure and identify gaps. Compare selected occupations in the following areas: • California projections and staffing patterns • Wages • Supply and demand • Occupational interests and values	• Training developers/providers • Human resource staff • Government policy makers • Planners
Careers Under Construction: Models for Developing Career Ladders Provide a career ladder model for use by employers and trainers interested in building training or bridging programs between lower skilled and related target occupations.	• Training developers/providers • Employers • Government policy makers • Planners
Health Care Careers Posters – Room To Grow, Satisfy Values, and Match Interests Three posters examine values, interests, wages, and education for health care careers. • *Find A Match for Your Interests in the Health Care Industry* • *Health Care Industry Careers—Room to Learn and Grow!* • *Satisfy Your Values in Health Care Careers!*	• Career Centers • One Stops • Classrooms
Health Care Careers Provide job seekers and students with brief career profiles for health care occupations requiring a Bachelor's degree or less	• Students • Counselors • Parents • Job Seekers • Educators • Case Managers

This project is intended to provide the educational community, the health care industry, and the employee/student with information to support business and career decisions to improve the supply and upward mobility of the workforce in the health care industry.

Focus on health care

LMID partnered with educational, health industry, and union representatives to study occupational skill clusters and career ladders for the health care industry in California. This partnership is designed to help meet the needs of employers for more skilled workers and the needs of the workers for better paying jobs. Both entities will benefit from the career ladder concept that aims to decrease employee turnover while increasing upward mobility within the industry.

Funding

The LMID obtained U.S. Department of Labor (DOL) One-Stop Labor Market Information Grant funds to partner with customers, select an industry sector, and study occupational skill clusters and career ladders. Under the grant, the LMID developed customer-focused occupational and career information resources, incorporating related labor market information such as occupational supply, employment projections, trends, wages, and skills-based information.

Acknowledge-ments

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INTRODUCTION

Health services industry

The health services industry in California and the United States is one of the most diverse, largest, and fastest growing industries.[1] There are currently over 250 occupations[2] in the health services industry (including administrative and operational support and direct health care), which account for about six percent of the State's fourteen million workers.[3] Between 1990 and 2000, the State's health services industry workforce grew by 22 percent from 760,000 to nearly 927,000 workers. Despite this sizable workforce increase, a shortage of nurses and other health care workers looms in California and throughout the country.[4]

Nationwide, about 13 percent of all wage and salary jobs created between 2000 and 2010 will be in the health services industry.[5] In California, nine out of the 25 occupations projected to grow the fastest by 2010 are in health services.

Registered Nurses (RNs) provide a large portion of the direct hands-on health care in California and the nation. They constitute the largest group of health care providers in California and are expected to increase from 198,200 in 2000 to 250,400 in 2010 to meet industry growth projections.[6] The supply of RNs is not, however, keeping up with the demand.

Recent lawmaking efforts

President Bush signed the Nurse Reinvestment Act into law on August 1, 2002. Introduced as HR 1436 by California Representative Lois Capps, who is also a registered nurse, the Act will:

- Provide scholarships for nursing students.
- Establish comprehensive geriatric training grants for nurses.
- Offer grants to nursing schools for faculty loan programs.
- Institute career ladder programs.
- Create nurse retention and patient safety enhancement grants.
- Provide for a Public Service Announcement campaign to promote the nursing profession.

The American Nursing Association and other organizations are requesting Congress appropriate $250 million to fund the Act.[7]

On January 23, 2002, Governor Gray Davis announced his three-year, $60 million Nursing Workforce Initiative (NWI) to address California's shortage of licensed nurses. The purpose of the NWI is

Recent lawmaking efforts (continued)

to increase the pool of licensed nurses (LVNs and RNs) by recruiting, training, and placing new and returning nurses, and retaining incumbent nurses.

Governor Gray Davis awarded NWI grants totaling $21 million to thirteen partnerships. The primary goal of each project is to increase the pool of LVNs and RNs. Project descriptions, award amounts, and contact information can be found at www.edd.ca.gov/wiaspnwiaw.htm.

In another attempt to increase the number of new nursing graduates in California, Governor Gray Davis signed AB 2314 "Nursing Education" in September 2002. This law calls for standardizing California nursing program requirements in the community college and CSU systems by September 2005. The intent of the law is to allow students to transfer more easily from one college to another without having to repeat courses and to provide standards for course work that can be applied toward their degree.

Increased needs

Population demographics are a significant factor to the nursing shortage. The population over age 65 is expected to nearly double by 2020 due to the aging of the baby boomer generation.[8] Medical, technological, and pharmaceutical advancements have increased longevity, exacerbating the need for health care workers at all levels and settings: hospitals, clinics, nursing and personal care facilities, and home care.

RN shortage

The current RN shortage is expected to widen in the next two decades. Contributing factors to the RN shortage include:

- California experienced a 20 percent RN vacancy rate in 2000.[9]
- The ratio of RNs to population in California has decreased from 566 to 544 for every 100,000 people between 1996 and 2000.[10]

Other contributing factors

The aging of the nursing workforce is a major contributing factor to the RN shortage. In 2000, the average age of working RNs is 45.2 years. In contrast, in 1983 the average age was 37.4.[11] In some regions of California, over half of the RNs in practice are over 50.[12]

Other contributing factors (continued)

Other factors affecting the recruitment and retention of RNs include:

- Reduction in the number of RNs being trained.
- Nationwide emergence of managed care that led to RN layoffs in the 1980s and 1990s.
- Nationwide supply shortages limit the pool of candidates willing to relocate.
- Higher cost of living in California may weaken recruiting efforts from other areas of the country.
- RNs are leaving the profession altogether.[13]

According to a report by the U.S. Government Accounting Office, nurse job dissatisfaction is caused by several related issues:[14]

- Inadequate staffing
- Heavy workload
- Increased mandatory overtime
- Lack of sufficient support staff
- Noncompetitive wages
- Lack of direct patient interaction

This supply shortage is increasing the demand for RNs, as well as for other direct hands-on health care providers in California and across the country.

Summary

California's health care industry, education, and labor partners face the challenge of attracting skilled workers to health care occupations and retaining the employees already in health care. One way to address these challenges is to develop effective career ladder models. The following sections of this report examine characteristics of RNs and four closely related occupations for their potential career ladder development qualities.

[1] Bureau of Labor Statistics, *Career Guide to Industries*, 2002-03 Edition, Bulletin 2541, January 2002, pp.184-190 lists the following industry segments: hospitals; nursing and personal care facilities; offices and clinics of physicians, including osteopaths; home healthcare services; offices and clinics of dentists; offices and clinics of other health practitioners; health and allied services, not elsewhere classified; medical and dental laboratories.

[2] Sri Ananda, Joan DaVanzo, *National Health Care Skill Standards*, FarWest Laboratories, 1995, p. 4. Retrieved from www.wested.org/nhcssp/nhcss01.htm (October 2001).

[3] EDD/LMID, *Employment Projections by Industry 2000-2010*. Retrieved from www.calmis.ca.gov/file/indproj/cal$tb2.htm (April 2003).

[4] Sheryl Silver, "Shortages Surfacing In Several Allied Health Fields," *Santa Barbara News-Press*, December 29, 2001. Retrieved from http://216.239.51.100/search?q=cache:BSEu31Ft_lgC:www.newspress.com/npsite/jobsource (August 2002).

[5] Bureau of Labor Statistics, *Career Guide to Industries,* p. 184.

[6] EDD/LMID, *Employment Projections by Occupation 2000-2010*. Retrieved from www.calmis.ca.gov/FILE/OCCPROJ/cal$TB6.htm (April 2003).

