

The logo for the Office of Statewide Health Planning and Development (OSHPD). It features the acronym "OSHPD" in a bold, blue, sans-serif font. A red curved line is positioned above the "H" and "P", resembling a stylized checkmark or a bridge.

Office of Statewide Health
Planning and Development

Healthcare Workforce Clearinghouse: Annual Report to the Legislature September 2015



Office of Statewide Health
Planning and Development

Healthcare Workforce Clearinghouse Program Annual Report to the Legislature September 2015



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Executive Summary

The Healthcare Workforce Clearinghouse (Clearinghouse), established by Senate Bill 139 (Chapter 522, Statutes of 2007), serves as the state's central source of healthcare workforce and educational data. The Clearinghouse is mandated by Health and Safety Codes §128050-128052 to collect, analyze, and distribute information on the educational and employment trends for healthcare occupations in the state. This annual report describes the efforts of the Clearinghouse to date, challenges that the program continues to face, next steps for the upcoming reporting year, and recommendations for enhancing the program's objectives.

During the 2013-2014 reporting year, the Clearinghouse produced 21 different fact sheets: 12 on healthcare workforce supply, five on healthcare workforce demand, and four on the health education pipeline. In addition, the Clearinghouse produced one report highlighting the physician assistant healthcare workforce in California. The program has also revised its interactive report tool to be more user-friendly and provide up-to-date data sets for healthcare workforce demand occupation employment projections, and age and provider count statistics for the Dental Board of California, Dental Hygiene Committee of California, and the Board of Vocational Nurses and Psychiatric Technicians.

There are various challenges that face the Clearinghouse with respect to data reporting, collecting, and consistency. The recent passage of AB 2102 (Chapter 420, Statutes of 2014) will help to alleviate the data reporting challenges as the legislation mandates the Board of Registered Nursing, Board of Vocational Nurses and Psychiatric Technicians, Respiratory Care Board, and Physician Assistant Board to collect consistent demographic data elements. Although this will help eliminate disparities in the data and help grow the data, additional data sources on healthcare education programs will be important to include in order to better understand the workforce trends. Moreover, the Clearinghouse's data warehousing capabilities is another challenge for the program to address in the short-term.

For the next reporting period, the Clearinghouse has outlined exploring internal data sets such as hospital financial and utilization reports to help estimate healthcare workforce supply and demand; collaborating with allied health licensing boards to collect newly mandated demographic data elements; and enhancing the program's interactive reports to include additional healthcare workforce supply and education data.

Recommendations to move the program forward include collaborating with internal and external stakeholders to standardize workforce data collection and reporting; creating partnerships with other state agencies that capture high school academies and adult healthcare related vocational programs data sets; and establishing Memorandum of Understandings (MOUs) with California higher education institutions for sharing enrollment and retention data of their health education programs.

Background

Senate Bill 139 (Chapter 522, Statutes of 2007) established the Clearinghouse within the Office of Statewide Health Planning and Development (OSHPD). The mission of the Clearinghouse is to serve as the central source of healthcare workforce and educational data. The purpose of the Clearinghouse is to collect, analyze, and distribute information on the educational and employment trends for healthcare occupations in the state. To the extent available, the Clearinghouse is directed to collect data on the following objectives:

- The current supply, geographic distribution, and diversity of healthcare workers by specialty.
- Current and forecasted demand of healthcare workers by specialty.
- The educational capacity to produce healthcare workers by specialty and geographic distribution.

The Clearinghouse is charged with identifying education and employment trends in the healthcare professions, reporting on current supply and demand for healthcare workers, identifying gaps in the educational pipeline both in specific occupations and geographic areas, and recommending state policies needed to address workforce shortage and distribution.

The Clearinghouse officially launched in June 2012, with the creation of interactive reports and the dissemination of healthcare workforce fact sheets on the program's website. The Clearinghouse established partnerships with the Department of Consumer Affairs (DCA), the California Department of Public Health (CDPH), the Employment Development Department's Labor Market Information Division (EDD-LMID), and state higher educational institutions. These partnerships provide data sources of healthcare workforce supply, demand, and education programs to analyze and publish healthcare workforce products for public use. This report will outline the data collected and analyzed, products produced by the Clearinghouse to date, the program's next steps, and recommendations for consideration to continue to build the Clearinghouse as California's repository for healthcare workforce information and data.

Healthcare Workforce Data Collection, Methods, and Products

The Clearinghouse primarily relies upon data provided by partnerships with DCA, EDD-LMID, and state educational institutions. Typically, the Clearinghouse receives DCA and EDD-LMID data sets on healthcare workforce supply and demand on a monthly and quarterly basis, respectively. Data sets received from DCA and EDD-LMID are submitted directly to the Clearinghouse's data warehouse reporting system as determined by MOU. For this reporting period, healthcare education program data were retrieved from the Integrated Postsecondary Educational Data System (IPEDS), a service provided by the U.S. Department's National Center for Education Statistics. The following outlines the process of data collection and analysis of these described data sets by the Clearinghouse.

Data collection and methods on the supply of healthcare workers

There are 19 healing arts licensing boards and bureaus administrated through DCA. CDPH also serves as a licensing agency for 13 healthcare occupations. DCA and CDPH serve as the main sources of healthcare worker supply data for the Clearinghouse (Appendix 1). Currently, the Clearinghouse receives data from DCA's nine of the 19 healing arts licensing boards and from all 13 CDPH healthcare occupations licensed. With this data, the Clearinghouse reports out the current supply of healthcare workers within each occupational group for the corresponding reporting period.

Each licensing authority predetermines the type of data requested, also known as data elements, by each licensee. Healthcare workforce data may be collected upon licensure in an overall licensee survey or in a separate survey during licensure renewal. Further, some questions within each survey are mandatory for licensees to complete, but most are voluntary. Since the collection of data elements is not consistent across all healthcare licensing entities, this results in inconsistencies when describing and analyzing healthcare workforce supply, not only within each profession, as data collection is not mandatory, but also for comparison across health professions. This is a reoccurring challenge for the Clearinghouse. To address this challenge, the Clearinghouse developed the healing arts survey on best practices by other states and the Health Resources and Services Administration. Data partners provide this survey as a sample to incorporate within their existing licensing processes.

During this reporting period, legislation was enacted which addresses the issue related to demographic data collection standards specifically for the allied health professions overseen by DCA. AB 2102 (Chapter 420, Statutes of 2014), will require the Board of Registered Nursing, Board of Vocational Nursing and Psychiatric Technicians, Physician Assistant Board, and Respiratory Care Board to biannually collect demographic data from their licensees and transmit these data to the Clearinghouse on an annual basis beginning in January 2015. These newly-required standardized data elements will include:

- Location of practice (city, county, and zip code)
- Race or ethnicity (provided at the discretion of the licensee)
- Gender
- Languages spoken
- Educational background
- Primary practice site (clinic, hospital, managed care organization, or private practice)

The following table highlights the data elements required by AB 2102 (light blue) compared to the data elements each board currently collects. It is anticipated that this law may incentivize the collection of consistent data elements among other allied health professional licensing boards and bolster the Clearinghouse's ability to meet its mandate.

Table 1: Licensee’s Demographic Data on Licensing Applications, Renewal, and/or Workforce Survey Forms (“X” indicates data elements currently collected)

Demographic Data	Licensing Authorities			
	<u>Physician Assistant Board</u>	<u>Board of Registered Nursing</u>	<u>Respiratory Care Board</u>	<u>Vocational Nursing and Psychiatric Technicians Board</u>
Age				
Date of Birth	X	X	X	X
Gender/Sex	X	X	X	
Citizenship				
Birth Place				
Race/Ethnicity		X		
Educational Background	X	X		
Continuing Education		X	X	X
High School, Address, Graduation Date		X		
Language Spoken		X		
Practice Activity (i.e. patient care, telemedicine, research, teaching, and administration)		X	X	
Website Profile (of licensee)				
Email Address	X	X	X	
Current Training Status		X	X	
Primary Practice Location		X		

The Clearinghouse’s expectation is to receive healthcare workforce supply data from data providers on a monthly basis (or as available) through the Clearinghouse’s data warehouse, where the data are validated for consistency, and analyzed to produce aggregate data reports for each health occupation. Existing MOUs with the Board of Registered Nursing and CDPH are in effect through 2015. During this reporting period, the Clearinghouse completed a blanket MOU with DCA representing eight health licensing boards and bureaus:

- Board of Vocational Nurses and Psychiatric Technicians

- Dental Board of California
- Dental Hygiene Committee of California
- Medical Board of California
- Osteopathic Medical Board of California
- Physician Assistant Board
- Respiratory Care Board
- Naturopathic Medicine Committee

The Clearinghouse secured a MOU with the Board of Optometry in August 2014 and with the Board of Occupational Therapy in December 2014. In total, the Clearinghouse anticipates receiving supply data from ten healthcare professional licensing agencies representing 25 healthcare professionals. Appendix 2 illustrates the data elements collected by each supply data provider and shared with the Clearinghouse for analysis.

In September 2013, DCA converted to a new licensing and enforcement system called BreEZe. The BreEZe system exports data in a different format than its previous legacy data reporting system. The Clearinghouse's data warehouse was designed to accommodate data from the legacy system. The Clearinghouse has been in ongoing discussions with DCA to determine how best to proceed to ensure that the program receives consistent and timely data. During this transitional period, the Clearinghouse relied on data from DCA boards that have not been converted to the BreEZe system. This has limited the Clearinghouse's data analysis capabilities to the following four boards:

- Board of Vocational Nurses and Psychiatric Technicians
- Dental Board of California
- Dental Hygiene Committee of California
- Medical Board of California

Data collection and methods on the demand of healthcare workers

The Clearinghouse relies on data from EDD-LMID to describe the current and projected demand for healthcare workers in the state. EDD-LMID provides workforce projections, wages, and staffing patterns data for 101 Standard Occupational Classifications (SOC) to the federal Department of Labor's Bureau of Labor Statistics (BLS). SOC codes create a uniform way of identifying occupations. The agency provides the Clearinghouse with current and projected data collected via the BLS Occupational Employment Statistics survey which includes the following:

- SOC for health professions by statewide and county regions.
- Annual average employment projections (two and 10-year) by statewide and county or Metropolitan Statistical Area (MSA).
- Employment change by statewide and county or MSA.
- Average annual job openings projections (new jobs/net replacements) by statewide and county or MSA.
- Median hourly/annual wage estimates by statewide and county or MSA.

- Industry employment projections by statewide level.

The Clearinghouse currently receives EDD-LMID data on a quarterly basis. The data are specifically for healthcare professions and provide detail on wages, employment projections, staffing patterns by occupation and industry, and occupational licenses needed for the occupation. Data from EDD-LMID are limited with respect to demographic information such as race/ethnicity, gender, training, and apprenticeships. Questions relating to educational institutions attended are not always mandatory for the respondent to answer, thus the sample size is limited. To the extent possible, the data available are reported to the Clearinghouse to allow the public to view healthcare education programs commonly attended by specific occupational groups.