[7] Nursing Insider, *Immediate Action Needed: Urge Congress to Fund the Nurse Reinvestment Act,* September 2002. Retrieved from www.nursingworld.org/gova/rederal/news/nra.htm (October 2002).

[8] State of California, Department of Finance, *County Population Projections with Age, Sex and Race/Ethnic Detail*, Sacramento, California, December 1998.

[9] U.S. General Accounting Office, *NURSING WORKFORCE: Emerging Nurse Shortages Due to Multiple Factors*, p. 4, July 2001.

[10] Ibid., p. 14.

[11] Service Employees International Union*, The Shortage of Care: A Study by the SEIU Nurse Alliance*, undated, p. 18. Retrieved from www.seiu.org/health/nurses/resources2 (August 2002).

[12] The Center for Health Professions, UCSF, *NURSING IN CALIFORNIA: A Workforce Crisis*, January 2001.

[13] Service Employees International Union*,* loc. cit.

[14] U.S. General Accounting Office, op. cit., pp. 8-10.

HEALTH CARE OCCUPATIONS IN FOCUS

Process

We met with representatives from the health services industry, education, and labor to determine their information needs related to recruitment and retention of workers. What were the most severe worker shortages that could benefit from career ladder research? On what occupations should LMID focus? What barriers to advancement currently exist?

Focus group one

We initially met with representatives from the Los Rios Community College District and Sacramento Sutter Health Care to help define scope and timelines. Following those initial meetings, the first focus group included participants from the Los Rios Community College District, Cosumnes River College, Sacramento City Unified School District, National Career College, Kaiser Permanente Medical Center, Sutter Health Central, Mercy Healthcare, Office of State Health Planning and Development, California Association of Health Facilities, and ResCare California to discuss health career recruiting and retention issues:

- Occupational requirements
- Skill requirements and deficiencies
- Training
- Recruitment levels and problems
- Retention
- Career movement
- Career ladder and lattice development

The education and industry representatives suggested a strategy based on incremental educational opportunities that facilitate entry-level health care worker ability to move up while remaining fully employed. The concept was to develop a curriculum for current employees giving them knowledge and skills that would assist in job advancement and improve their personal economic status without the need to quit work to attend school. A work/school combination would ultimately improve recruitment and retention in the industry.

Focus group one (continued)

Five direct-patient care occupations were selected as the focus of the study based on the high demand and/or turnover:

- Registered Nurse (RN)
- Licensed Vocational Nurse (LVN)
- Medical Assistant (MA)
- Nursing Aide (NA)*
- Home Health Aide (HHA)

The five occupations selected account for nearly 47 percent of the industry workforce—431,800 health care workers in California in 2000.[1] (Although the official Standard Occupational Code title for LVNs is Licensed Practical and Licensed Vocational Nurses, California uses the LVN designation.)

Focus group two

A subsequent focus group consisted of union representatives from the Service Employees International Union (SEIU) Local #250 and the California Association of Psychiatric Technicians (State Bargaining Unit #18). Issues discussed with these representatives included:

- Recruitment and retention problems.
- Barriers to upward mobility and what employers, unions, and educators can do to alleviate barriers.
- Potential career ladders, lateral career movement, and the career ladder selection process.

The group emphasized development of good working relationships between industry employers, union groups, and the educational community to further partnerships to solve recruitment and retention problems. To this end, SEIU Local No. 250 has developed a working relationship with Kaiser Permanente and local community colleges in several locations in the state to establish career ladder step-up programs designed to move employees from entry-level positions to higher-paying positions through short-term, skills-based training programs. Nursing Aide, MA, and LVN occupations are part of this training program effort.

*Nursing Aides are included in the broad occupational group Nursing Aides, Orderlies, and Attendants in the U.S. Department of Labor's Standard Occupational Classification System. This group also includes the commonly referenced Certified Nursing Assistant (CNA).

Broad view

Although this report focuses on five occupations, other occupations are included in both analysis and exhibits to give a more complete picture of health care industry employment and career opportunities. We developed the poster, *Health Care Industry Careers—Room to Learn and Grow!* (Exhibit 3.1), to illustrate the range of occupations in the health care industry. Workers can see the job and career opportunities accessible by both vertical and horizontal movements and consider moving both within and outside their current scope of employment duties, functions, and interests. Such a visual aid allows workers and students to see their own career possibilities and plan their steps accordingly.

Similarity of Psychiatric Technician and LVN

Both focus groups mentioned that the occupations of Psychiatric Technician (PT) and LVN in California are similar in education requirements, wage rates, and job duties and receive nearly identical training. Working locations, however, vary significantly. Most PTs work for the State in such facilities as mental hospitals, developmental centers, and prisons. In contrast, most LVNs worked in hospitals (35 percent), nursing and personal care facilities (32 percent), home health care services (17 percent), and offices and clinics of medical doctors (13 percent).[2]

Since the estimated number of LVNs (51,600) is so much higher than the number of PTs (11,500),[3] the LVN occupation represents both occupations in the analyses in this report.

[1] EDD/LMID, *Employment Projections by Occupation 2000-2010*. Retrieved from www.calmis.ca.gov/htmlfile/subject/occproj.htm (April 2003).

[2] EDD/LMID, *California Industry and Occupation Staffing Patterns,* 2000-2010 data.

[3] EDD/LMID, *Employment Projections by Occupation 2000-2010*.

PUTTING IT IN PERSPECTIVE - LABOR MARKET INFORMATION

Labor market information

Labor market information assists in the design and development of any career ladder project by providing standardized information by which to compare industries and occupations. Data on wages, employment projections, supply and demand, staffing patterns, and occupational skills come from nationally designed survey systems. Information is available at the national, state, regional, and local levels. California's labor market information is available online at www.calmis.ca.gov.

Wages

Wages are one of the most important occupational considerations to students and workers. While many workers are willing to start working at minimum wage, few are content to stay at that level for an extended time.

The LMID annually conducts the Occupational Employment Statistics (OES) survey that reaches approximately 35,000 employers to gather occupational wage data for over 850 occupations in California (105,000 total over a three-year period). California wages shown reflect median hourly wages and average annual wages. This information is available at statewide, regional, and county levels.

Exhibit 3.1, *Health Care Industry Careers – Room to Learn and Grow!*, displays the current Statewide wage ranges and training levels required for 160 occupations found within the health care industry. The wage range tiers accompanied by the training level data clearly show the financial rewards that additional education and training can provide upwardly mobile employees. (A poster version of Exhibit 3.1 is available upon request from the LMID Publications and Information Unit at (916) 262-2162.)

Appendix A lists employment and wage information for health care occupations requiring education up to a Bachelor's degree.

EXHIBIT 3.1

Health Care Industry Careers – Room to Learn and Grow!

Administrative Support and Management Occupations	Direct Patient Care Occupations	Other Health Services and Operations Support Occupations
Statewide median wages more than $39.00 per hour		**$$$$$$$**
✚ Chief Executives	◒ Dentists	
✚ Computer and Information Systems Managers	◒ Optometrists	
✚ Financial Managers	◒ Pharmacists	
✚ Marketing Managers	◒ Physicians and Surgeons	
Statewide median wages range from $30.00 - $38.99 per hour		**$$$$$$**
▲ Computer Programmers	◆ Clinical Nurse Specialists*	▲ Mechanical Engineers
▲ Computer Systems Analysts	▲ Dental Hygienists	▲ Orthotists
◆ Health Specialties Teachers, Postsecondary	◆ Nurse Anesthetists*	▲ Prosthetists
✚ Human Resources Managers	◆ Nurse-Midwives*	
▲/◆ Management Analysts	◆ Nurse Practitioners	
▲/◆ Medical and Health Service Managers	◆ Physical Therapists	
◆ Operations Research Analysts	▲ Physician Assistants	
✚ Public Relations Managers	◒ Podiatrists	
✚ Purchasing Managers	◆ Psychologists, Clinical	
Statewide median wages range from $25.00 - $29.99 per hour		**$$$$$**
▲ Accountants and Auditors	◆ Audiologists	✚ Cytotechnologists
✚ Administrative Service Managers	◒ Chiropractors	✚ Histotechnologists
▲ Budget Analysts	▲ Diagnostic Medical Sonographers	▲ Medical and Clinical Lab Technologists
▲ Database Administrators	◆ Epidemiologists	◆ Medical Scientists
◆ Nursing Instructors and Teachers, Postsecondary	▲ Nuclear Medicine Technologists	◆ Microbiologists
	▲ Occupational Therapists	
	▲ Radiation Therapists	
	▲/▲ Registered Nurses	
	◆ Speech-Language Pathologists	
	▲ Ultrasound Technologists	
Statewide median wages range from $20.00 - $24.99 per hour		**$$$$**
✚ Claims Adjusters, Examiners, & Investigators	▲ CT Technologists (Computerized Tomographics)	▲ Biomedical Equipment Technicians
▲ Compensation, Benefits, & Job Analysis Specialists	▲ Dietitians and Nutritionists	✚ Carpenters
▲ Computer Support Specialists	◆ Educational, Vocational, & School Counselors	✚ Electricians
▲ Employment, Recruitment, & Placement Specialists	▲ Occupational Therapist Assistants	✚ Perfusionists
● Food Service Managers	▲ Physical Therapist Assistants	✚ Stationary Engineers & Boiler Operators
▲ Insurance Sales Agents	▲ Psychiatric Technician Instructors	
◆ Librarians	▲ Radiologic Technologists & Technicians	
▲ Public Relations Specialists	▲ Respiratory Therapists	
▲ Purchasing Agents	◆ Social Workers, Medical & Public Health	
▲ Training and Development Specialists	● Vocational Education Teachers, Postsecondary	

Statewide median wages range from $15.00 - $19.99 per hour — $$$

- ■ Bookkeeping, Auditing, and Accounting Clerks
- ■ Computer Operators
- ■ Dispatchers, Police, Fire, and Ambulance
- ■ Human Resources Assistants
- ■ Insurance Claims & Policy Processing Clerks
- ● Medical Coders*
- ● Medical Transcriptionists
- ■ Payroll and Timekeeping Clerks
- ■ Procurement Clerks
- ■ Statistical Assistants
- ◆ Art Therapists
- ▲ Cardiovascular Technologists and Technicians
- ◆ Dance Therapists
- ● Dental Assistants
- ■ Electrocardiograph (EKG) Technicians
- ● Licensed Vocational Nurses
- ▲ Music Therapists
- ● Psychiatric Technicians
- ▲ Recreational Therapists
- ◆ Social Workers, Mental Health & Substance Abuse
- ● Surgical Technologists
- ▲ Environmental Science and Protection Technicians, including Health
- ✚ Heating and Air Conditioning Mechanics
- ▲ Histotechnicians
- ● Housekeeping Supervisors
- ▲ Medical & Clinical Laboratory Technicians
- ■ Painters, Construction and Maintenance
- ✚ Plumbers

Statewide median wages range from $10.00 - $14.99 per hour — $$

- ■ Bill and Account Collectors
- ■ Billing and Posting Clerks and Machine Operators
- ■ Correspondence Clerks
- ■ Customer Service Representatives
- ■ Data Entry Keyers
- ■ File Clerks
- ■ General Office Clerks
- ■ Interviewers, except Eligibility and Loan
- ■ Mail Clerks & Mail Machine Operators
- ▲ Medical Records & Health Information Technicians
- ● Medical Secretaries
- ■ Receptionists and Information Clerks
- ■ Shipping, Receiving, & Traffic Clerks
- ■ Stock Clerks & Order Fillers
- ■ Word Processors & Typists
- ▲ Dietetic Technicians
- ● Electroencephalographic (EEG) Technologists
- ● Emergency Medical Technicians and Paramedics
- ● Medical Assistants
- ■ Occupational Therapist Aides
- ✚ Opticians, Dispensing
- ■ Pharmacy Aides
- ● Pharmacy Technicians
- ● Phlebotomists
- ■ Physical Therapist Aides
- ■ Psychiatric Aides and Apprentices
- ■ Social and Human Service Assistants
- ■ Ambulance Drivers and Attendants
- ✚ Cooks, Institution or Cafeteria
- ✚ Dental Laboratory Technicians
- ✚ General Maintenance and Repair Workers
- ✚ Medical Appliance Technicians
- ■ Medical Equipment Preparers (Central Supply Technicians)
- ■ Medical Equipment Repairers
- ■ Order Clerks
- ■ Switchboard Operators
- ■ Truck Drivers, Light

Statewide median wages range from $6.75 - $9.99 per hour — $

- ■ Cashiers
- ● Certified Nursing Assistants
- ■ Home Health Aides
- ■ Nursing Aides, Orderlies & Attendants
- ■ Personal and Home Care Aides
- ■ Cooks, Short Order
- ● Cosmetologists
- ■ Counter Attendants - Food Concession
- ■ Couriers & Messengers
- ■ Dining Room & Cafeteria Attendants
- ■ Dishwashers
- ■ Food Preparation Workers
- ■ Food Servers, Nonrestaurant
- ■ Janitors and Cleaners
- ■ Landscaping & Groundskeeping Workers
- ■ Laundry Workers
- ■ Maids & Housekeeping Cleaners
- ■ Parking Lot Attendants
- ■ Security Guards

Training Level Key

- ■ Short-term on-the-job training
- ■ Moderate-term on-the-job training
- ✚ Long-term on-the-job training
- ● Work Experience
- ● Post-secondary vocational training
- ▲ Associate degree
- ▲ Bachelor's degree
- ✚ Work experience plus a Bachelor's degree or higher
- ◆ Master's degree
- ◆ Doctoral degree
- ◡ First professional degree

Sources: 2002 Wages from Occupational Employment Survey of Employers by EDD/LMID
*Healthcare Association of Southern California – Healthcare Human Resources Management Association

EXHIBIT 3.1

EXHIBIT 3.2 – Comparison of Wages for Focus Health Care Occupations by County and MSA Regions