Data collection and methods on the healthcare education pipeline

The Clearinghouse previously reported California healthcare education program data available through the California Postsecondary Education Commission (CPEC). The data reported through the Clearinghouse's website included health disciplines, student race/ethnicity, and student enrollments (for University of California and California State University only). CPEC discontinued operation in November 2011, however its website is maintained as a historical archive of education institution data through 2010. For this reporting year, the Clearinghouse reported healthcare education data obtained by IPEDS. IPEDS data utilized for analysis were from the 2012-2013 academic year for healthcare program enrollment and graduate completion information. Although the data from IPEDS are useful, it is limited in scope compared to what was previously available by CPEC. The following are limitations of IPEDS:

- Only educational institutions that receive federal student financial aid are required to report data to IPEDS.
- Data are aggregated at the institutional level and not specifically by programs.
- The data available do not provide the ability to link students who complete a degree program with those who are enrolled in degree programs.
- IPEDS surveys are compiled as a standalone from each other and serve to describe the number of students enrolled or completing degree programs at a particular point in the academic year.
- The relative capacity of degree programs and whether or not certain degree programs are impacted is difficult to determine.

One of the next steps for the Clearinghouse is to establish relationships with public higher educational institutions to receive more specific data on the educational capacity of healthcare occupation pipeline programs.

Data products for workforce supply, demand, and education

During the 2013-2014 reporting period, the Clearinghouse produced ten workforce supply fact sheets using data provided by DCA boards and bureaus. These fact sheets utilized infographics to illustrate demographic information such as the age distribution of professionals, the types of educational institutions where professionals completed their professional training, and what counties professionals specify as their primary location of practice (reported as county of residences). These workforce supply fact sheets include the following:

- Dentist: Age, Sex, and Education
- Dentist: Age, Licensure, Sex, and Location
- Registered Dental Assistants (RDA)
- Registered Dental Hygienist (RDH)
- Licensed Vocational Nurses (LVN)
- Licensed Psychiatric Technicians
- Physicians and Surgeons (MD): A Preliminary Analysis
- California Medical Doctors: Licensee Flow Chart
- California Medical Doctors: Facts on Current Licensees
- Physicians and Surgeons (MDs): Activities and Specialties from the Medical Board of California's Physician Survey
- Psychiatrists: Medical Board of California' Physician Survey

The University of California, San Francisco (UCSF) and the Board of Registered Nursing completed a report based on the 2012 Registered Nurses Workforce Survey. The Clearinghouse produced two fact sheets highlighting key findings from the report. These key findings include the following:

- Reasons for job satisfaction by age
- Income by county
- Average income earned between 2006 and 2012
- Leading industries of employment

The Clearinghouse has produced a summary report using the findings from UCSF's report along with a comparison of the 2010 Registered Nurses Workforce Survey. This summary report will provide readers with the ability to compare the findings of the two workforce surveys and evaluate trends regarding the changing RN workforce demographics. It is expected this summary report will be released in 2015.

The Clearinghouse produced five workforce demand fact sheets during this reporting period. These fact sheets utilized data available from EDD-LMID. Workforce demand fact sheets were designed to complement the healthcare workforce supply fact sheets described previously as well as provide an overview of the healthcare workforce professions in high demand in California. The workforce demand fact sheets include the following:

- Dentist
- RDA
- RDH
- Physician Assistants (PA)
- Healthcare Occupational Employment Projections in California 2012-2022

Health education pipeline fact sheets were developed during this reporting period by analyzing data available from IPEDS for the 2012-2013 academic school year for total student enrollment and degrees awarded. During this reporting period, the Clearinghouse produced four fact sheets specific to health professional education programs in California:

- Top 10 Healthcare Programs
- California Community Colleges
- California State Universities
- University of California

Appendix 3 provides examples of these fact sheets which are currently available on the Clearinghouse's website.

In addition to the fact sheets, the Clearinghouse has authored a report describing the workforce of PAs. In collaboration with the California Academy of Physician Assistants, the Clearinghouse released in September 2014 a report titled "Survey Snapshot: Physician Assistants". The report examines the results of a 2013 survey of PAs in California. The survey was completed by PAs between March and July 2013. The report includes responses from 3,405 PAs on various topics such as provider demographics, patient characteristics, retirement plans, employment status, specialties, practice sites, student loans, working in underserved areas, and graduation statistics. Response rates were then compared to a similar survey administered in 1998. Key findings from the report include:

- The distribution of male and female PAs shifted between 1998 and 2013, with an increase of female PAs and a decrease in male PAs by approximately six percent, respectively.
- PAs identifying as Caucasian and African American declined by six and three percent, respectively. The percentage of Asian/Pacific Islander PAs increased by five percent.
- The average age of PAs increased from 43 years of age in 1998 to 49 years of age in 2013.
- Family Practice remained as the top specialty, but the percentage of respondents identifying Family Practice as a specialty declined by eight percent. PAs respondents also identified as primarily in private practice.
- PAs working in medically underserved areas increased by six percent and those working in Health Professional Shortage Areas decreased by 12 percent between 1998 and 2013.

The Clearinghouse has made available to the public similar healthcare workforce reports produced by the Healthcare Reform (HCR) and the Workforce, Education, and Training (WET) units within OSHPDs Healthcare Workforce Development Division (HWDD). The HCR unit produced a report on best practices in healthcare workforce development. The WET unit produced six workforce analysis reports conducted by an independent contractor, as part of the program's five-year plan (2014 to 2019). Three of the four reports are focused on the public mental health supply, demand, and health educational pipeline.