Occupational Code	29-1111		29-2061		31-1011		31-1012		31-9092	
	Registered Nurses		Licensed Practical and Licensed Vocational Nurses		Home Health Aides		Nursing Aides, Orderlies, and Attendants		Medical Assistants	
County / MSA Region	50th Percentile (Median) Hourly Wage	Mean Annual Wage	50th Percentile (Median) Hourly Wage	Mean Annual Wage	50th Percentile (Median) Hourly Wage	Mean Annual Wage	50th Percentile (Median) Hourly Wage	Mean Annual Wage	50th Percentile (Median) Hourly Wage	Mean Annual Wage
State of California	$27.31	$57,855	$16.92	$37,528	$9.05	$20,270	$9.41	$20,291	$13.00	$27,569
Butte County	$23.68	$48,147	$15.25	$31,288	$8.10	$16,870	$8.78	$18,419	$10.83	$22,475
Fresno MSA	$27.02	$58,549	$15.27	$32,749	$9.45	$20,849	$8.56	$18,614	$9.18	$20,869
Imperial County	n/a	n/a	$13.31	$29,045	n/a	n/a	n/a	n/a	$8.89	$21,184
Kern County	$27.79	$56,439	$16.41	$34,519	$7.42	$15,463	$8.72	$17,752	$10.07	$21,890
Los Angeles County	$27.15	$56,398	$16.71	$38,661	$8.76	$19,418	$8.86	$19,763	$12.28	$26,410
Merced County	$24.17	$52,071	$15.02	$32,251	$7.77	$17,143	$8.27	$17,448	$9.72	$21,313
Monterey County	$24.82	$52,234	$18.81	$38,469	$9.91	$21,571	$9.61	$20,444	$11.77	$26,078
Mother Lode Region	$24.90	$51,871	$13.13	$29,465	$7.74	$16,081	$9.74	$20,456	$10.70	$23,022
North Coast Region	$24.30	$48,995	$16.20	$33,695	$9.37	$20,605	$9.57	$19,639	n/a	n/a
Northern Counties	$24.36	$49,884	$16.02	$33,511	$8.95	$18,973	$9.03	$20,273	$9.51	$21,169
Oakland MSA	$32.46	$67,287	$20.44	$42,437	$14.82	$27,750	$11.30	$23,729	$14.45	$30,004
Orange County	$25.59	$53,462	$17.62	$38,741	$8.93	$18,924	$9.45	$20,097	$12.70	$26,431
Riverside-San Bernardino MSA	$26.07	$55,994	$15.26	$32,795	$8.22	$17,855	$8.69	$18,566	$10.81	$23,713
Sacramento MSA	$27.72	$59,525	$17.77	$38,365	$8.90	$20,364	$9.92	$20,648	$14.08	$28,559
San Diego County	$25.46	$53,817	$15.85	$36,178	$9.19	$20,440	$9.56	$20,275	$12.86	$26,739
San Francisco MSA	$32.00	$65,899	$19.61	$40,628	$10.55	$23,850	$10.73	$23,200	$16.03	$33,577
San Joaquin County	$25.40	$52,478	$16.54	$35,115	$8.18	$18,732	$9.57	$19,786	$10.66	$23,440
San Luis Obispo County	$24.77	$49,991	$15.87	$33,627	$8.10	$18,883	$9.08	$19,266	$11.26	$26,017
Santa Barbara County	$23.88	$49,293	$16.48	$34,347	$10.55	$22,458	$8.77	$19,018	$15.13	$30,520
Santa Clara County	$31.62	$65,794	$20.37	$42,431	$11.50	$24,461	$11.13	$23,871	$16.33	$37,388
Santa Cruz County	$27.65	$58,817	$17.89	$38,153	$8.31	$18,030	$10.31	$24,753	$13.74	$29,757
Shasta County	$20.99	$46,499	$14.59	$29,538	$8.01	$16,441	$8.72	$18,311	$10.74	$23,399
Sonoma County	$29.46	$59,791	$19.77	$41,089	$9.67	$21,666	$10.71	$22,587	$14.58	$30,529
Southwest Central Valley Region	$24.72	$51,188	$14.08	$31,005	$7.74	$16,124	$7.81	$16,233	$13.85	$28,408
Stanislaus County	$25.25	$54,296	$19.23	$38,982	$8.33	$19,412	$8.79	$18,721	$13.68	$27,956
Tulare County	$24.77	$54,710	$15.42	$31,797	$8.79	$17,713	$8.07	$17,104	$9.56	$20,566
Vallejo-Fairfield-Napa MSA	$27.46	$57,736	$17.99	$37,378	n/a	n/a	$10.52	$22,177	$13.64	$31,712
Ventura County	$31.40	$71,213	$17.25	$36,584	$8.22	$17,891	$9.78	$21,120	$12.03	$26,327
Yolo County	$23.54	$48,114	$15.72	$32,351	$6.79	$15,663	$9.17	$19,355	$10.58	$23,079
Yuba City MSA	$25.72	$52,465	$16.58	$34,819	n/a	n/a	$9.62	$19,825	$11.87	$26,048

n/a: Information not available. Source: EDD/LMID Occupational Employment Statistics (OES) Survey 2002. Occupations are classified by the Standard Occupational Classification (SOC) codes. View details of the survey methodology at www.calmis.ca.gov/file/occup$/oeswages/oestechnnotes.htm

Wages (continued)

EXHIBIT 3.2, *Comparison of Wages for Focus Health Care Occupations by County and MSA Regions*, displays the mean annual and median hourly wages for the five focus occupations among California counties or Metropolitan Statistical Areas (MSAs) and Regions.

The counties included in MSAs and regions are distributed as follows:

- Fresno MSA = Fresno, Madera
- Mother Lode Region = Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne
- North Coast Region = Del Norte, Humboldt, Lake, Mendocino
- Northern Counties Region = Colusa, Glenn, Lassen, Modoc, Nevada, Plumas, Sierra, Siskiyou, Tehama, Trinity
- Oakland MSA = Alameda, Contra Costa
- Riverside-San Bernardino MSA = Riverside, San Bernardino
- Sacramento MSA = El Dorado, Placer, and Sacramento
- San Francisco MSA = Marin, San Francisco, San Mateo
- Southwest Central Valley Region = Kings, San Benito
- Vallejo-Fairfield-Napa MSA = Napa, Solano
- Yuba City MSA = Sutter, Yuba

Projections

The numbers of employment openings are very important for students and workers planning a career or anticipating making job changes, but this factor is not always considered until the individual completes their education and starts looking for a job opening. Wages in an occupation may be very good, but if there are only a few openings annually in an occupation, the educational investment can be risky.

Occupational employment estimates are based on survey data collected from approximately 105,000 California employers through the Occupational Employment Statistics (OES) program. A sample of employers in all industries is surveyed over a three-year period, resulting in occupational staffing patterns for each industry. These staffing patterns are applied to industry projections to produce occupational projections. The projections show just how important the demand for these five direct-care occupations is and will continue to be within the State's workforce.

The 2000-2010 California projections covering 850 occupations underscore the demand for the focus on health care occupations within the ten-year period:

- Registered Nurses, the largest health care occupation both statewide and nationally, will have the eighth largest number of statewide job openings (97,500) of all occupations.
- Medical Assistants will have the 11th fastest growth rate (53 percent) and the 34th largest number of statewide job openings (43,500).

Projections (continued)

- Nursing Aides will have the 39th largest number of job openings (39,300).
- Home Health Aides have the 23rd fastest growth rate (45 percent) among all occupations.
- Licensed Vocational Nurses are expected to have 27,100 job openings.

Clearly, the demand for workers in these five occupations is great and will be for some time. The demand extends into all segments of the health services industry as shown in Exhibit 3.3. Current industry distribution of focus health care occupations is displayed in Exhibit 3.4, *California Industries That Employed Health Care Workers in 2000.*

We note that the industry distribution of these occupations also has implications for career ladders. While 72 percent of RNs are employed in hospitals, only about 35 percent of LVNs and 13 percent of MAs are employed in hospitals.

See Appendix C for detailed California county projections for the five focus occupations, the estimated number of openings per year in each county, and the number of training programs for the focus occupation located in each county.

EXHIBIT 3.3 – Growth in Health Services Occupations and Industry Segments

		Registered Nurses	Licensed Vocational Nurses	Medical Assistants	Nursing Aides, Orderlies, and Attendants	Home Health Aides	TOTAL
STATEWIDE ALL INDUSTRIES	*2000*	198,200	51,600	50,500	98,300	33,200	431,800
	2010	250,400	63,900	77,100	123,500	48,000	562,900
Absolute Growth		52,200	12,300	26,600	25,200	14,800	131,100
% Change		*26.3%*	*23.8%*	*52.7%*	*25.6%*	*44.6%*	*30.4%*
Separations[a]		45,300	14,800	16,900	14,100	5,200	96,300
Estimated Openings		97,500	27,100	43,500	39,300	20,000	227,400
HEALTH SERVICES INDUSTRY SEGMENTS[b] *(SIC – Standard Industrial Classification)*							
Health Services Statewide [c] ***(SIC 80)***	*2000*	164,600	41,600	50,100	80,600	12,200	349,100
	2010	207,400	51,400	76,900	98,900	19,100	453,700
Absolute Growth		42,800	9,800	26,800	18,300	6,900	104,600
% Change		*26.0%*	*23.6%*	*53.5%*	*22.7%*	*56.6%*	*30.0%*
Offices & Clinics of Medical Doctors *(SIC 801)*	*2000*	23,000	5,500	37,900	900	1,000	68,300
	2010	33,000	7,500	57,900	1,300	1,500	101,200
Absolute Growth		10,000	2,000	20,000	400	500	32,900
% Change		*43.5%*	*36.4%*	*52.8%*	*44.4%*	*50.0%*	*48.2%*
Offices of Other Health Practitioners *(SIC 804)*	*2000*	1,500	100	2,100	200	n/a	3,900
	2010	2,100	100	3,700	300	n/a	6,200
Absolute Growth		600	0	1,600	100	n/a	2,300
% Change		*40.0%*	*0.0%*	*76.2%*	*50.0%*	n/a	*59.0%*
Nursing & Personal Care Facilities *(SIC 805)*	*2000*	10,600	13,300	100	50,100	1,300	75,400
	2010	14,600	16,500	100	62,800	1,600	95,600
Absolute Growth		4,000	3,200	0	12,700	300	20,200
% Change		*37.7%*	*24.1%*	*0.0%*	*25.4%*	*23.1%*	*26.8%*
Hospitals *(SIC 806)*	*2000*	118,800	14,500	6,500	27,600	3,100	170,500
	2010	140,100	13,200	9,900	31,400	4,300	198,900
Absolute Growth		21,300	-1,300	3,400	3,800	1,200	28,400
% Change		*17.9%*	*-9.0%*	*52.3%*	*13.8%*	*38.7%*	*16.7%*
Home Health Care Services *(SIC 808)*	*2000*	6,200	7,000	100	1,500	6,400	21,200
	2010	10,800	12,200	100	2,600	11,100	36,800
Absolute Growth		4,600	5,200	0	1,100	4,700	15,600
% Change		*74.2%*	*74.3%*	*0.0%*	*73.3%*	*73.4%*	*73.6%*
Health & Allied Services, All Other *(SIC 809)*	*2000*	4,300	1,200	2,200	300	400	8,400
	2010	6,600	1,900	3,300	500	600	12,900
Absolute Growth		2,300	700	1,100	200	200	4,500
% Change		*53.5%*	*58.3%*	*50.0%*	*66.7%*	*50.0%*	*53.6%*

Source: EDD/LMID, *Projections of Employment by Industry and Occupation*, 2000-2010

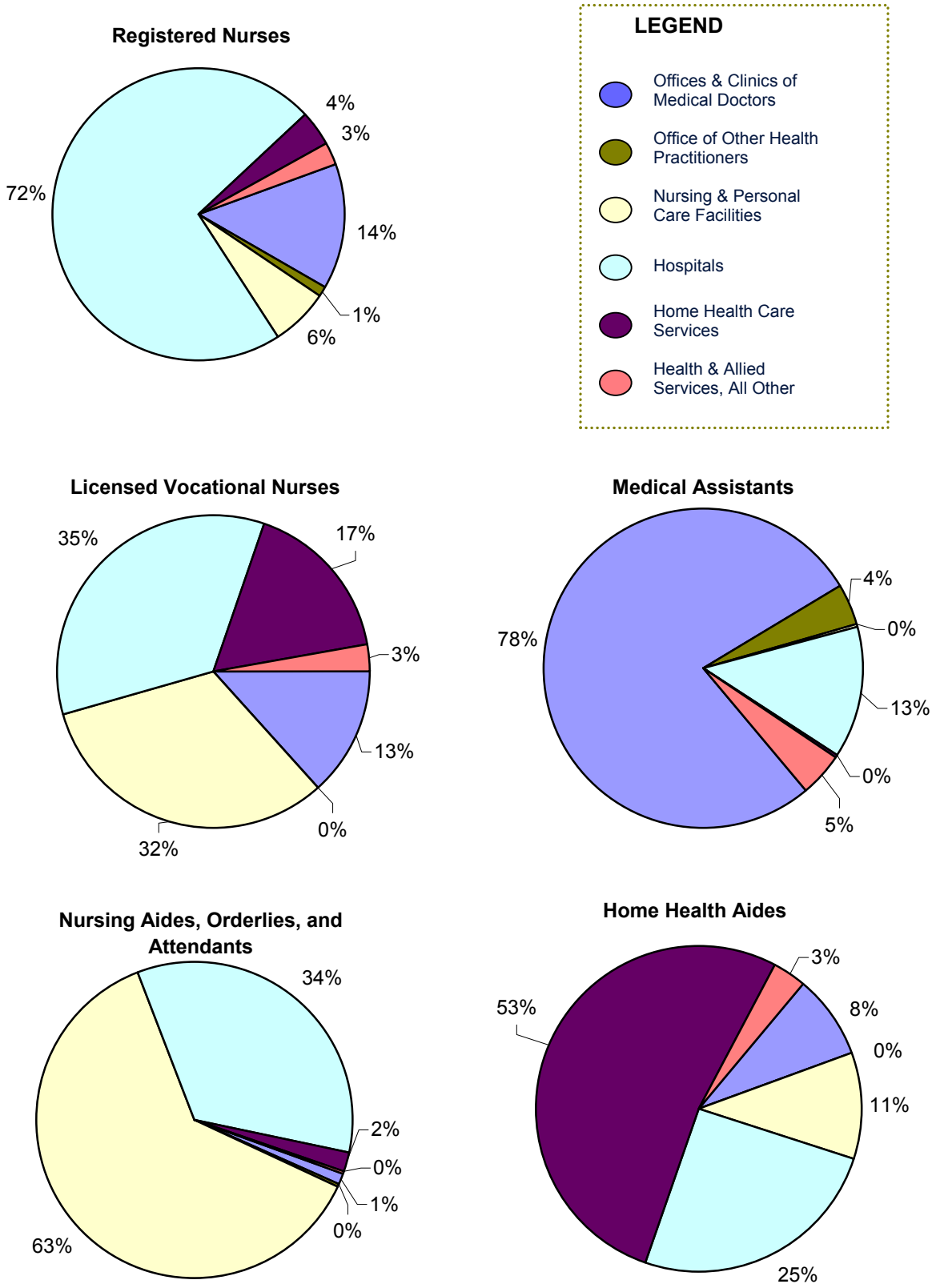
[a] Separations – Additional openings due to turnover over and above growth opportunities

[b] Data represents workers employed in the Health Services Industry and does not include healthcare workers employed in other industries such as Government or Education.

[c] Health Services Statewide totals for Registered Nurses and Medical Assistants include: SIC 802 – Office of Dentists, SIC 803 – Office of Osteopathic Physicians, SIC 807 – Medical and Dental Laboratories.

n/a: Projections not available.

EXHIBIT 3.4 – California Industries That Employed Health Care Workers in 2000



Supply side information – employer feedback

The California Cooperative Occupational Information System (CCOIS) is a partnership of California's LMID and local agencies that gathers local occupational and labor market information from employers. The CCOIS local partners conduct annual employer surveys about occupations selected by each local partnership. The CCOIS survey compiles information for selected occupations on employer benefits; skills, education, training, and experience requirements; advancement; employment trends; and recruitment. The resulting CCOIS *Occupational Outlook Reports* are LMID's source of supply-side information.