Interactive reports for consumers of health workforce data

The Clearinghouse makes available on its website interactive reports for healthcare workforce data consumers. Healthcare workforce researchers, government partners, and the public are able to use these interactive reports to select data for specific professions. The interactive reports first became available to the public in June 2012. Further refinement to the reports were necessary however, and the interactive reports were taken down between November 2013 and September 2014. As of December 2014, a revised version of the interactive reports became available on the Clearinghouse website utilizing a more user-friendly SQL Server Reporting System (SSRS).

These revised interactive reports provide users with EDD-LMID Occupational Employment Projections for licensed and certified health professionals in California by Occupation, Age Distributions, and Provider Counts for current licensees from the Dental Board of California, Dental Hygienist Committee of California, and the Board of Vocational Nurses and Psychiatric Technicians. The web address and screen shots of these revised reports are provided in Appendix 4.

During the next reporting period, the Clearinghouse will continue to build out this interactive report tool to include additional healthcare workforce supply and educational pipeline data sets.

Challenges

The Clearinghouse has identified two major challenges during the next reporting period:

- 1) **Data sharing between DCA's BreEZe licensing reporting system.** During this reporting period, a considerable amount of time and effort was undertaken to incorporate data from BreEZe within the Clearinghouse's data warehousing system. The Clearinghouse data warehouse was built to support DCA's legacy data reporting system requirements and was not designed to accept data from data provider's adhoc requests. The BreEZe system conversion began in September 2013. Boards are transitioned to the BreEZe system in scheduled releases. Boards not transitioning to the BreEZe system continue to collect licensee data via the legacy data reporting system, which the Clearinghouse is able to support.

Between September 2013 and August 2014, the Clearinghouse was unable to analyze data from the following five boards due to system incompatibility with BreEZe:

- Board of Registered Nursing
- Osteopathic Board
- Respiratory Care Board
- Naturopathic Medicine Board
- Physician Assistant Board

The Medical Board of California was able to provide the Clearinghouse an internal database of its licensees for analysis to bypass the BreEZe system. Data was analyzed using this work-around to produce data facts sheets.

The following three boards remained on DCA's legacy data reporting system and the Clearinghouse was able to analyze data as described in the previous section:

- Dental Board of California
- Dental Hygiene Committee
- Board of Vocational Nursing and Psychiatric Technicians

The boards mentioned above are scheduled to transition to the BreEZe system during the 2015 calendar year. It is the Clearinghouse's top priority to find solutions for incorporating BreEZe data into its data warehouse during 2015 to continue to report workforce supply data.

- 2) **Clearinghouse's current data warehouse system.** The Clearinghouse data warehouse was built to accommodate specific individual data submissions in a specific format. With the growth of healthcare workforce data providers with a variety of data formats, it is essential that the Clearinghouse is able to accept data in a variety of formats. The Clearinghouse data warehouse system needs to be more flexible to accommodate the variety of data products that other data providers have available. During the upcoming reporting period, the Clearinghouse will be re-evaluating its data system using an independent business analyst contractor. The business analyst will document, analyze, develop, and provide recommendations to the Clearinghouse to improve its data warehouse system.

Next steps

The following are activities planned for the 2015 calendar year:

- 1) **Explore OSHPD's internal data sets as a way to expand the Clearinghouse's library of available healthcare workforce data.** The Clearinghouse will begin to explore data available from OSHPD's Health Information Division relating to hospital financial and utilization reports as

another way to enumerate the current healthcare workforce supply and demand.

- 2) **Collaborate with the Board of Registered Nursing, Physician Assistant Board, Respiratory Care Board, and the Board of Vocational Nursing and Psychiatric Technicians on strategies for implementing the mandates of AB 2102.** Implementing this bill will require: 1) reviewing current surveys in place by these boards to capture the demographic data elements mandated by the Legislature, 2) providing guidance and best practices for developing a standard data collection method for the data elements required across all four boards, and 3) identifying technical requirements needed for accepting data from each board to Clearinghouse’s data warehouse.

- 3) **Expand the Clearinghouse’s interactive reports.** The Clearinghouse will continue to improve and enhance its online interactive report tool. Priority focus will be to add healthcare supply data sets to the tool. A partnership between the California Community Colleges Chancellor’s Office will be explored with the intention of onboarding their available data on health education programs provided in the state.

Recommendations

The following three recommendations are presented for consideration to enhance the work of the Clearinghouse in future years:

- 1) **Collaborate with internal and external stakeholders, including licensing agencies, to standardize workforce data collection and reporting to meet the data standards established by the Health Resources and Services Administration (HRSA).** Consistency of data elements across licensing agencies provide opportunities for comprehensive data analysis of the healthcare workforce. Below are the data elements that are considered best practices for healthcare workforce survey collection:

Demographic Information	Practice Locations
High school attended (name, city, state, country)	Employment status (part-time, full-time)
College/University attended (name, city, state, country)	Specialty
Education degree and/or certificate awarded	Work setting (hospital, skilled nursing, school/university, clinic, medical office, laboratory, home care, etc.)
Post-graduate training status	Primary and secondary practice location (address, city, state, zip, and country)

Demographic Information	Practice Locations
Date of Birth	Number of hours per week spent at primary and secondary practice locations
Location of birth (city, state, county, country)	Primary and secondary practice work activity (patient care, telemedicine, research, teaching, administration, etc.)
Gender	Retention issues
Race and ethnicity	Retirement (expected data, volunteering, etc.)
Languages spoken	N/A

- 2) **Identify California Department of Education (CDE) as a valued partner with OSHPD to obtain data on high school academies and adult healthcare related vocational programs.** The following list of data elements for CDE institutions would further enhance the health education pipeline analysis efforts:

Student Demographics	Institutional Statistics
Date of Birth	Date of graduation
Gender	Enrollment
Race and ethnicity	Attrition rates
Language (s) spoken	Wait time to enter program of study
High school and location (name, city, state, zip, county)	Health and medical training programs and locations (name, address, city, state, county)
Health program of study	Number of health training program slots

- 3) **Establish MOUs with California State University, University of California, and California Community College systems to provide individual campus-level data on health training programs disaggregated from systems-level data.** Current data available are through the federal IPEDS system which is in aggregate form and has restricted the interconnection of survey data for enrollment and graduation completion.