Exhibit 3.5 shows that California employers consistently report difficulty in recruiting qualified experienced and inexperienced workers for the five focus occupations. These survey results provide a local, regional, and statewide picture of the supply of both the experienced and inexperienced workers in the five occupations. Maps in Exhibits 3.6 through 3.10 show reported level of difficulty in recruiting the focus occupation at the entry level for each county or consortium. The source of these survey findings, CCOIS' *Occupational Outlook Reports,* are accessible online at www.calmis.ca.gov/htmlfile/ccois/oor.htm or in print by calling (916) 262-2162.

EXHIBIT 3.5 – California Employers Report Difficulty Recruiting Focus Health Care Occupations

Occupation	Difficulty Recruiting Inexperienced Workers	Difficulty Recruiting Experienced Workers
Registered Nurses	Very Difficult	Very Difficult
Licensed Vocational Nurses	Moderate	Moderate
Medical Assistants	Moderate	Moderate
Nursing Aides	Moderate	Moderate
Home Health Aides	Moderate	Moderate

Source: EDD/LMID, CCOIS *Occupational Outlook Reports*, 1999-2001.

Tables in Appendix B show the degree of recruitment difficulty reported by surveyed employers in each county or consortium.

Supply side information - education and training capacity

The capacity of California RN education and training institutions is inadequate to turn out sufficient graduates to fill RN openings in the State, and California must rely on recruiting RNs from other states and countries.

California education and training institutions graduate approximately 5,000 RNs a year, which would be 50,000 over a ten-year period. The estimated number of RN openings for 2000 to 2010 is 97,500. California graduates account for less than 50 percent of the RNs licensed each year by the Department of Consumer Affairs, Board of Registered Nursing. The majority of California RN licenses granted 2001/02 were issued to RNs coming from other states (47 percent) or countries (15 percent).[1]

The capacity to train LVNs is limited by availability of faculty. The number of approved student slots in LVN programs in California for 2001-2002 was 6,841 but the number of actual student admissions was only 3,407.[2] Training programs for LVNs are not operating at the capacity of approved slots because they do not have enough faculty to support the students. The reasons given for insufficient faculty are either the lack of funding for additional faculty positions or the inability to find qualified candidates to fill the faculty positions. In a few instances, the reason for not filling all of their available slots was the inability to access enough clinical sites to provide clinical experience for the students. That occurred primarily in the Los Angeles and San Diego areas that have a large number of nursing programs.[3]

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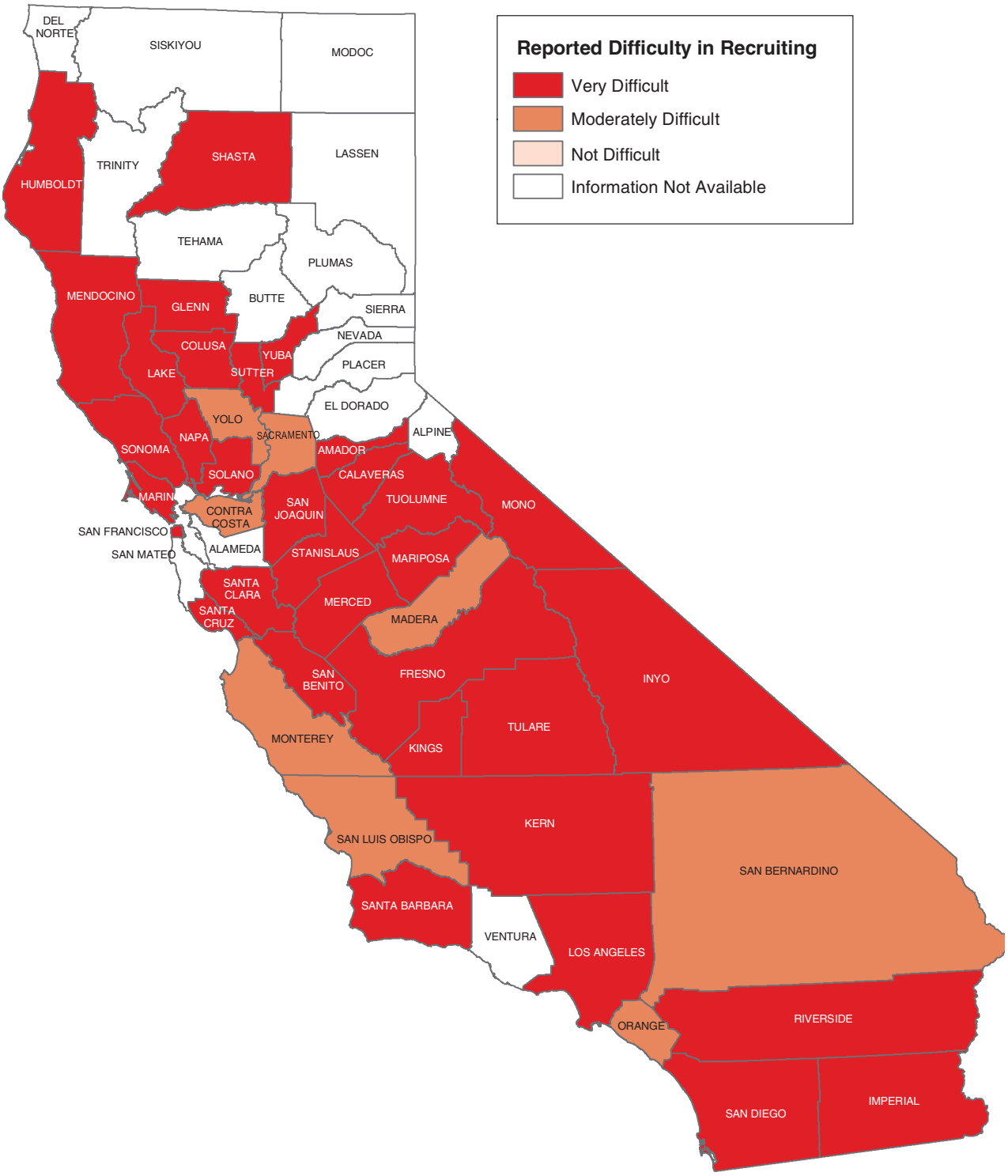
[1] Ellen M. Lewis, MSN, RN, et al, *Planning for California's Nursing Work Force*, The California Nursing Work Force Initiative, Phase III Final Report, University of California, Irvine, September 2002, p. 13. Retrieved from www.ucihs.uci.edu/cspcn (December 2002).

[2] Board of Vocational Nursing and Psychiatric Technicians, unpublished reports from 65 of 101 vocational nursing programs, December 2002.

[3] Suellen Clayworth, MN, RN, Nursing Education Consultant, Board of Vocational Nursing and Psychiatric Technicians, Sacramento, CA, December 2002.