Obtaining individual campus data and/or program level data will allow for more comprehensive data analysis to identify gaps and trends in the healthcare education pipeline. A sample list of data elements to be collected include the following:

Student	Faculty	Institution
Date of Birth	Date of Birth	Number of training slots available
Gender	Gender	Enrollment rates
Race and ethnicity	Race and ethnicity	Attrition rates

Student	Faculty	Institution
Languages spoken	Health program area of institution	Wait time
High school attended	Languages spoken	N/A
High school location (name, city, state, county, country)	N/A	N/A

Conclusion

The Clearinghouse continues to develop its foundation for becoming the state's centralized data repository for healthcare workforce supply, demand, and health education program data. During the 2013-2014 annual reporting period, the Clearinghouse produced 21 workforce supply, demand, and education fact sheets and one healthcare occupation report. Data reporting and consistency challenges still face the Clearinghouse. Legislative efforts, such as AB 2102, assist with the effort of mandating licensing authorities to collect and report consistent data elements across healthcare occupations to the Clearinghouse for analysis of healthcare workforce trends.

Moving forward, it is essential for the Clearinghouse to maintain and improve its relationships with existing data providers, as well as expand its reach to include new data providers. These would include post-secondary education providers and healthcare professional groups, so that the Clearinghouse can begin analyzing workforce trends and education pipeline issues and gaps in these new areas.

Appendix 1: Current Clearinghouse MOUs with Healthcare Workforce Supply Licensing Authorities and Occupation Types

State Agency	Board/Bureau/Licensing Authority	Occupation Type	Clearinghouse MOU
Department of Consumer Affairs	Acupuncture Board	Acupuncturists	
	Board of Behavioral Science	Licensed Clinical Social Workers	
		Licensed Educational Psychologists	
		Licensed Marriage, Family and Child Therapists	
		Registered Marriage, Family and Child Therapist Interns	
		Professional Clinical Counselors	
		Board of Chiropractic Examiners	Chiropractors
	Board of Occupational Therapy	Occupational Therapists	X*
		Occupational Therapy Assistants	X*
	Board of Optometry	Optometrists	X*
	Board of Psychology	Psychologists	
		Psychological Assistants	
		Registered Psychologist	
	Board of Registered Nursing	Registered Nurses	X
	Board of Vocational Nurses and Psychiatric Technicians	Vocational Nurses	X
		Psychiatric Technicians	X
	California State Board of Pharmacy	Pharmacists	
		Pharmacy Technicians	
		Intern Pharmacists	
	California Board of Podiatric Medicine	Podiatrists	
	Dental Board of California	Dentists	X
	Dental Hygiene Committee of California	Dental Assistants	X
		Dental Hygienists	X
	Medical Board of California	Physicians and Surgeons (MD)	X
	Naturopathic Medicine Committee	Naturopathic Physicians	X
	Osteopathic Medical Board of California	Osteopathic Physicians (DO)	X
	Physical Therapy Board of California	Physical Therapists	
		Physical Therapy Assistants	
	Physician Assistant Board	Physician Assistants	X
	Respiratory Care Board of California	Respiratory Care Practitioners	X

Appendix 1: Current Clearinghouse MOUs with Healthcare Workforce Supply Licensing Authorities and Occupation Types (continued)

State Agency	Board/Bureau/Licensing Authority	Occupation Type	Clearinghouse MOU
	Speech-Language Pathology and Audiology and Hearing Aid Dispensers Board	Speech-Language Pathologists	
		Speech-Language Pathology Assistant	
		Speech-Language Pathology or Audiology Aides	
Department of Public Health	Licensing and Certification Branch	Certified Nurse Aids	X
		Hemodialysis Technicians	X
		Home Health Aids	X
		Nursing Home Administrators	X
	Laboratory Field Services Branch	Clinical Laboratory Bioanalysts	X
		Clinical Laboratory Directors	X
		Clinical Laboratory Scientist Trainees	X
		Clinical Laboratory Scientists	X
		Clinical Laboratory Specialists	X
		Cytotechnologists	X
		Medical Laboratory Technicians	X
		Phlebotomist/Certified Phlebotomy Technicians	X
	Public Health Microbiologists	X	
Radiological Services Branch	Nuclear Medicine Technologists		
	Radiologic Technologists		
Department of Social Services		Certified Administrators Residential Care Facilities for the Elderly	
Emergency Medical Services Authority		Emergency Medical Technicians	
		Paramedics	
		Advanced Emergency Medical Technicians	

*Boards with new MOUs established and data elements transmitted to OSHPD are pending

Appendix 2: Healthcare Workforce Supply Data Providers—Demographic Data Elements Collected by Clearinghouse

Demographic Data	Licensing Authorities											
	BVNPT	BRN	CBOT*	CBO*	CDB	DHCC	MBC	NMC	OMB	PAB	CDPH	RCB
Age												
Date of Birth	X	X			X	X	X	X	X	X	X	X
Gender/Sex		X			X		X	X	X	X	X	X
Citizenship									X		X	
Birth Place							X	X	X		X	
Race/Ethnicity		X			X	X	X		X			
Educational Background		X			X	X	X	X	X	X	X	
Continuing Education	X	X			X	X	X	X	X		X	X
High School, Address, Graduation Date		X										
Language Spoken		X			X	X	X		X		X	
Practice Activity		X					X		X			X
Website Profile							X					
Email Address		X					X	X		X		X
Current Training Status		X					X		X			X
Primary Practice Location		X			X	X	X		X			