Difficulty in Recruiting Entry-Level Registered Nurses



Cartography by:
Current Economic Statistics
Labor Market Information Division
California Employment Development Department
August 2002

EXHIBIT 3.6

Difficulty in Recruiting Entry-Level Licensed Vocational Nurses

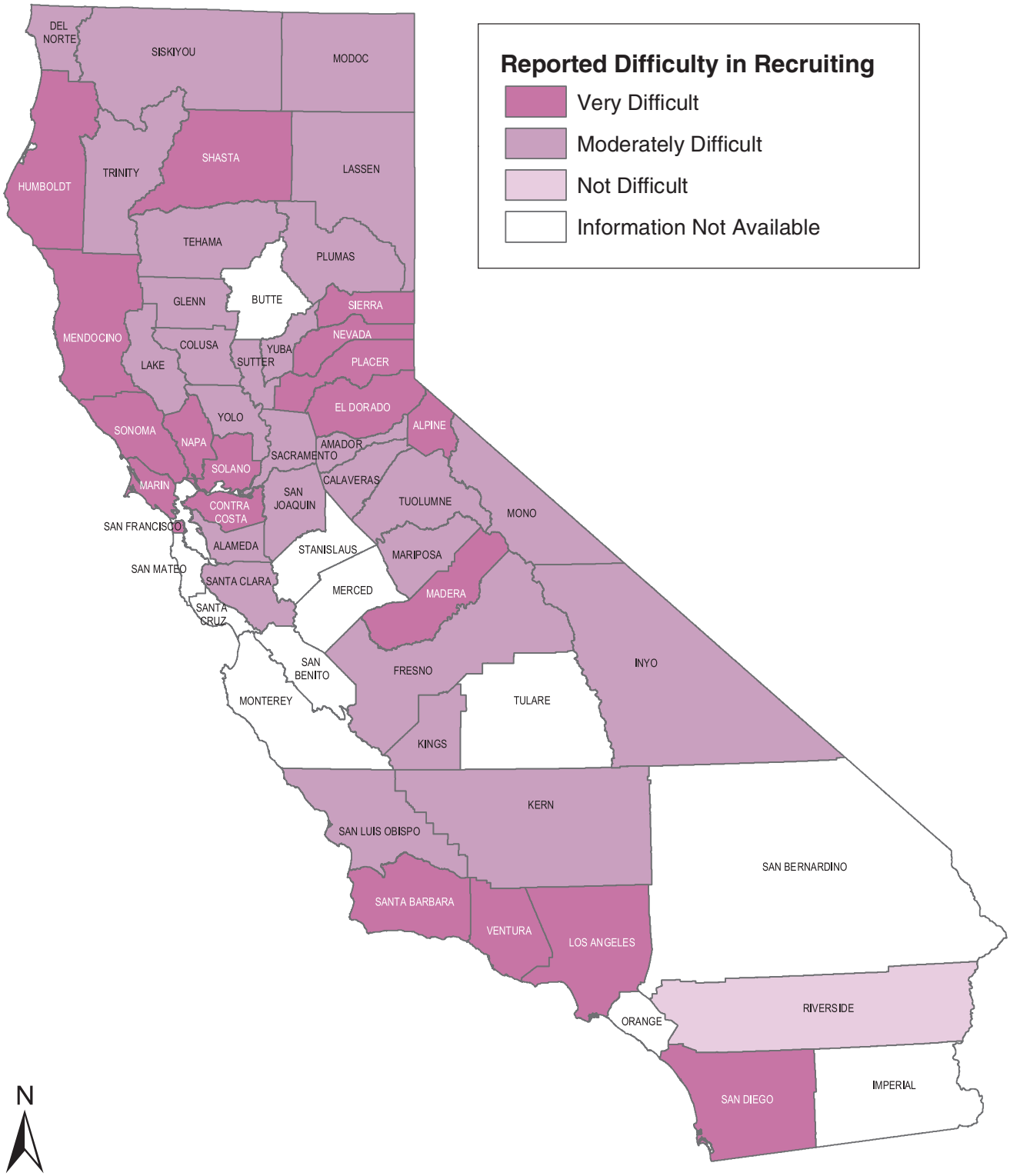


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EXHIBIT 3.7

Difficulty in Recruiting Entry-Level Medical Assistants

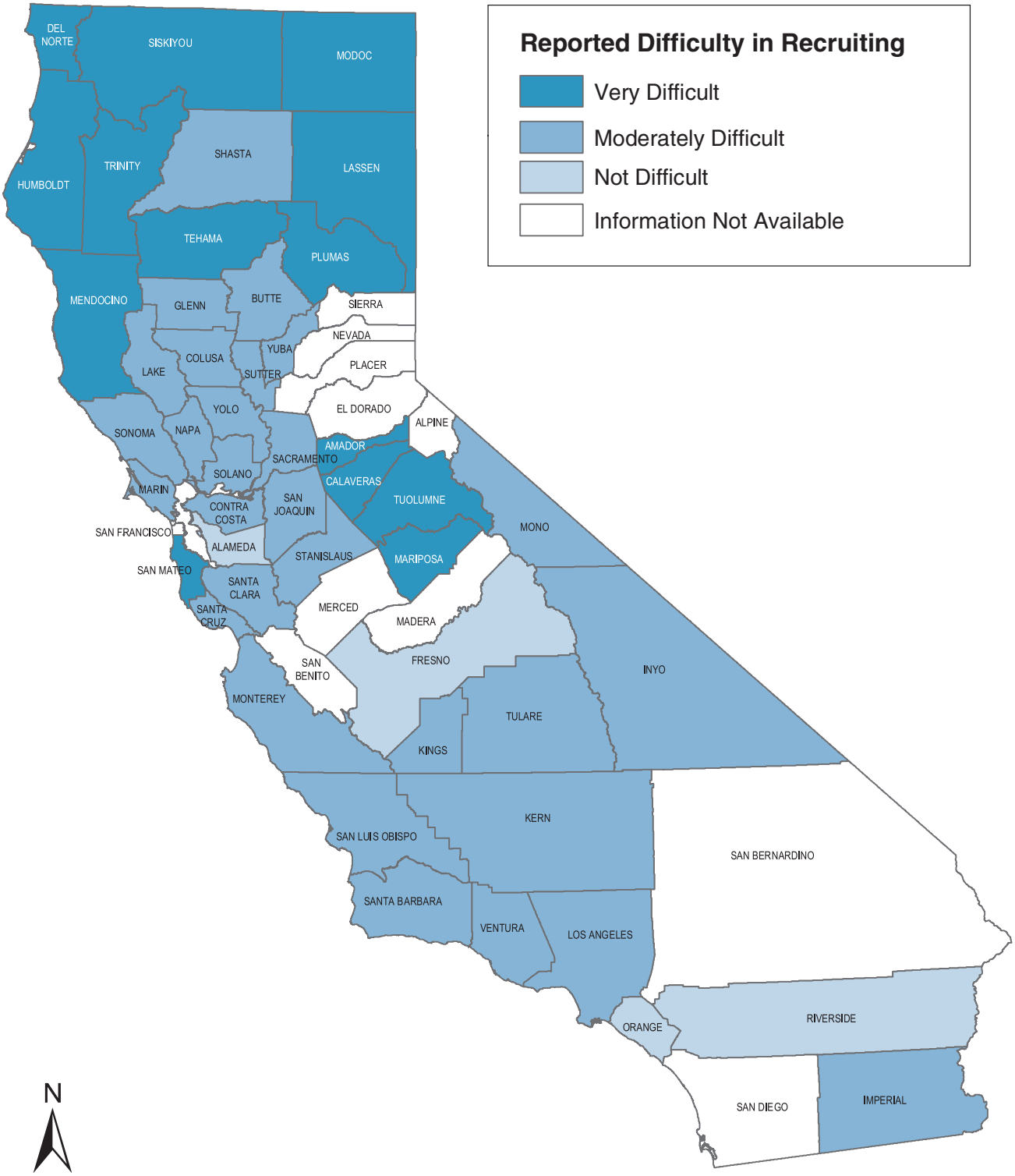

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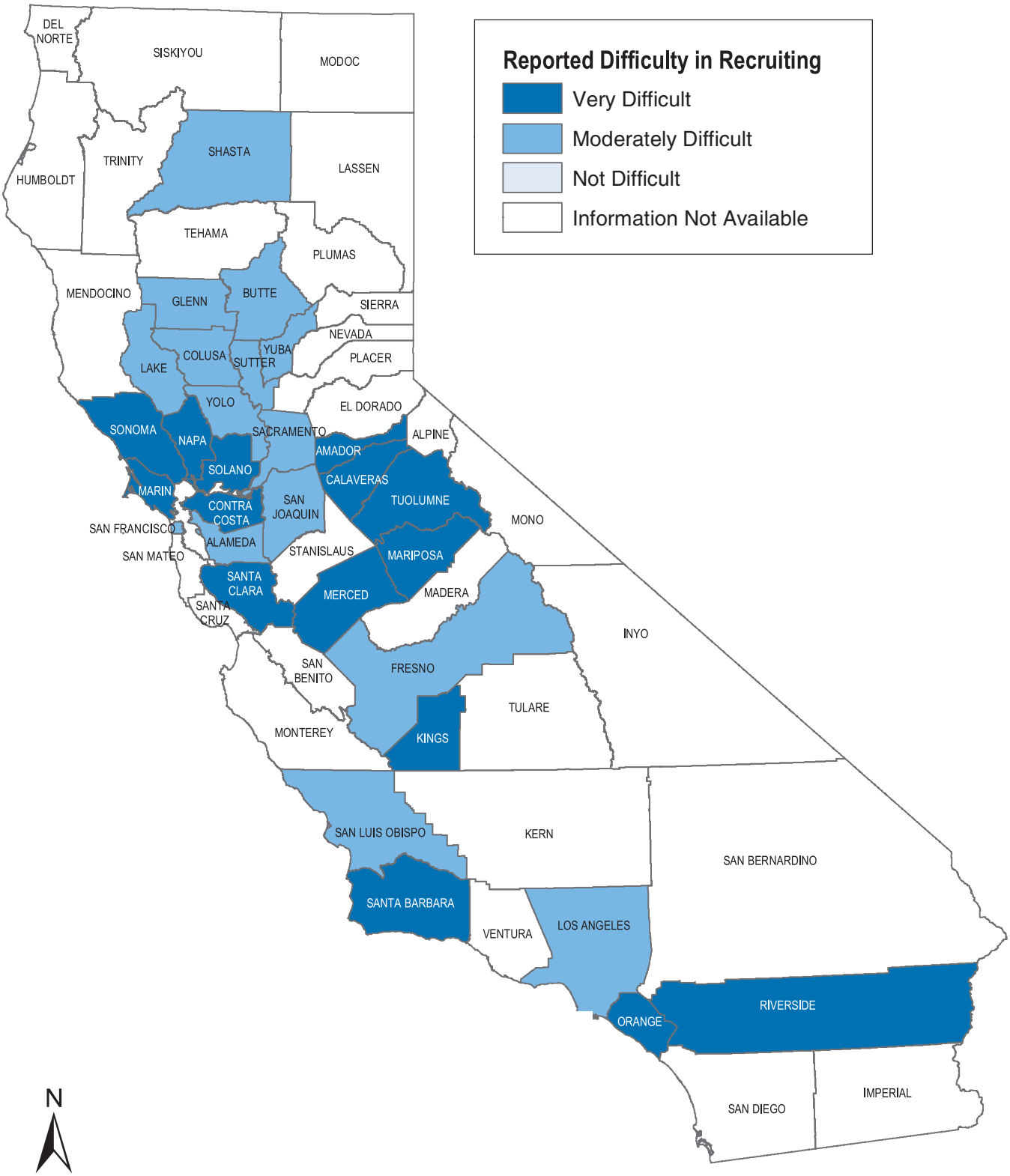