Acronym list

BVNPT: Board of Vocational Nursing and Physician Technicians
 BRN: Board of Registered Nursing
 CBOT: California Board of Occupational Therapy
 CBO: California Board of Optometry
 CDB: California Dental Board
 DHCC: Dental Hygiene Committee of California
 MBC: Medical Board of California
 NMC: Naturopathic Medical Board
 OMB: Osteopathic Medical Board
 PAB: Physician Assistant Board
 CDPH: California Department of Public Health
 RCB: Respiratory Care Board

*Boards with new MOUs established and data elements transmitted to OSHPD are pending

Appendix 3: Fact Sheets



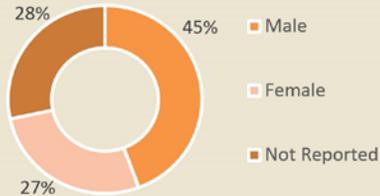
Fact sheet



Psychiatrists– Medical Board of California’s Physician Survey

2014

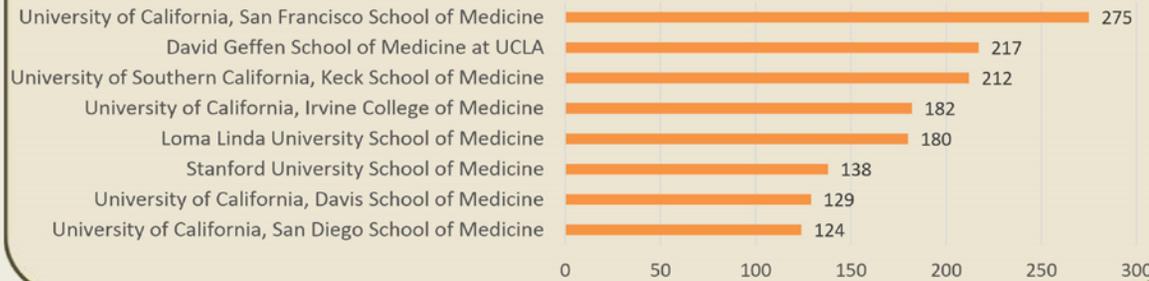
Sex (n=1,723)



Counties where the Most Psychiatrists are Residing*	# of Psychiatrists
Los Angeles	1,604
San Diego	568
San Francisco	533
Santa Clara	420
Orange	404
Total	3,529

These data are derived from the Medical Board of California’s Physician Survey. As of September 2014, the total number of currently licensed psychiatrists who selected Psychiatry as their primary specialty and who practice in California was 1,723. The total numbers vary by chart due to the removal of out of state/country and responses left blank within each survey question. *County of residence does not include practice location; therefore, it’s total n=5,975.

California Medical Schools from Which Psychiatrists Graduated (n=1,457)



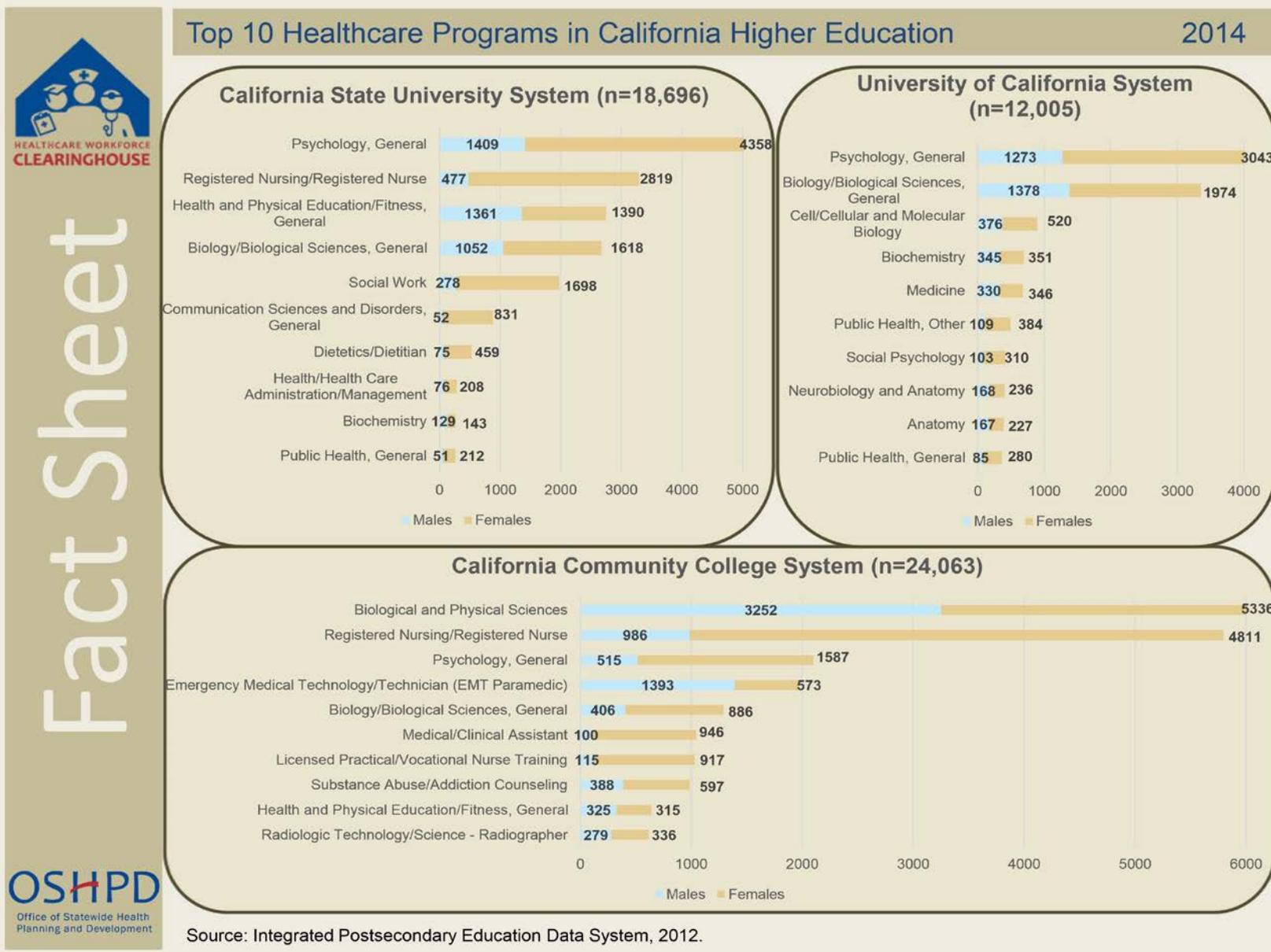
Counties where the Most Psychiatrists are Practicing Patient Care	# of Psychiatrists
Los Angeles	440
San Francisco	166
San Diego	146
Santa Clara	137
Orange	95
Total	984

Fifty-seven percent of psychiatrists practice in five California counties (n=1,723).

Counties where the Fewest Psychiatrists are Practicing Patient care	# of Psychiatrists
Tuolumne	2
Calaveras	1
Inyo	1
San Benito	1
Siskiyou	1
Total	6

Source: Medical Board of California, Physician Survey, September 2014. Results for this Fact Sheet are based on a preliminary analysis of the September 2014 Medical Board of California Licensee Database and Physician Workforce Survey. Future analysis of this data set is subject to revision.

Appendix 3: Fact Sheets (continued)



Appendix 3: Fact Sheets (continued)



Fact Sheet



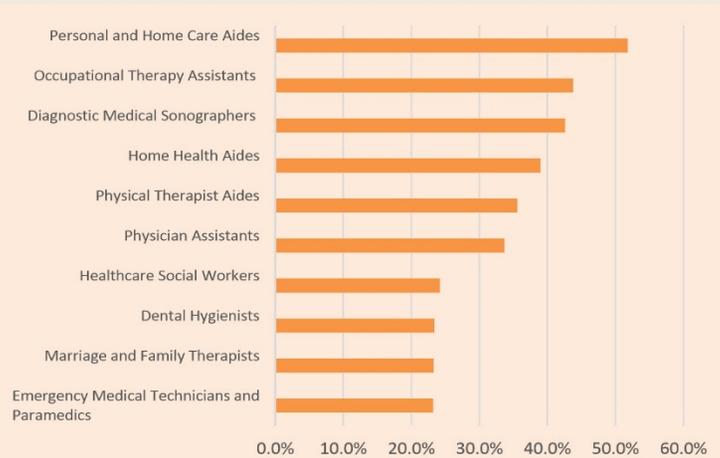
Occupational Employment Projections 2012-2022¹

2014

The following information is based on the State of California Employment Development's Labor Market Information Division Statewide 2012-2022 Occupational Employment Projections.

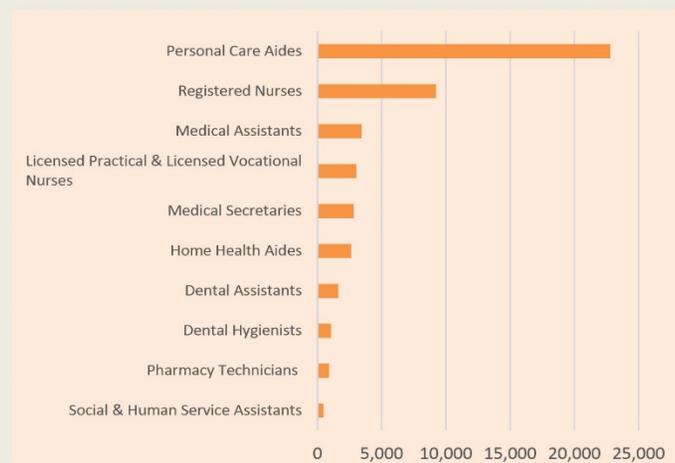
Top Ten Fastest Growing Health Occupations

Health Occupation Title	Percent Change	Employment 2012	Employment 2022	Top Industries Employing this Occupation
Personal and Home Care Aides	51.8%	386,900	587,200	Private Households
Occupational Therapy Assistants	43.8%	1,600	2,300	Offices of Other Health Practitioners
Diagnostic Medical Sonographers	42.6%	4,700	6,700	Office of Physicians
Home Health Aides	39%	44,900	62,400	Community Care Facility for the Elderly
Physical Therapist Aides	35.6%	4,500	6,100	Offices of Other Health Practitioners
Physician Assistants	33.7%	8,300	11,100	Offices of Physicians
Healthcare Social Workers	24.2%	13,200	16,400	General Medical & Surgical Hospitals
Dental Hygienists	23.4%	21,800	26,900	Offices of Dentists
Marriage and Family Therapists	23.3%	6,000	7,400	Individual and Family Services
Emergency Medical Technicians and Paramedics	23.2%	16,800	20,700	Other Ambulatory Health Care Services



Top Ten Health Occupations with the Most Job Openings

Health Occupation Title	Total Annual Job Openings	Top Industries Employing this Occupation
Personal Care Aides	22,800	Private Households
Registered Nurses	9,230	General Medical & Surgical Hospitals
Medical Assistants	3,450	Office of Physicians
Licensed Practical & Licensed Vocational Nurses	3,040	Nursing Care Facilities
Medical Secretaries	2,810	Office of Physicians
Home Health Aides	2,610	Community Care Facility for the Elderly
Dental Assistants	1,640	Office of Dentists
Dental Hygienists	1,060	Office of Dentists
Pharmacy Technicians	900	Health & Personal Care Stores
Social & Human Service Assistants	483	Individual and Family Services



¹Source of Data: Employment Development Department, Labor Market Information Division Public Master File, June 2014.