EXHIBIT 3.8

Difficulty in Recruiting
Entry-Level Nursing Aides, Orderlies, and Attendants



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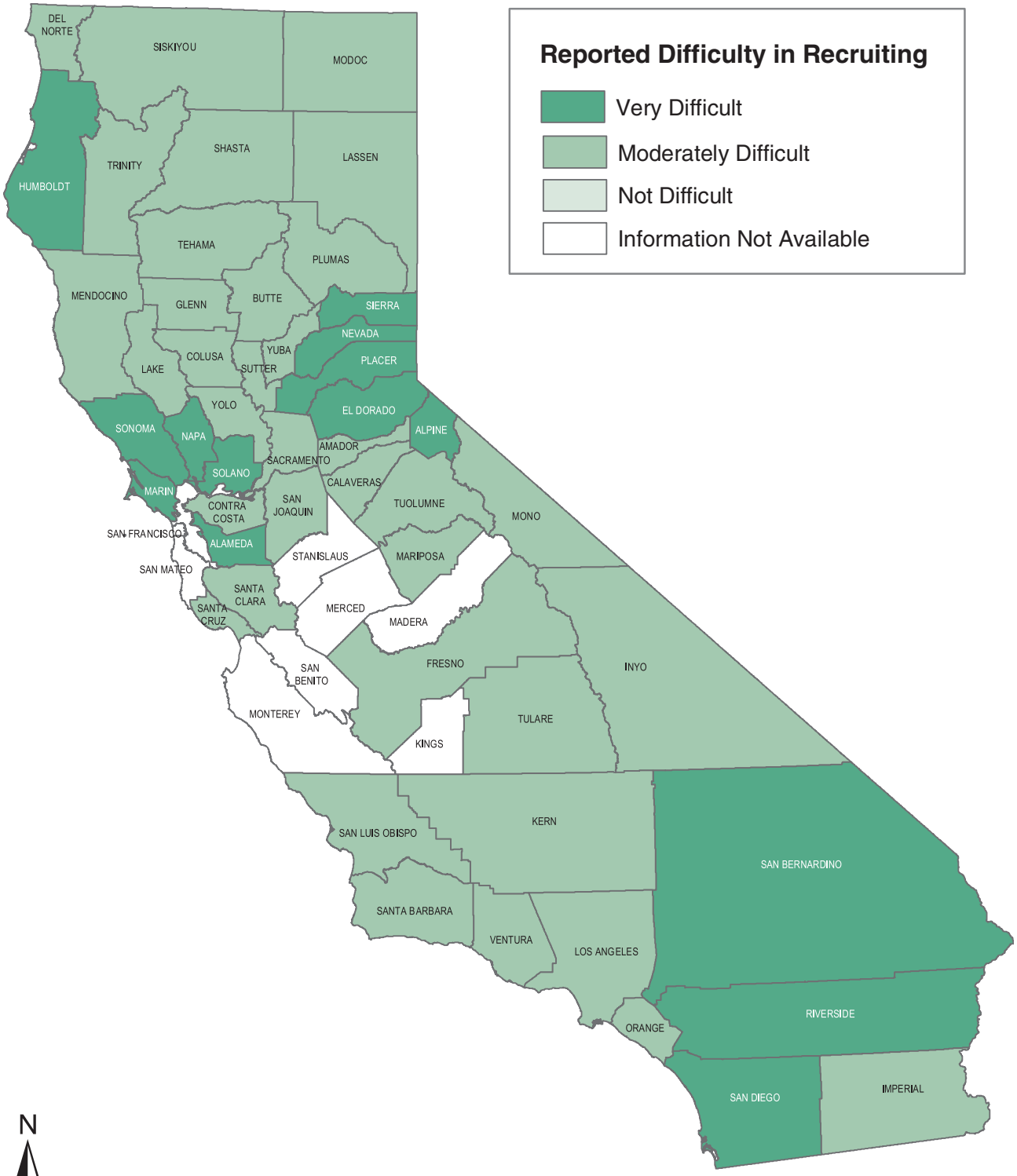
Current Economic Statistics
Labor Market Information Division
California Employment Development Department
August 2002

EXHIBIT 3.9

Difficulty in Recruiting Entry-Level Home Health Aides



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Current Economic Statistics
Labor Market Information Division
California Employment Development Department
August 2002

EXHIBIT 3.10