Appendix 4: Interactive Reports

Accessible at <http://oshpd.ca.gov/hwdd/hwc/#interactive-reports>
 EDD-LMID Occupational Employment Projections Report

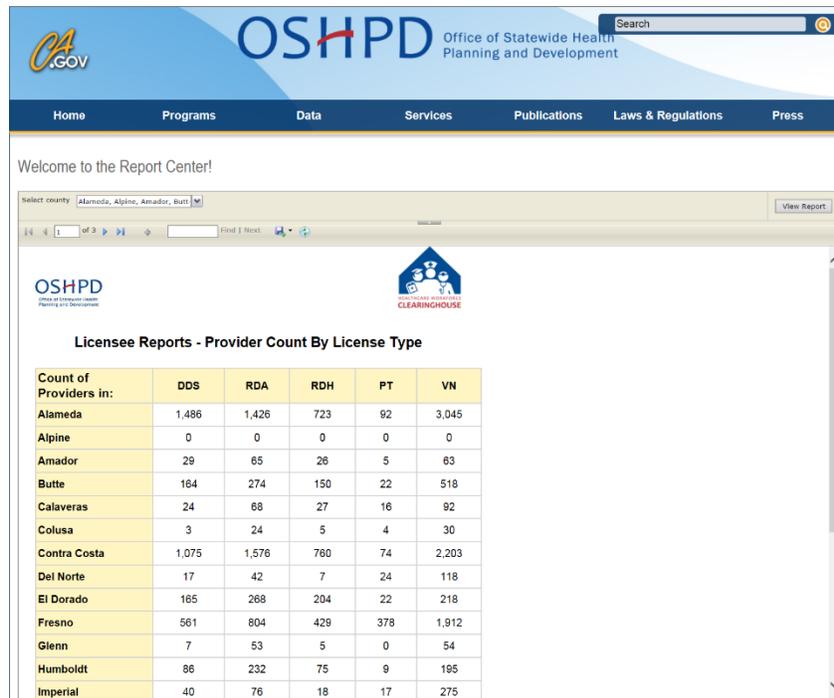
SOC Code	Occupation Title	Annual Average Employment		Employment Change		Average Annual Job Openings			2012-1st Quarter Wages		Education Training Levels
		2012	2022	Numerical	Percent	New Jobs	Replacement Needs	Total Jobs	Median Hourly	Median Annual	
533011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	1,600	1,900	300	18.8%	30	30	60	\$12.99	\$27,017.87	MODERATE-TERM ON-THE-JOB TRAINING (1-12 MONTHS)
291061	Anesthesiologists	3,400	4,000	600	17.6%	60	90	150			FIRST PROFESSIONAL DEGREE
299091	Athletic Trainers	1,200	1,400	200	16.7%	20	30	50	\$45,971.90		BACHELOR'S DEGREE
291181	Audiologist	1,000	1,300	300	30.0%	30	20	50	\$35.69	\$74,231.13	NOT AVAILABLE
191029	Biological Scientists, All Other	9,000	10,100	1,100	12.2%	120	260	380	\$35.30	\$73,430.84	BACHELOR'S DEGREE

Age Distribution by Categories- Doctor of Dental Surgery (DDS)

Count of DDS Providers in:	17 and younger	18 - 24	25 - 34	35 - 44	45 - 54	55+	Not Reported	Total
Alameda	0	0	165	408	377	536	0	1,486.00
Alpine	0	0	0	0	0	0	0	0.00
Amador	0	0	3	3	12	11	0	29.00
Butte	0	0	16	43	21	84	0	164.00
Calaveras	0	0	1	2	2	19	0	24.00
Colusa	0	0	0	0	0	3	0	3.00
Contra Costa	0	2	103	286	289	395	0	1,075.00
Del Norte	0	0	1	1	4	11	0	17.00
El Dorado	0	0	13	32	36	84	0	165.00
Fresno	0	1	64	120	143	233	0	561.00

Appendix 4: Interactive Reports (continued)

Provider Counts by License Type



Welcome to the Report Center!

Select county: Alameda, Alpine, Amador, Butte

OSHPD
Office of Statewide Health Planning and Development

CLARIFICATION: PROVIDENCE CLEARINGHOUSE

Licensee Reports - Provider Count By License Type

Count of Providers in:	DDS	RDA	RDH	PT	VN
Alameda	1,486	1,426	723	92	3,045
Alpine	0	0	0	0	0
Amador	29	65	26	5	83
Butte	164	274	150	22	518
Calaveras	24	68	27	16	92
Colusa	3	24	5	4	30
Contra Costa	1,075	1,576	760	74	2,203
Del Norte	17	42	7	24	118
El Dorado	165	268	204	22	218
Fresno	561	604	429	378	1,912
Glenn	7	53	5	0	54
Humboldt	86	232	75	9	195
Imperial	40	76	18	17	275